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# VALIDATION REPORT

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**Worldbank**

**WEST NILE ELECTRIFICATION  
PROJECT**

**SGS Climate Change Programme**

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## Summary

The Worldbank has commissioned SGS to perform the validation of the project: "West Nile Electrification Project". 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 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.

The report and the annexed validation describes a total of 10 findings which include:

- 4 Corrective Action Requests;
- 5 New Information Requests; and
- 1 Observation

All CARs and NIRs were successfully closed out and the project will hence be recommended by SGS for registration with the UNFCCC.

Subject.:		
CDM validation		<b>Indexing terms</b>
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## Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
COP/MOP	Conference of Parties / Meeting of Parties
DNA	Designated National Authority
DOE	Designated Operational Entity
GHG	Greenhouse gas
HFO	Heavy fuel oil
IBRD	International Bank for Reconstruction and Development
IETA	International Emission Trading Association
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
MW	Mega Watt
NIR	New Information Request
NGO	Non Governmental Organization
NIR	New Information Request
PCF	Prototype Carbon Fund
PDD	Project Design Document
UNFCCC	United Nations Framework Convention on Climate Change
WNEP	West Nile Electrification Project

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## 1. Introduction

### 1.1 Objective

The Worldbank has commissioned SGS to perform the validation of the project: “West Nile Electrification Project” 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

The two main project components of the WNEP are:

- Project Component #1: Installation and operation of a 3.5 MW (2 units of 1.75 MW) hydroelectric power plant; and
- Project Component #2: Installation and operation of a HFO-fired 1.5 MW generator. The generator will serve as a base-load plant during the construction phase of the hydroplant and as a peaking plant once the hydroplant becomes operational in 2007.

The project also upgrades and extends the existing distribution networks in Paidha, Nebbi, and Arua municipalities, as well as connects existing and new customers, who would otherwise operate small, privately-owned generation facilities.

### 1.4 The names and roles of the validation team members

Name	Role	Affiliate
Gareth Phillips / Marco van der Linden	Team leader / lead assessor	SGS UK / SGS NL
Ferdinand Bitanahirwe	Local expert	SGS UG
Irma Lubrecht	Technical reviewer	SGS NL

## 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 the last section of 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.

<b>Checklist Question</b>	<b>Means of verification (MoV)</b>	<b>Comment</b>	<b>Draft and/or Final Conclusion</b>
<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 <b>Corrective Action Request (CAR)</b> due to non-compliance with the checklist question (See below). <b>New Information Request (NIR)</b> 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 1 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 2). 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 Uganda. Uganda ratified the Kyoto protocol on 25th March 2002 and has appointed a DNA. No Letter of Approval was provided and a CAR (01) was raised. A letter was provided that stated a number of conditions which were specifically linked to the voluntary participation. This did not seem to meet the requirements of the EB. Consequently a new letter was provided and the CAR was closed out.

The International Bank for Reconstruction and Development (IBRD) acting as Trustee for the Prototype Carbon Fund ("PCF") is identified as project participant. Initially, the non-host party involved for this project participant was the Government of Finland. Finland ratified the Kyoto Protocol on 31st May 2002 and has appointed a DNA. No Letter of Approval was provided and a CAR (02) was raised. The Letter of Approval from Finnish DNA was provided and the CAR was closed out. A letter confirming that the Finnish contribution to the PCF does not result in diversion of ODA was also provided and is attached as Annex 3.

At a later stage the Netherlands was also identified as a Party involved for the IBRD. The Netherlands ratified the Kyoto Protocol on 31st May 2002 and has appointed a DNA. A Letter of Approval from the Netherlands was provided.

The PDD indicates that the project is supported by the Rural Electrification Fund with Norway acting as a donor and contributing resources to the fund. A statement was received from Norway that this funding does not lead to a diversion of ODA and will not count towards its obligation under Annex 1. This letter is attached as Annex 4.

### 3.2 Eligibility as a small scale project

The project utilises two small scale methodologies ID and II B. AMS ID is applied for the hydropower component of the project and meets the technology/measure described for this simplified methodology. Since this involves the installation of 3.5 MW, it falls within the small scale threshold.

