

## DRAFT TERMS OF REFERENCE

### CONSTRUCTION SUPERVISION CONSULTANS FOR THE REHABILITATION OF PADU DIVERSION WEIR POWER SYSTEM WORKS – TRAFALGAR

#### **Background**

Dominica Electricity Services Limited (DOMLEC) has received financing from the Caribbean Development Bank (CDB) in an amount equivalent to USD16M towards the cost of the rehabilitation and restoration of its Generation and Transmission/Distribution Systems, and intends to apply a portion of the proceeds of this financing to eligible payments under the contract.

DOMLEC operates three hydro power plants along the Roseau River namely, Laudat, New Trafalgar and Padu with installed capacities of 1240, 1760 (X2) and 940 (x 2) KVA respectively. DOMLEC will be upgrading the Padu Intake Weir which had been in a state of disrepair over the years due to the damage of the river channel from previous hurricanes and storms. The last tropical storm, Erika in August 2015 saw the river channel changing its course and damage to the Dam Head and river walls within the channel. DOMLEC has now decided to rehabilitate the existing Padu Intake Weir with the intent of increasing its' generation capacity after further damage and blockage along the river course and some of its facilities from the after effects of Hurricane Maria in 2017.

The Project is being implemented by DOMLEC through its Generation Department. DOMLEC has contracted Consultants who will assist the Generation Department with delivering the Project. The Consultants have prepared designs and contract documentation and will assist in tender administration and evaluation.

The Generation Department of the company, the Executing Department, now wishes to undertake the rehabilitation of the Padu Hydro power System by activating the existing Padu Intake weir which has been in disrepair for some years now.

#### **Description of the Project**

The Padu Power station is the last of the three power stations which is supplied by an approximately 2 kilometers by 1 meter in diameter pipeline running through the village of Trafalgar via two tunnels, 104

and 49 meters long about 900 meters downstream of the Trafalgar Power station. After the water is spent at the Padu Power Station, it then flows back into the Roseau River. Approximately one thousand feet upstream of the Trafalgar Hydro station is a catchment area (dam) in the river which diverts a percentage of the water into the Padu Intake Tank. The principal purpose of this system is to maintain a steady flow of water to the Padu Intake and in the event there is excess water, it is spilt over back into the river. This system is called The Padu Diversion Weir. During the passage of Hurricane Maria, the Diversion Weir system was completely dislodged and washed away due to the large volumes of water and debris from the river swells. The natural river channel/ bed was also transformed. Sections of a retaining wall which also channeled water into the weir were dislodged and pushed far downstream. The Walkway Footbridge which is used to access the weir was also severely damaged. The rehabilitation seeks to correct some of the design defects by incorporating resiliency into the new design. The new design takes into consideration the concept of one in one hundred years flood to create a more resilient system to climate change. Material and design specifications will take into consideration resilience to climate change. Based on this, the system will be more resilient than the previous. Work will be concentrated on DOMLEC's compound and in the river upstream of the Trafalgar Hydro station. A permanent access has to be created hence some excavation will occur on the riverbank. Some river training works, construction of a dam head within the existing river channel, construction of a gate lock off valve system and trash deflector at the mouth of the weir will take place. The reconstruction of the walkway bridge over the weir and extension and heightening of the reinforced concrete river wall also forms part of the project scope.

## **Objectives**

The objective of the consultancy is to (a) ensure high standards of quality assurance in the execution of work and completion of work within stipulated time period; (b) to provide comprehensive supervision of project implementation activities carried out by the Contractor to ensure complete compliance with the drawings, technical specifications and various stipulations contained in the Contract Documents; (c) to ensure efficient construction supervision by personnel who are experienced in modern methods of construction supervision and contract management; (d) to act on behalf of DOMLEC to review all activities associated with Construction to ensure compliance of requirements of Contract Agreement in order to have a sound Project; (e) to report to DOMLEC on the financial and technical aspects of the Project and to assist

DOMLEC for effective project monitoring by providing project management and monitoring support .The duration of the assignment is expected to be for a period of nine months.

### **Scope of Consulting Services**

The scope of services to be executed by the consultant includes but is not limited to the following:

- Issue instructions, in accordance with the authority specified in the Conditions of Contract, to the Contractor such that works can proceed with due expedition.
- Comment on the Contractors' proposals and methods for executing the works.
- Monitor progress against programme, instructing the Contractor to revise its programme as necessary in order to meet due completion dates. Hold regular progress meetings with the Contractor and take minutes for record purposes.
- Ensure that the works are executed to the correct line and level and that the quality of workmanship and materials are in compliance with the technical specifications.
- Ensure prompt responses when the Contractor calls for inspections and approvals.
- Receive, draft, record and send any correspondence associated with the Works.
- Instruct the Contractor to perform any additional works or variations within the limits set out in the Contract or that have been duly authorized by the client.
- Report to the client on the physical progress of the works.
- Keep full and complete records on site of all matters pertaining to the Works including, but not limited to, correspondences, site instructions, variations, revised drawings, site sketches, minutes of meetings, testing, inspections, approvals, measurement, progress reports and completion certificates.
- Ensure that the Contractor in particular complies with contractual obligations in respect of labour standards and mitigation of impacts on the environment.
- Maintain a supervisory presence when the Contractors are executing Permanent Works.
- Ensure that the Contractor follows good practice in respect of labour standards including health and safety issues.
- Inform the client of and keep detailed particulars and records pertaining to any matters that may constitute a contractual dispute.

- Carry out inspections, instruct and supervise any necessary remedial works before the official completion of the project.
- Undertake tests, sampling and other exercises to ensure the quality and assurances of specifications are in compliance with designs.
- Ensure safety during construction and adherence to all requirements under the Environment Social Management Plan (ESMP) prescribed under the Contract
- Certification of work volume and interim certificates for progress payments
- Perform all other tasks not specifically mentioned herein but necessary to properly supervise and control all construction activities in accordance with the terms of the Contract.

### **Professional Qualifications of the Proposer Firm and its Key Personnel**

The Service Provider must be a professional company registered for work supervision services and with at least 10 years of relevant experience. It will have to demonstrate that it has institutional and managerial capacities and experienced human and adequate physical resources capable to conduct services as described in the previous sections.

A reference list of the most recently implemented relevant projects needs to be submitted alongside the offer, including the contact details of organizations/clients on the success of similar projects/contracts of no less than 2 references in the past 5 years. The Contractor must have at least 1 contract/assignment related to the supervision of similar works (in scope and complexity) in the last 3 years.

The Service Provider shall make his own assessment of the inputs needed to carry out the work covered by these terms of reference. It shall provide adequately qualified staff in terms of expertise and experience and ensure sufficient time allocation to complete the required activities and to achieve the objectives of the project.

The key experts should meet the following qualifications.

Position	Qualification/ Competencies	General/Overall Experience (years)	Job Specific experience (years)	
Construction Management Specialist / Team Leader	B.Sc. Civil Engineering or Construction Management ,	10	<ul style="list-style-type: none"> <li>• 5 years' professional experience in planning, designing and construction Supervision, management of major water sector projects on large river systems.</li> <li>• 5 years' specific experience in construction supervision of major dams/ bridges/ major canal projects at similar position in renowned Consultancy firm using ICB procedures under FIDIC Conditions of Contract for Construction</li> </ul>	
Health & Safety Expert	University degree in any technical field	5	At least 3 years of health & safety experience with a HS certificate	