



Kigali, on...../..... / 2022

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Request for Expressions of Interest (REOI)

Hiring Consulting Firm to Carry out Supervision of Engineering design supply and installation of 15kV Switching substations and Rehabilitation of associated Distribution of lines in KIGALI

The Government of Rwanda has applied for financing from the European Investment Bank (EIB) toward the cost of the Rwanda Universal Energy Access Project (RUEAP) and intends to apply part of the proceeds toward payments under the Contract for **out Supervision of Engineering design supply and installation of 15kV Switching substations and Rehabilitation of associated Distribution of lines in KIGALI** under the European Investment Bank (EIB) Funding.

The services included under this project are:

The project consists of Supervision of the installation of 15kV switching substations in Kigali. This project will enable to improve electricity Distribution Network in Kigali. The Project funded by EIB shall involve the construction of new 15kV switching substations in the different parts of Kigali City. The selected cabins shall be equipped with Gas Insulated motorized breakers and SCADA that will enable remote switching from the control center, reinforcement of existing Over-head MV feeders that are poorly designed and need to be re-conducted or newly re-constructed, extension of MV lines and associated cabin to enable contingency supply and fault isolation, linking 2 existing cabins to create a switching mechanism that allows load transfer incases of contingencies The detailed descriptions are provided in Section (6) below alongside the location map shown in Annex-1 of the Terms of reference.

1. SPECIFIC ASSIGNMENT

The purpose of the consultancy service is to carry out the role of supervision for energy access construction works. The consultant will carry out the scope outlined below up to commissioning and preparation of final Project Completion Reports

The Consultant tasks shall include but not limited to the following:

In general, the scope of consultancy services shall include, but not limited to:

- a) Assessment and approval of the contractor's/suppliers detailed design documents and drawings for compliance with the specifications in accordance with sound engineering practice.
- b) Supervision of all types of site construction activities and ensure that the works are done in compliance with the contract plans and specifications

- with regards to both quality and timing.
- c) Inspecting and witnessing with EDCL representatives the factory acceptance tests (FAT) during the manufacture of major items of equipment and at the manufacturers' premises.
 - d) Monitor procurement, delivery and management of materials and equipment at field sites.
 - e) Supervise and approve the testing and commissioning of works.
 - f) Check and approval of complete set of "As-Built" drawings, and documentation; and hand over formalities to the executing agency including the required quantities as specified in each contract document.
 - g) Holding regular planning and progress meetings to monitor progress and prepare minutes of meetings that shall be shared between the project executing agency representatives, contractors for review and approval.

2. EXPERTISE REQUIRED

Consultancy Firm:

The Consultant must be highly qualified and for that purpose should submit evidence of firm's previous experience in works associated with design, supervision, and construction management of similar nature (experience in the supervision of electricity distribution and/or transmission projects) and preferably of projects located in the Great Lakes Region.

All site supervision staff should have adequate experience, similar to this Project area. In addition, it is required that all field personnel of the Consultant be proficient in international communication skills, particularly in English.

The qualified consultant firms with capacity to perform the required services will be shortlisted. The request for proposals will be issued to shortlisted consultant firms, which will provide technical and financial proposals.

The consultant will carry out the scope outlined in the terms of reference. The contract duration will be 32 months from the contract commencement date up to the final completion of the project; including the following:

- 20 months (1 month for construction contract commencement, 18 months for contract duration, 1 month for preparation of Project Completion Reports)
- 12 Months of liability period (during this period of the consultant staff will be part time).

The Energy Development Corporation Limited (EDCL) now invites eligible consultants to indicate their interest in providing these services.

Consultants may constitute joint ventures to enhance their chances of qualification.

Eligibility criteria, establishment of the short-list and the selection procedure shall be in accordance with the Guide to Procurement for projects financed by the EIB, *dated September 2018*, which is available on the Bank's website at www.eib.org.