AMS IIB is applied for the installation and operation of a HFO-fired 1.5 MW generator to replace current diesel generators. AMS IIB applies to technologies that improve the efficiency of fossil fuel generating units. Replacement of diesel generators with the HFO fired generator involves both a fossil fuel switch and an increase in efficiency. Since the emission reductions are derived through the efficiency improvement, AMS IIB is considered most suitable for this project component. The energy savings are expected to be in the order of 51 TJ which falls within the threshold.

The UNFCCC website at the moment does not show any projects in Uganda or its neighbouring countries and therefore the project activity is not considered a debundled part of a larger activity.

### 3.3 Baseline selection and additionality

The project is claiming retroactive credits with the crediting period starting in 2005. A first version of the PDD was already reviewed and pre-validated by SGS in September 2001 for the Prototype Carbon Fund. This shows that the CDM has been taken into account from the start of the project. The starting date of the project is well documented.

Additionality was addressed in the PDD through the identification of a number of barriers including investment barriers, economic barriers and political barriers. These barriers were supported by both anecdotal and documented evidence.

The site visit confirmed that in the absence of improved electricity supply via a grid or mini-grid, there is no alternative for local inhabitants but to carry on using gen-sets and engines. State-of-the-art equipment is unlikely to be used in this locality.

Information in the PDD was cross referenced against some internet sources which confirmed that Uganda's per capita energy consumption is among the lowest in the World and for individuals is mainly biomass based. It further described the ERT program developed by the Government of Uganda, with support of the World Bank that aims to increase access to modern, clean and affordable energy to the rural areas by 2012. The West Nile project is one of the fast track projects under this scheme.

A 2004 Worldbank/ ICF Investment Climate Assessment confirmed that 'general constraints to operation for business in Uganda' include:

- Electricity;
- Access to Financing (e.g. collateral);
- Cost of Financing (e.g. interest rates);
- Macroeconomic Instability (inflation, exchange rate).

Although the main Uganda grid has a high share of hydropower projects, recent articles discuss public investment in the energy sector has been erratic. The government concedes that the major causes of the current energy crisis in Uganda revolve around the lack of investment in new generation capacity; prolonged drought since 2003; growth in demand for electricity and limited public and private financial resources to invest in large infrastructure projects. Therefore, electricity tariffs are set to increase anticipation of a shift in emphasis towards thermal from hydro-power generation.

It was therefore accepted private investment in a small scale electricity generation project involving hydropower is not business as usual in Uganda.

### 3.4 Application of Baseline methodology and calculation of emission factors



In 2001, the project developers had undertaken an extensive survey of energy consumption in the area. This survey calculated an average efficiency (in litres of diesel per KWh) for the range of diesel generators operating in the West Nile region. During a (pre-) validation of the project activity, this survey was reviewed and samples of questionnaires completed along with database files of the responses were provided.

For AMS IIB, the baseline is the technical energy losses within the project boundary times an emission coefficient for the fuels used. The PDD initially adopted an approach which calculated the project emission directly from the fossil fuel consumption and the baseline from the energy produced times the baseline emission factor. Although a feasible approach, this wasn't considered to be in line with the requirements of the methodology and a NIR (08) was raised. In the revised PDD, the baseline efficiency found in the survey is compared with the expected efficiency of the HFO generator which will be monitored and updated ex-post. Baseline and project emissions are then calculated using these efficiencies and the emission factors of the different fuels (diesel in baseline scenario; diesel and HFO in the project scenario). This approach was considered to meet the requirements of the simplified methodology and the NIR was closed out.

For the hydropower component of the project using AMS I.D, the baseline is the annual KWh generated by the renewable unit times the emission coefficient for the modern diesel generating unit. Based on the determined average efficiency from the survey, a baseline emission coefficient (in kg CO<sub>2</sub>/KWh) was calculated using IPCC default values. This value was found to be in the range of emission coefficients for modern diesel generators provided in AMS ID. For the ex-ante baseline calculation the yearly electricity generation was estimated by the technology provider. The actual electricity production will be monitored and baseline emissions calculated ex-post.

