

ISHASHA 6.6 MW SMALL HYDROPOWER PROJECT

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C-Quest Capital Malaysia Limited

Project Title	Ishasha 6.6 MW Small Hydropower Project
Version	01
Date of Issue	28-02-2014
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1 PROJECT DETAILS

1.1 Summary Description of the Project

Since the project was registered under CDM on 08-06-2012 with CDM reference 6381, and according to paragraph 3.11.9 of the VCS standard version 3.4, this section does not need to be completed. Please refer to CDM PDD at the website below:

<http://cdm.unfccc.int/UserManagement/FileStorage/OW1J0BAISQ2DY4MPC8LT356ZUFVHRE>

1.2 Sectoral Scope and Project Type

The project is categorised under type/category as below:

a) Sectoral scope: 01 - Energy industries (renewable - / non-renewable sources)

b) Type: I - Renewable energy projects

The project is not a grouped project.

1.3 Project Proponent

Organization name	Eco Power Uganda Limited
Contact person	Bhatiya Ranatunga
Title	CEO
Address	30/1 Bagatalle Road, Colombo, 3, Sri Lanka
Telephone	+94-11-4513470/1/2
Email	bhatiya@ecopower.lk

Organization name	C-Quest Capital LLC
Contact person	Ken Newcombe
Title	CEO
Address	1211 Connecticut Ave, NW - Suite 800, Washington DC 20036
Telephone	+1 202 416 2400
Email	cqc-operations@cquestcapital.com

1.4 Other Entities Involved in the Project

Not applicable

1.5 Project Start Date

06-03-2011 (which is the start date of plant operation for electricity generation)

1.6 Project Crediting Period

Start date of crediting period: 06-03-2011

End date of crediting period: 30-06-2012

1.7 Project Scale and Estimated GHG Emission Reductions or Removals

Project Scale	
Project	X
Large project	

Year	Estimated GHG emission reductions or removals (tCO ₂ e)
2011	15,691 ¹
2012	9,487 ²
Total estimated ERs	25,178
Total number of crediting years	1.32
Average annual ERs	19,027

1.8 Description of the Project Activity

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1.9 Project Location

- a) Host Party(ies): Republic of Uganda
- b) Region/ State/ Province: Kanungu District of South-Western Uganda
- c) City/ Town/ Community: Ruheza-Kyajura Village, Nyamigoue Parish in Kanyantoorogo sub-county

¹ Based on 6 March 2011 start date for crediting period equivalent to 301 days in 2011

² Based on end date of crediting period of 30 June 2012 equivalent to 182 days in 2012.

d) Physical/ Geographical location:

Location	Coordinates
Weir/Diversion Intake	-0.935556, 29.668611
Power House/Tailrace	-0.878611, 29.657500

Figure 1: Map of Uganda showing project site

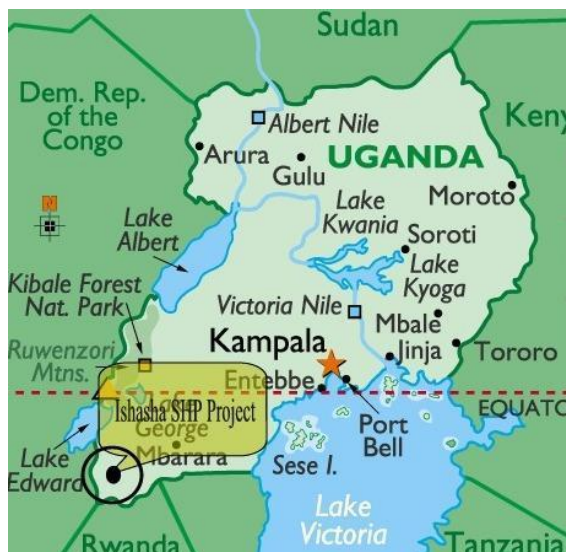
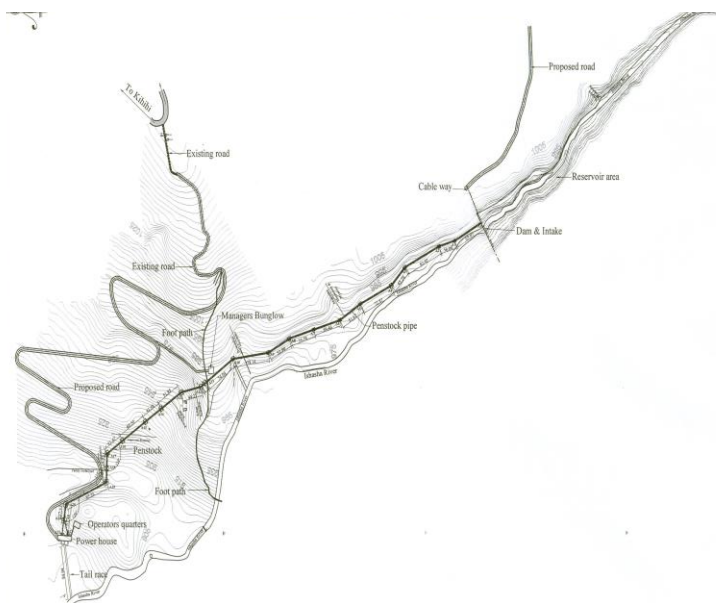


