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# **Expression of Interest for the Moco-Moco Hydropower Rehabilitation Project, Guyana**

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## 1.0 Organisational Profile

1. Name of Applicant:
2. Status of Organisation:  - State owned company - Foreign aid organization - Private limited company - Other
3. Address:
4. Chief Functionary of the Organization and Nodal Contact Person:
5. Details of Ownership Structure and Directors /Key Management
6. Tel Fax Mobile E-mail:
7. Company/Business Registration Details (Place, Year & Act of Registration):

8. Organisation's Vision and Objectives:
9. Geographical Areas of Operation:
10. Years of Functioning and Previous Relevant Experience
11. Organisational Infrastructure ( <i>Staff strength, Facilities etc.</i> )

### 1.1 Details of Major Projects in the past Three (3) Years:

Indicate up to three (3) reference projects that the firm/sub consultancy/joint venture experiences are relevant.

#### Project 1

• Project Name			
• Name of Client			
• Country		Project location within Country	
• Participation	<input type="checkbox"/>	As lead firm	
	<input type="checkbox"/>	As associate firm	
• Value of Services		(US\$)	
• Source of Financing			
• Start Date		(dd/mm/yyyy)	
• Completion Date		(dd/mm/yyyy)	
• Name of Associate Firms (if any)			
• Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed			
• Description of the Project (less than 500 words)			

• Description of the Actual Services Provided by your Firm (less than 300 words)			
Project 2			
• Project Name			
• Name of Client			
• Country		Project location within Country	
• Participation	<input type="checkbox"/>	As lead firm	
	<input type="checkbox"/>	As associate firm	
• Value of Services		(US\$)	
• Source of Financing			
• Start Date		(dd/mm/yyyy)	
• Completion Date		(dd/mm/yyyy)	
• Name of Associate Firms (if any)			
• Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed			
• Description of the Project (less than 500 words)			
• Description of the Actual Services Provided by your Firm (less than 300 words)			

Project 3

• Project Name			
• Name of Client			
• Country		Project location within Country	
• Participation	<input type="checkbox"/>	As lead firm	
	<input type="checkbox"/>	As associate firm	
• Value of Services		(US\$)	
• Source of Financing			
• Start Date		(dd/mm/yyyy)	
• Completion Date		(dd/mm/yyyy)	
• Name of Associate Firms (if any)			
• Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed			
• Description of the Project (less than 500 words)			
• Description of the Actual Services Provided by your Firm (less than 300 words)			

1.3 Whether accounts are duly audited by a Chartered Accountant: Yes/ No. If yes, provide name and address of Auditor.

## 2.0 Project Information

1. Project Title: Moco-Moco Hydropower Rehabilitation Project					
2. Thematic areas being addressed; (√) -Rehabilitation of intake structure -Rehabilitation of head race channel -New or rehabilitated penstock -Rehabilitation or replacement of the electro-mechanical equipment -Flow monitoring equipment					
3. Project Location: Moco Moco, Central Rupununi, Region 9, Guyana, South America					
4. Background:  The 500 kW Moco-Moco hydropower station was built in the year 1999, equipped with Chinese turbines, 2x 250 kW and the scheme went out of operation in the year 2003 due to a landslide along the penstock alignment. The electro-mechanical equipment was subsequently vandalized and some parts are missing. Whether the remaining Chinese equipment could be rehabilitated is questionable and using the previous penstock alignment for the new penstock again is only advised when the alluvial deposits in this gully are removed or flushed out.  <i>4.1 Justification for the project:</i>  The Government of Guyana has declared the rehabilitation of Moco-Moco to be a priority project in order to strengthen the Lethem Power Company supplying the vicinity of Lethem and to substitute the diesel consumption with renewable energy.  <i>4.2 SWOT Analysis</i>  <i>It is expected that interested parties do submit a SWOT Analysis expressing their assessment of the project.</i>					
	<table border="1"> <tr> <td><u>Strengths</u> Every kWh produced is required</td> <td><u>Weaknesses</u> Standardized Power Purchase Agreements not yet in place.</td> </tr> <tr> <td><u>Opportunities</u> Civil structure existing, high tension line to Lethem existing</td> <td><u>Threats</u> Geological risks, high costs</td> </tr> </table>	<u>Strengths</u> Every kWh produced is required	<u>Weaknesses</u> Standardized Power Purchase Agreements not yet in place.	<u>Opportunities</u> Civil structure existing, high tension line to Lethem existing	<u>Threats</u> Geological risks, high costs
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## 5. Brief description of the proposed project:

Interested parties are expected to describe the intended business model. Two options are available:

1: An engineering contract (no EPC) on a Design and Build basis, including commissioning and handing over to the Government of Guyana, via the Lethem Power Company who would take over the responsibility to operate the scheme.

2: An IPP arrangement with a PPA agreement with the Lethem Power Company over a maximum period of 25 years; tariffs, base load and annual guaranteed production to be negotiated.

### 5.1 *Goal/Objectives:*

The goal is to contribute to an improved performance of the Lethem Power Company through cost effective solutions and the maximum possible annual energy production. The following benchmarks are indicative:

- Initial investment - max. 3500 USD per installed kW
- Installed capacity - 500 to 1000 kW, one or two units or more up to the proponent (an option would be to install one unit now and the second one later, after amortization of the first one in which case the penstock diameter would have to be designed for the design discharge of two or more units).
- Site specific production cost per unit below 18 US cents/kWh
- Annual firm production not less than 1.6 GWh

These benchmark figures need to be stated in the EoI for comparison of offers received.

## 5.2 Methodology

Describe the work plan and an anticipated implementation schedule.

## 5.3 Projected impact

Estimate the amount of work the project would generate for local labour.

## 5.4 Project outcomes

If the project is considered to have a capacity building effect for the small hydropower sector in Guyana, this should be mentioned.

## 5.5 Project sustainability

This is more concerning operation and maintenance and only to be described for parties preferring the IPP model over the Design and Build engineering contract. However, proposed guarantee periods must be indicated.

## 5.6 Project replicability(If applicable)

6. Has a similar project being done by someone else elsewhere in the past?

YES ..... No .....

If YES please provide details.



7. Estimated project cost: *(Please list all activities and associated budgets)*

<b>Particulars</b>	<b>Amount</b>
<b>Project Activity costs:</b>	
<i>Activity 1</i>	
<i>Activity 2</i>	
.....	
.....	
.....	
.....	
<b>Administrative Cost</b>	
.....	
.....	
<b>Total</b>	

<b>Funding breakdown</b>	<b>Amount</b>
Organisation contribution (if any)	
Any other (please specify).....	
-	
.....	
...	
-	
.....	
....	

8. Duration of Construction: (Should not exceed 12 months)

9. Expected social and environmental impacts:

10. Whether the project is to be executed individually or through a consortium?  
 If through a consortium, kindly provide details (Name, address, tel. numbers) of consortium members and specify the services each member will provide.

### 3.0 Evaluation Grid

The evaluation grid follows common international standards for small hydro projects. Technical aspects are rated with 60 % and financial, organizational aspects with 40% as long as they are within the benchmarks indicated: Both aspects get 100 points and are broken down as follows:

#### Technical aspects:

- Proposed electro-mechanical equipment including governing and control 35%
- Penstock alignment, penstock design including shut of valves 25%
- Powerhouse layout 10%
- Proposed rehabilitation and civil work 30%

#### Financial/Organizational aspects:

- Proposed institutional setup, contractual model 20%
- Proposed project framework 10%
- Firm annual production (kWh) 20%
- Production cost per unit (US\$/kWh) 40%
- Guarantees 10%