### **3.5 Application of Monitoring methodology and Monitoring Plan**

The PDD provides for monitoring of parameters in accordance with approved monitoring methodology. A detailed monitoring plan and worksheets will need to be developed following full implementation of the projects but the PDD identified all the key areas to be included in the management and operation system and the roles and responsibilities of the Project Participants.

### **3.6 Project design**

Minor editorial errors were noted involving unclear wording (NIR 5) and incorrect use of units (NIR 6). This was corrected in a revised version of the PDD and the NIRs were closed out.

NIR 9 was raised to clarify the starting date of the project which was set in 2003. It was clarified that this involved construction of the transmission line between Nebbi and Arua which is a necessary part of the project. Date confirmed from other source and from reviewing the EIA for the power line construction. The NIR was closed out.

### **3.7 Environmental Impacts**

The necessary permits have been obtained and measures to mitigate environmental impacts are specified in the permits. The implementation of these measures may be assessed during verification if necessary. More information was requested on the potential for methane emissions from inundation (NIR 7) and this information was provided in section F1 of the PDD. It was noted that the Certificates of approval of EIA from NEMA have conditions attached which should be monitored during verification and hence an Observation was raised (Obs 1).

### **3.8 Local stakeholder comments**

Substantial stakeholder consultation was undertaken as part of the early planning for the project. Samples of survey forms were viewed. The version of PDD posted on the internet did not give an adequate description of the stakeholder consultation process and more information was requested

(CAR 3 and CAR 4). This information was provided in the revised version of the PDD and the 2 CARs were closed out.

#### **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 Project Design Documents for this project were made available on the SGS website <http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=47> and were open for comments from 28th October 2005 until 26th November 2005. Comments were invited through the UNFCCC CDM homepage

##### **4.2 Compilation of all comments received**

No comments have been received.

##### **4.3 Explanation of how comments have been taken into account**

No comments have been received.

## 5. Validation opinion

SGS has performed a validation of the project: “West Nile Electrification Project”. 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 the use of hydropower for the production of electricity and the installation of an efficient generator to replace diesel generators, 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 barriers demonstrates that the proposed project activity 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. If the project is implemented as designed, the project is likely to 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

<b>Date</b>	<b>Name</b>	<b>Position</b>	<b>Short description of subject discussed</b>
	Philip Gwage	DNA Secretariat	<i>General status of the project. Letter of approval</i>
	Gerald M. Sawula	Deputy Director at NEMA	<i>Environmental Impact Assessments</i>
	G.Turyahikayo	Director REA	
	Mr. Karan Capoor	World Bank	<i>World Bank CDM projects in East Africa</i>
	Lasse Ringius	World Bank CFB Project Developer	

## 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/ PDD, the following versions have been reviewed
  - Rev 0 received October 2005 and made publicly available
  - Rev 1 received November 2005
  - Rev 2 received September 2006
  - Rev 3 received 18-10-2006
  - Rev 4 received 20-10- 2006 and marked as Version 1, dated October 19, 2006
  - Rev 5, received 03-11-2006 and marked as version 2, dated October 30 2006
- /2/ AMS ID (version 9) and AMS IIB (version 7)
- /3/ Affirmation Regarding no Diversion of Official Development Assistance from the Royal Ministry of Foreign Affairs of Norway, dated 9 August 2005.
- /4/ Letter of Approval from Ministry of Water and Environment, Republic of Uganda, dated 11<sup>th</sup> July 2006 ref APS 99/115/02
- /5/ Written Approval from Ministry of Foreign Affairs of Finland, reference number HEL5759-10
- /6/ Written Approval from the Ministry of Housing, Spatial Planning and the Environment of the State of the Netherlands, dated 1st December 2005, reference DGM/IMZ/2005211237
- /7/ Affirmation Regarding no Diversion of Official Development Assistance from Ministry of Foreign Affairs of Finland, dated 4 August 2005

Category 2 Documents (background documents used to check project assumptions and confirm the

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validity of information given in the Category 1 documents and in validation interviews):