Figure 2: Overview of Ishasha River and the Ishasha Hydroelectric power Project



1.10 Conditions Prior to Project Initiation

The project activity is a Greenfield project. The project activity is generating electricity from a new hydropower plant, which will be fed into the Uganda grid, displacing electricity generated from the

Uganda source mix. In case the project activity was not implemented, the same amount of electricity would be generated from the fossil fuel power plants connected to the grid.

1.11 Compliance with Laws, Statutes and Other Regulatory Frameworks

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1.12 Ownership and Other Programs

1.12.1 Right of Use

The letters of Approval (LoA) from government of Uganda and Netherlands have been provided to DOE as the proof of title of the project.

1.12.2 Emissions Trading Programs and Other Binding Limits

Not Applicable. The project was registered at UNFCCC (Registration ID - 6381).

1.12.3 Other Forms of Environmental Credit

The project is a CDM registered project and has not been applied for any form of environmental credit. .

1.12.4 Participation under Other GHG Programs

The project has been registered in UNFCCC (Registration ID - 6381).

1.12.5 Projects Rejected by Other GHG Programs

The project has neither been applied nor rejected under any program..

1.13 Additional Information Relevant to the Project

Eligibility Criteria

Not applicable. The project is not a grouped project.

Leakage Management

Not applicable.

Commercially Sensitive Information

Not applicable.

Further Information

Contribution to sustainable development

The primary objective of the project is to supply affordable electricity and contribute to environmental and economic sustainability for the population of Uganda. The electricity grid in Uganda supplies only a small fraction of the population and relies partly on fossil fuels. During the peak demand hours the fossil fuel use is very heavy. Increased production of electricity from renewable resources will lead to the reduction of the global emissions of greenhouse gases. The project will further help Uganda to stimulate and commercialize the use of grid connected renewable energy technologies. The project will demonstrate the viability of small scale grid connected hydropower directed primarily at peak hour service which can support improved energy security, improved air quality, improved local area livelihoods and sustainable renewable energy industry development.

The project will:

- Produce renewable energy and thus reduce global greenhouse gas emissions;
- Help to stimulate the small hydropower industry in Uganda;
- Create local employment during the construction and operation of the hydropower station;
- Reduce other pollutants such as particulates, SO₂, and NO_x resulting from fossil fuel power generation industry in Uganda;
- Reduce Uganda's increasing energy deficit; and
- Reduce import dependency.

The project contributes to sustainable development in Uganda in the following ways:

- Hydropower presents various environmental benefits compared to other primary energy sources: hydropower does not result in emissions of pollutants into the atmosphere nor does it emit residuals that can have a negative impact on soil, vegetation, drinking water etc. As a renewable energy source hydropower can be sustainably used by future generations. The proposed project will also contribute to a reduction in emissions other than GHG emissions related to conventional electricity generation, such as emissions of sulphur dioxide, nitrogen oxides, and particulates;
- The project will diversify Uganda's energy mix which comprises of biomass, petroleum and electricity. According to the energy balance 2006, final energy consumption is as much as 92.1% biomass, plus 7.0% petroleum products but only 0.9% electricity;³
- The project will result in additional employment opportunities, especially during the construction phase. Construction materials for the substantial quantum of concrete used for the project and access roads will be sourced locally;
- The project complies with national and local laws and regulations. The project has been granted a permit to develop the Ishasha small hydropower plant by the Electricity Regulatory Authority (ERA) and the Environmental and Social Impact Assessment (ESIA) has been approved by the National Environment Management Agency (NEMA);
- The project supports the main policy goal of the Ministry of Energy and Mineral Development; namely "To establish, promote the development, strategically manage and safeguard the rational and sustainable exploitation and utilization of energy and mineral resources for social and economic development".⁴

³ Annual Report 2006, Ministry of Energy and Mineral Development, page 32

⁴ Annual Report 2006, Ministry of Energy and Mineral Development, page iii

2 APPLICATION OF METHODOLOGY

2.1 Title and Reference of Methodology

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2.2 Applicability of Methodology

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2.3 Project Boundary

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2.4 Baseline Scenario

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2.5 Additionality

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2.6 Methodology Deviations

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3 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

3.1 Baseline Emissions

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3.2 Project Emissions

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3.3 Leakage

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3.4 Net GHG Emission Reductions and Removals

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4 MONITORING

4.1 Data and Parameters Available at Validation

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4.2 Data and Parameters Monitored

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4.3 Monitoring Plan

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5 ENVIRONMENTAL IMPACT

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6 STAKEHOLDER COMMENTS

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