Introduction

The Government of Rwanda plans to increase very significantly its electricity generation capacity in the coming years. It is in this spirit that Rwanda Mountain Tea Ltd decided to seize the opportunity and invest in Hydropower plants. Rwanda Mountain Tea Ltd currently operates a 4 MW Hydropower Plant on Giciye river and there is an ongoing construction of a second plant of 4 MW on the same river.

Rwanda Mountain Tea Ltd is looking for the development of a third hydropower project in the lower reach of the Giciye River.

The project is located some 20 km South-West of Musanze city, in the Western Province, Nyabihu District, Rurembo/Shyira Sectors.

The boundary of the project is delimited:
   a) Upstream, by the Giciye II hydropower plant, actually under construction by Rwanda Mountain Tea Ltd, at elevation 1785 masl [coordinates 35M 788260 E 9815320 S],
   b) Downstream at the level of the confluence of the Giciye River with the Mukungwa River.

The maximum potential head of the reach is around 330 m.

It is proposed to hire a consultant to proceed to a Feasibility Study, looking for the best alternative for an optimal use of the available head. The consultant will generate and evaluate a set of alternatives, select the best alternative according to a balanced set of evaluation criterion, and establish the technical, financial, economic, social and environmental viability of the selected alternative and prepare tender documents for construction and procurement.

Objective of the Study

The study will be carried out in two phases:

   a) Phase 1: Development and evaluation of alternatives

   The general purpose is to define different possible alternatives, to determine their overall feasibility, to evaluate the construction costs, potential generation and environmental and social impacts.

   Based on the overall evaluation of the alternatives, the Consultant will propose the best alternative to be developed further at the feasibility level.

   Specific objectives are:

   i. To collect the available information on the site and on the upper projects of Giciye I and II, and other potential development in the catchment area;
ii. To carry out the necessary investigations: topography, geology/geotechnics and hydrology in order to get the basic documentation for the study;

iii. To generate alternatives, taking into consideration the necessity of the optimal use of the potential of the site within its boundaries;

iv. To prepare a preliminary cost estimate (CAPEX and OPEX), to determine the expected/potential power generation and to set up in an economic model in order to define the financial figures of the possible alternatives;

v. To describe the potential impacts of the projects and

vi. To propose the best alternative according to the defined criterion.

b) Phase 2: Detailed assessment of the selected alternative

With all the studies necessary to determine the overall feasibility of implementing the Project.

Specific objectives are:

i. To establish the technical, economic, environmental and social feasibility of the project;

ii. To estimate the cost of implementing the project;

iii. To prepare preliminary design of the project;

iv. To prepare an implementation schedule for the project, And

v. To prepare the tender documents for construction and procurement.

Scope of services

The following are the specific activities to be carried out by the consultants:

Phase 1

(a) Review all the existing information, reports and studies relevant to the Giciye III Hydro Power Project.

(b) Plan and execute the required site investigations that will include but not limited to geotechnical investigations, topographical surveys, meteorological and hydrological surveys.

(c) Come up with various alternative options of implementing the project as well as investigating temporary and permanent access facilities to the project and power evacuation options for the power generated by the project.

(d) Establish a preliminary environmental and social impact inventory for the project alternatives.

(e) Determine a preliminary implementation time schedule for each project alternatives,

(f) Carry out a preliminary Financial and Economic analysis of the projects alternatives including calculation of the financial internal rate of return (FIRR), taking into account all the financial costs and benefits of the proposed project. Sensitivity analyses should be carried out on the financial results with respect to changes in several key variables.

(g) Do a comparative ranking of for all the projects alternative options based on the economic and financial analysis and recommend the best alternative and its implementation plan.
Phase 2

(a) Carry out basic design of project features including but not limited to the river diversion, intake, water way, penstock, power house, hydro-mechanical equipment, generating equipment and tail race.

(b) Plan and complete additional site investigations if required, such as geotechnical investigations, topographical surveys and hydrological surveys.

(c) Carry out extensive environmental and social impact assessment (ESIA) assessment of the project in compliance with the guidelines of REMA - Rwanda Environment Management Authority.

(d) Determine an implementation time schedule for the project.

(e) Prepare a construction plan and cost estimate for the main civil works including preparatory works, hydro-mechanical works, generating equipment and transmission line as well as associated expenditure disbursements plan and schedules.

(f) Carry out an in-depth Financial and Economic analysis of the project including calculation of the financial internal rate of return (FIRR), net present value (NPV) and weighted average cost of capital, taking into account all the financial costs and benefits of the proposed project. Sensitivity analyses should be carried out on the financial results with respect to changes in several key variables.

(g) Identify all risks to the project and suggested mitigation plans. Consultant shall also identify risks related to revenues and costs and conduct relevant sensitivity analyses on the financial results with respect to changes in several key variables. The consultant shall prepare an overall risk management matrix for mitigating identified risks and unknowns during planning stage, procurement stage, construction stage, commissioning, defects liability, and operation period.