- /7/ Unqualified validation report, references and checklists from validation exercise in 2001
- /8/ Certificate of Approval of Environmental Impact Assessment for the Nyagak Hydropower project. Certificate number 279, dated 31st May 2002
- /9/ Certificate of Approval of Environmental Impact Assessment for the proposed Bondo-Nebbi transmission line. Certificate number 275, dated 28th May 2002
- /10/ A description of the census of generators (gensets) and motive engines carried out in the West Nile Region of Uganda in August 2000 and a summary Excel sheet, with each generator/engine, by category (business, household, etc.), hours of operation and estimated loads.
- /11/ The following websites were visited to cross reference information on additionality:  
<http://www.ugandainvest.com/energy.pdf> which confirms:  
<http://siteresources.worldbank.org/EXTAFRsumaAFTPS/Resources/ICA002.pdf>  
<http://allafrica.com/stories/200609270235.html>  
<http://allafrica.com/stories/200610100058.html>

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## Validation Protocol

### CDM.VAL0303: West Nile Electrification Project

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

REQUIREMENT	MoV	Ref	Comment	Draft finding	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.	DR	PDD/LoA	No LoA from host party	CAR 1	OK
1.2 The project shall assist non-Annex I Parties in achieving sustainable development and	DR	PDD/LoA	No LoA from non-host party	CAR 2 LoA from non-host party (and non-	OK

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
shall have obtained confirmation by the host country thereof, and be entered into voluntarily				diversion of ODA) (Finland) received	
1.3 All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects	DR	PDD A3	Yes, Uganda has acceded to KP 25/3/02 and KP entered into force 16/2/05. Source: <a href="http://unfccc.int/parties_and_observers/parties/items/2224.php">http://unfccc.int/parties_and_observers/parties/items/2224.php</a>	OK	OK
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	DR	PDD	Yes the project reduces emissions by replacing small gen sets with a large more efficient diesel gen set and hydropower	OK	OK

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
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	DR / I	PDD / website	Completed. No comments. See <a href="http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=47">http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=47</a>	OK	OK
1.6 The project has correctly completed a Project Design Document, using the current version and exactly following the guidance	DR	PDD	Yes, with some minor comments (see 8.2)	OK	OK



REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
1.7 The project shall not make use of Official Development Assistance (ODA), nor result in the diversion of such ODA	DR	PDD / statements	Although the project is part of a programme funded by WB and Govt Norway, the project activity itself is not funded and ODA funds are not used to purchase CERs Letter confirming non-diversion required	CAR 2 Letter supplied	OK
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?	DR	PDD	n/a		N/A
1.9 Does the project meet the additional requirements detailed in:	DR	PDD	Yes. See table 9	See table 9	OK

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
Table 9 for SSC projects Table 10 for AR projects Table 11 for AR SSC projects					
1.10 Is the current version of the PDD complete and does it clearly reflect all the information presented during the validation assessment.	DR	PDD	Yes. The PDD is complete and does not require additional information that is not presented.	OK	OK
1.11 Does the PDD use accurate and reliable information that can be verified in an objective manner?	DR	PDD	Yes, the PDD is transparent and verifiable	OK	OK



<b>Table 2</b>	<b>Baseline methodology(ies) (Ref: PDD Section B and E and Annex 3 and AM) Normal CDM projects only</b>
<b>Table 3</b>	<b>Additionality (Ref: PDD Section B3 and AM) Normal CDM projects only</b>
<b>Table 4</b>	<b>Monitoring methodology (PDD Section D and AM) Normal CDM Projects only</b>
<b>Table 5</b>	<b>Monitoring plan (PDD Annex 4) Normal CDM Project activities only</b>
<b>Table 6</b>	<b>Environmental Impacts (Ref PDD Section F and relevant local legislation) Normal CDM Project Activities only</b>

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

CHECKLIST QUESTION	MoV *	Ref	COMMENTS	Draft Concl	Final Concl
7.1 Have relevant stakeholders been consulted?	DR	PDD /SV	Yes broad stakeholder consultation was carried out with reports from third parties who carried out surveys	OK	OK
7.2 Have appropriate media been used to invite comments by local stakeholders?	DR	PDD / SV	Yes	OK	OK
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?	DR	PDD / SV	Yes regulations have been complied with and certificate of approval of EIA obtained, confirming that consultations were completed	OK	OK
7.4 Is a summary of the stakeholder comments received provided?	DR	PDD	No, the PDD presents a series of viewpoints, but these do not amount to a summary of comments received	CAR 3 revised	OK
7.5 Has due account been taken of any stakeholder comments received?	DR	PDD	No, the PDD presents a summary of the comments but does not explain how due account has been taken.	CAR 4 revised	OK

**Table 8 Other requirements All CDM project activities**

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
<b>8.1 Project Design Document</b>					
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	PDD is well written and uses version 2 of SSC PPD template	OK	OK
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	PDD is well written. On page 6, the heading for Figure 1 refers to the system as originally designed. Please clarify significance of “originally”	NIR 5 – revised	OK
<b>8.2 Technology to be employed</b>					
8.2.1 Does the project design engineering reflect current good practices?	PDD	DR	Yes; standard run-of-river design is described; diesel gen sets are higher efficiency	OK	OK
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	Yes	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.3 Is the project technology likely to be substituted by other or more efficient technologies within the project period?	PDD	DR	No	OK	OK
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	Not extensive training but some trained staff will be required and these must be employed by the entity implementing the project (WRENC0)	OK	OK
<b>8.3 Duration of the Project/ Crediting Period</b>					
8.3.1 Are the project's starting date and operational lifetime clearly defined and reasonable?	PDD	DR	Starting date not totally clear	NIR 9	OK
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	Yes. 3 * 7 renewable	OK	OK
8.3.3 Does the project's operational lifetime exceed the crediting period	PDD	DR	Yes	OK	OK