(h) Prepare Draft Feasibility Study Report, including drawings, for review and discussion.

(i) Prepare a Final Feasibility Study Report taking into account client’s comments.

(j) Prepare a separate executive summary styled report of a standard and quality acceptable to funding agencies outlining the principal of the project, costing of the basic components, economic and technical justifications and the social and environmental assessment of Giciye III Hydropower project.

(k) Prepare a complete tender documentation set for construction and procurement, including Technical Specifications, Drawings, General and Special Conditions.

Expected outputs

The Consultant shall prepare and submit to the Client the followings documents and reports.

1) Phase 1 report (5 copies)
2) Draft and Final Feasibility Study Report (10 copies), including drawings
3) Executive Summary of the Final Feasibility Report (10 copies)
4) Tender documents for construction and procurement
Guidance on tender submissions

The following is required in the tender response:

- **Technical skills of project team.** Tenderers should:
  - Clearly identify members of the project team.
  - Demonstrate relevant skills and knowledge of project team.
  - Provide professional CVs of individuals who will be involved in the delivery of the contract.

- **Relevant experience and past performance.**
  The ideal submission would show a strong record, knowledge and experience of the members of the project team in carrying out feasibility work and developing community owned hydro projects to planning permission and beyond. Tenderers should demonstrate:
  - Technical hydro power capability, including pre-feasibility and design capability;
  - Experience of working with Community Groups on energy related projects
  - A track record of taking hydro projects through the development process, including activities such as applying for CAR licenses/consulting with SEPA and managing steps in the hydropower development process;
  - A reference (and contact details) should be provided for a minimum of three examples.

- **Project management and risk.** Tenderers should:
  - Detail project management processes.
  - Set out the project plan demonstrate how the project will be phased.
  - Outline their understanding of risk and approach to managing project risks.

- **Project understanding.** Tenderers should demonstrate and understanding of the requirements of the project.

- **Methodology.** Tenderers should:
  - Demonstrate how all elements described in the tender specification will be met.
  - Provide a proposed project program for the delivery of the different elements and key milestones for the scope of works.
  - The contractor should clearly state any specific exclusion from the scope of works.

- **Price.** Tenderers should:
  - Provide detailed costing for all activities in the scope of work. Project costing should be clearly broken down by project tasks.
  - The contractor should clearly state any specific additional activities to the scope of works (and why they have been included), these should be prices as separate line items.
  - Give an indication of value for money.
**Tender Evaluation Criteria**

All submissions from suppliers will be scored on both price and quality. The contract will be awarded to the supplier who receives the highest total score. The overall Price/Quality split for this tender will be 30%/70% respectively.

<table>
<thead>
<tr>
<th>Price Criteria</th>
<th>Weighting %</th>
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<tbody>
<tr>
<td>Price itemization of services</td>
<td>10%</td>
</tr>
<tr>
<td>Price and value for money</td>
<td>90%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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</tbody>
</table>

The ‘price and value for money’ evaluation will be scored as follows:

The maximum marks available for this part of the Tender will be 5 and will be awarded to the cheapest price submitted by a Tenderer who meets all of the tender requirements. The remaining Tenderers will receive marks on a pro rata basis from the cheapest to the most expensive price. The total price submitted by the Tenderer will be used for the purpose of this evaluation.

<table>
<thead>
<tr>
<th>Quality Criteria</th>
<th>Weighting %</th>
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</thead>
<tbody>
<tr>
<td>Relevant skills and qualifications of proposed team</td>
<td>30%</td>
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<tr>
<td>Previous relevant experience e.g. 3 previous examples of work that are relevant to this contract</td>
<td>20%</td>
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<tr>
<td>Understanding of the specific project requirements detailed in the scope of services</td>
<td>20%</td>
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<tr>
<td>Methodology and approach proposed</td>
<td>15%</td>
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<tr>
<td>Risk identification and mitigation</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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</tbody>
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**General Variations to Contract**

It is possible that other unforeseen additional work will arise during the course of this contract. As any of this may give rise to a requirement for a variation in agreed works or a contract extension, the successful consultant would be expected to quantify its charges for any potential additional work. This will also be subject to formal approval by the Client prior to any further work being undertaken.

**Terms and Conditions**

The work described above is what is currently envisaged to be required, but the Client reserve the right to vary these requirements, by mutual agreement with the successful consultant.

Submissions should be open for acceptance for up to thirty days. The Client is under no obligation to accept the lowest or any tender submission.
Intellectual Property

The reports, presentations and all intellectual property and copyright of all materials prepared under this commission shall rest with the Client.

Tender Submission and Closing Date

The deadline for submission of the tenders is 5.00pm on 28th February 2016. Tenders should be as a softy pdf copy on CD and three hard copies addressed to:

Name: Rwanda Mountain Tea Ltd

Email: info@rwandamountaintea.com

Address: P.O.BOX 1576 Kigali – Rwanda

Any question related to this tender should be emailed to majyalibu@rwandamountaintea.com before, 5.00 pm, 25th February 2016.