**Table 9 Additional requirements for SSC project activities only**

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
SSC projects use the SSC PDD and simplified baseline and monitoring methodologies as detailed in Appendix B (to the Modalities and Procedures for Small scale CDM projects, Annex II to Decision 21/CP.8) Indicative simplified baseline and monitoring methodologies for selected small scale CDM project activity categories					
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	Yes. Both project activities class as SSC	OK	OK
9.2 The project conforms to one of the categories listed in Appendix B to Annex II to Decision 21/CP8	PDD	DR	Yes, it falls under ID and IIB	OK	OK
9.3 The small scale project activity is not a debundled component of a larger project activity?	PDD	DR	Yes, there are no other SSC projects in the area	OK	OK
9.4 PDD has been prepared in accordance with appendix A of Annex II to Decision 21/CP8	PDD	DR	Yes	OK	OK
9.5 The project uses a simplified baseline and monitoring methodology specified in Appendix B. If not, they may propose changes to the meths or a new SSC project category	PDD	DR	Yes	OK	OK
9.6 Are the emission reductions	PDD	DR	Application of AMS IIB for the project does not seem to meet the	NIR 8	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
determined in accordance with the methodology described			simplified methodology		
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	The project comprises two separate project activities but they are not de-bundled components of a larger single activity	OK	OK
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 / SV	DR	<p>Yes. EIA has been performed and requisite certificates obtained</p> <p>Information sought on area of the impoundment and potential for methane release from inundation of vegetation</p> <p>It was noted that the Certificates of approval of EIA from NEMA have conditions attached which should be monitored during verification.</p>	NIR 7	OK Obs 1
9.9 The project results in emission reductions that are additional in accordance with the following requirements: (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	PDD intern et	DR	<p>Yes, both project activities result in reduced emissions</p> <p>Both project activities are impeded by the barriers described in the PDD</p> <p>Besides sources in PDD, information cross referenced against following sources:  <a href="http://www.ugandainvest.com/energy.pdf">http://www.ugandainvest.com/energy.pdf</a> which confirms:            - Uganda's per capita energy consumption, is among the lowest in</p>	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
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			<p>the World and for individuals is mainly biomass based</p> <ul style="list-style-type: none"> <li>- The Government of Uganda, with support of the World Bank, is to fund the ERT program that aims to increase access to modern, clean and affordable energy to the rural areas by 2012. The global purpose of the 10-year ERT programme is to contribute to global environmental protection by reducing greenhouse emissions. It will therefore benefit from the Global Environmental Facility (GEF) and the Prototype Carbon Fund (PCF).</li> <li>- The fast track projects to be implemented under the ERT programme include: The West Nile Power Project (isolated grid): This will involve mainly generation at River Nygak and later at Olewa to supply power to Arua and Nebbi Districts. Through a system of competitive bidding, Government selected Uganda Rural Electrification Company Limited (URECL) as the winning bidder. The International Finance Corporation (IFC) is promoting the Uganda Rural Electrification Company Ltd.</li> </ul> <p><a href="http://siteresources.worldbank.org/EXTAFRSUMAFTPS/Resources/ICA002.pdf">http://siteresources.worldbank.org/EXTAFRSUMAFTPS/Resources/ICA002.pdf</a></p> <p>2004 Worldbank ICF Investment Climate Assessment which confirms that general constraints to operation for business in Uganda includes :</p> <ul style="list-style-type: none"> <li>- Electricity</li> <li>- Access to Financing (e.g. collateral)</li> <li>- Cost of Financing (e.g. interest rates)</li> </ul>		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			<p>- Macroeconomic Instability (inflation, exchange rate)</p> <p><a href="http://allafrica.com/stories/200609270235.html">http://allafrica.com/stories/200609270235.html</a></p> <p>Of September 26, 2006: ELECTRICITY tariffs are set to increase in October in anticipation of a shift in emphasis towards thermal from hydro-power generation at the beginning of next year</p> <p><a href="http://allafrica.com/stories/200610100058.html">http://allafrica.com/stories/200610100058.html</a></p> <p>Since the country first commissioned the 150MW Owen Falls Hydro Power Station in 1954, public investment in the energy sector has been erratic</p> <p>In its \$4.4 billion 20-year Comprehensive Investment Plan for the power sector, the government concedes that the major causes of the current energy crisis revolve around the lack of investment in new generation capacity; prolonged drought since 2003; growth in demand for electricity and limited public and private financial resources to invest in large infrastructure projects</p>		
9.10 Leakage is calculated according to the provisions of the SSC methodologies in Appendix B ( <a href="http://cdm.unfccc.int/Projects/pac/sscli_stmeth.pdf">http://cdm.unfccc.int/Projects/pac/sscli_stmeth.pdf</a> )	PDD	DR	There is no leakage, as determined by the methodologies	OK	OK
9.11 The project boundary shall be constructed in accordance with the requirements of the SSC meths in Appendix B	PDD	DR	Yes. The Project boundary includes all sources , the grid and hydro power station. The PDD also refers to emissions from transport of fuel but as there is no suitable methodology for these reductions as yet, they are not included. It is noted that some of these emissions	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			would arise in Kenya as result of the transport of fuel from Mombasa to West Nile		
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	Yes. ID requires monitoring of generation output from renewable energy source. IIB requires energy content of fuel input and energy content of electrical output.  Table 5 ID number 1.c units are described as MJ/t. Should these be t/m3	OK  NIR 6 – corrected	OK
9.13 The monitoring plan shall present good monitoring practice appropriate to the circumstances of the project activity (para 33)	PDD	DR	Yes, the monitoring requirements for the project operator are described and appear to be the basis for sound monitoring and reporting system.	OK	OK
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	The overall plan is consistent with the above requirements	OK	OK

**Table 10 Additional requirements for AR projects – N/A**

**Table 11 Additional requirements for SSC AR projects – N/A**

**Table 12 Additional information to be verified by local assessors / site visit**

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Confirm project description matches EIA statement and certificate of approval of EIA.	PDD	DR	Certificate of approval of EIA numbers 000275 dated 28/5/02; 000276 dated 29/5/02 and 000279 dated 31/5/02 were provided confirming EIA approval for Nyagak, and Olewa hydro plants and the transmission line from Bondo to Nebbi.	ok	Ok
The PDD contains a number of general statements about the area, its agricultural potential, population, power shortage etc. Please comment on whether these statements are generally an accurate characterisation of the area.	PDD	SV	These information were verified during a site visit to the original PCF project by our local assessor Ferdinand Bitanhirwe in 2002. The statements have not changed and they are still applicable.	OK	OK
The PDD claims the projects are the only such projects in the area	UNFCCC	DR	No other Ugandan PDDs are posted on the UNFCCC website – active or archived calls	OK	OK
PDD presents data on existing fuel use in gen sets in the area, based on an extensive survey in 2001. Please confirm existence of survey	PDD / survey	DR	Samples of questionnaires completed by CEFORD on behalf of the project in 2000 were provided along with database files of the responses	OK	OK
Is it reasonable to assume that diesel and petrol gen-sets and engines similar	PDD	SV	Yes. In the absence of improved electricity supply via a grid or mini-grid, there is no alternative for local	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
to those being used currently would continue to be used in the baseline scenario?			inhabitants but to carry on using gen-sets and engines. State-of-the-art equipment is unlikely to be used in this locality.		



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## Annex 2

### FINDINGS OVERVIEW

#### FINDINGS FROM VALIDATION OF WEST NILE ELECTRIFICATION PROJECT

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 that this is an open list and more findings may be added as validation progresses.

Date: 04-11-2005

Raised by: Gareth Phillips

No.	Type	Issue	Ref
1	CAR	No LoA from Host Government	1.1
Date: 29-12-2005 Benoit Bosquet			
Please find attached the HC LoA for the Uganda West Nile project			
Date: 01/11/2006; Marco van der Linden			
The letter that you provided states are number of conditions which are specifically linked to the voluntary participation. This does not seem to meet the requirements of the EB.			
Date: 31-7-2006; Lasse Ringius			
The revised LoA for Uganda is attached. Pls let us know if it is satisfactory			
Date 04-08-2006: Marco van der Linden			
LoA reviewed and accepted.			
CAR closed out.			

Date: 04-11-2005

Raised by: Gareth Phillips

No.	Type	Issue	Ref
2	CAR	No LoA from non-host govt. Declaration of non-diversion of ODA also required for PCF participant	1.2



Date: see attached
Date: 21/12/05; Gareth Phillips LoA and statement of non-diversion received for Finland
CAR closed

Date: 04-11-2005		Raised by: Gareth Phillips	
No.	Type	Issue	Ref
3	CAR	In section G2, the PDD presents a series of viewpoints, but these do not amount to a summary of comments received	7.4
Date: 17/11 [Comments] The test is a summary of the findings by CEFORD and can be seen in document entitled REPORT ON SOCIAL INTERMEDIATION FOR THE WEST NILE ELECTRICITY CONSESSION (UTILITY) UNDER THE ENERGY FOR RURAL TRANSFORMATION PROJECT (ERT).			
Date: 17/11/05; Gareth Phillips [Acceptance and close out] Action accepted.			
CAR closed.			

Date: 04-11-2005		Raised by: Gareth Phillips	
No.	Type	Issue	Ref
4	CAR	In section G3, the PDD presents a summary of the comments but does not explain how due account has been taken.	7.5
Date: 16/12/05 [Comments] The PCF representatives have clarified that the consultation process was very intensive involving door to door surveys of energy use as part of the original PCF project in 2000. Samples of the door to door surveys have been provided. Clearly it is not possible to give specific details of how each comment has been addressed.			
Date: 16.12.05; Gareth Phillips CAR closed			

Date: 04-11-2005		Raised by: Gareth Phillips	
No.	Type	Issue	Ref
5	NIR	On page 6, the heading for Figure 1 refers to the system as originally designed. Please clarify significance of "originally"	8.2
Date: [Comments] Wording changes			
Date: 15/12/05; Gareth Phillips [Acceptance and close out] Reviewed and OK			
NIR closed			

Date: 04-11-2005		Raised by: Gareth Phillips	
No.	Type	Issue	Ref
6	NIR	Table 5 ID number 1.c units are described as MJ/t. Should these be t/m3	9.12
Date: [Comments] Corrected			

Date: 15/12/05; Gareth Phillips  
[Acceptance and close out]  
Reviewed and OK

NIR closed

Date: 04-11-2005

Raised by: Gareth Phillips

No.	Type	Issue	Ref
7	NIR	Please comment on the area of the impoundment and potential for methane release from inundation of vegetation	9.8

Date:  
[Comments] Address in section F1

Date: 15/12/05; Gareth Phillips  
[Acceptance and close out]  
Reviewed and OK

NIR closed

Date: 04-08-2006

Raised by: Marco van der Linden

No.	Type	Issue	Ref
8	NIR	Referring to version 7 AMS II.B the methodology applies to energy efficiency the methodology refers to the efficiency as the ratio between the energy going in (as fuel) and the energy coming out (as electricity). The current description and application of the simplified methodology do not reflect this. The approach that you have selected is based on fuel consumption which is but feasible but more in line with category III.B (fossil fuel switch). Since the implementation of the HFO generator is a mix of fuel switch and efficiency improvements you will need to determine which one is the most significant one.	9.6

Date: 17-10-2006; Lasse Ringius

Please see attached revised PDD

Date: 18-10-2006; Marco van der Linden

Application of the methodology and calculation of grid EF is still not clear.

Date: 03-11-2006; Lasse Ringius

Please see attached revised PDD

Date: 09-11-2006; Marco van der Linden

Revised PDD reviewed (dated October 30, 2006). The baseline efficiency found in the study is compared with the expected efficiency of the HFO generator which will be monitored and updated ex-post. Baseline and project emissions are then calculated using these efficiencies and the emission factors of the different fuels (diesel in baseline scenario; diesel and HFO in the project scenario). This approach was considered to meet the requirements of the simplified methodology.

NIR closed out.

Date: 04-08-2006

Raised by: Marco van der Linden

No.	Type	Issue	Ref
9	NIR	Starting date of the project is listed as April 2003 however section A2 does not describe it is not clear what the actions have been in 2003 that would meet the definition of starting date in the CDM glossary.	8.3.1
<p>Lasse Ringius</p> <p>The Government of Uganda built the transmission line between Nebbi and Arua in 2002-2003 and included that as an asset to be transferred to the West Nile Power company (the winning bidder). This powerline was a necessary part of the project.</p>			
<p>Date: 09-11-2006; Marco van der Linden</p> <p>OK, date of transmission line construction confirmed from <a href="http://www.norad.no/business/default.asp?V_ITEM_ID=123">http://www.norad.no/business/default.asp?V_ITEM_ID=123</a></p> <p>Copies of EIA for power line construction reviewed</p> <p>NIR closed out.</p>			

Observations:

- 1) It was noted that the Certificates of approval of EIA from NEMA have conditions attached which should be monitored during verification



MINISTRY FOR FOREIGN AFFAIRS  
OF FINLAND

HEL0270-59

### Affirmation Regarding no Diversion of Official Development Assistance

The Government of Finland, acting through the Ministry for Foreign Affairs of Finland, hereby confirms that any public funding from Finland used to participate in the Prototype Carbon Fund does not result in a diversion of official development assistance and is separate from and is not counted towards its financial obligations as a Party included in Annex I.

Done at Helsinki on 4th August 2005

Mr. Pekka Puustinen  
Director, Designated National Authority for the Republic of Finland  
Unit for Sectoral Policy  
Department for Development Policy



ROYAL MINISTRY  
OF FOREIGN AFFAIRS

Prototype Carbon Fund  
The World Bank  
Washington DC  
USA

Your ref

Our ref EB

Date  
9 August 2005

**Affirmation Regarding no Diversion of Official Development Assistance**

The Royal Ministry of Foreign Affairs of Norway hereby confirms that any public funding used to participate in the Prototype Carbon Fund does not result in a diversion of official development assistance and is separate from and is not counted towards Norway's financial obligations as a Party included in Annex I.

Done at Oslo on 9 August 2005

Harald Neple  
Director General