The shortlisting criteria are as follows:

i) ELIGIBILITY

The Firms from all countries are eligible except for those debarred by the Bank (EIB) and the EU.

ii) EXPERIENCE IN SIMILAR ASSIGNMENTS (70 points)

The EOIs will be checked to assess whether the firms have demonstrated experience in management and supervision of works of similar nature (electricity transmission and distribution works) over the last 10 years.

The consultant firm should have at least 3 similar assignments executed in the above-mentioned period, among which at least one in sub-Saharan Africa and at least one relevant to projects financed by Multilateral Development Banks.

The similarity should be in terms of nature and value of at least 500,000 USD.

iii) Financial Capacity (30 Points)

The interested consultant firms should demonstrate their financial capacity (Financial position) to implement this assignment.

The financial position will be verified in the Audited financial statement of the last three years:

- ✓ Average annual turnover should be at least 1.8million USD; (15 points)
- ✓ Availability of financial resource such as liquid assets (The current ratio) should be greater than 1) (15points)
- ✓ The current ratio is calculated as follow: $\text{current Asset} / \text{current Liabilities}$
- ✓ In case of joint venture, each partner should submit their Audited financial statements of the three last years.
 - The turnover will be calculated for each partner; the combined average annual turnover of the last three years of the joint venture company should meet the requirement. The minimum average annual turnover of one of the partners should not be less than 40% of the requested value.
 - Each partner should have a current ration greater than one.

The firms will be ranked according to their experience and financial capacity.

The minimum score to be qualified is 70 points.

The Terms of Reference (TOR) for the assignment will be published on REG Website

Expressions of interest must be delivered through the e-mail addresses mentioned below by 06 / 02 / 2023 before 5.00 PM Local Time and mention:

Consulting Firm to Carry out Design and Supervision of works related to Power Distribution Lines Construction.

Energy Development Corporation Limited (EDCL)
KN 2 ST, P.O. Box 3855 Kigali, Rwanda; Procurement Unit, 11th Floor KCT,
RUEAP Senior Procurement Specialist, Tel: + 250 788466130
Email: procurement@edcl.reg.rw
copy to cuwajeneza@edcl.reg.rw and jmujawase@edcl.reg.rw

Submission requirements:

- a) brief overview of the firm/consortium including company profile, organization and list of staffing meeting the Key staff requirements set out in the Terms of reference;

- b) details of firm's/consortium's similar experience and related assignments covering the last 10 years and strictly related to the envisaged services, including information on contract value, contracting entity/client, project location/country and source of financing, duration (mm/yy to mm/yy), expert months provided (if different from duration), main activities, objectives, completion certificates (maximum 10 references);
- c) Audited Financial statements for the last 3 years.
- d) EIB Covenant of Integrity duly completed and signed. Form is available under [https://www.eib.org/attachments/strategies/guide to procurement en.pdf](https://www.eib.org/attachments/strategies/guide%20to%20procurement%20en.pdf).

The consultant firms will be selected in accordance with EIB guidelines and the detailed information in terms of references will be published on REG website (www.reg.rw).

IMPORTANT: It should be noted that, in the Covenant of Integrity, the tenderer is requested to self-declare all sanctions and / or exclusions (including any similar decisions having the effect of imposing conditions on the tenderer or its subsidiaries or to exclude the said tenderer or its subsidiaries, such as temporary suspension, conditional non-exclusion, etc.) imposed by the European institutions or any multilateral development banks (including the World Bank Group, the African Development Bank, the Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank or Inter-American Development Bank), regardless of the date of issue and the expiration or not of such decisions and of the current status of any sanction and / or exclusion. In this regard, any omission or misrepresentation, made knowingly or recklessly, may be considered as fraud under the EIB Anti-Fraud Policy. Therefore, the Client reserves the right to reject any offer presenting an inaccurate or incomplete Covenant of Integrity and may cause the rejection of the offer for prohibited conduct.

Sincerely.

For



Gentille UMUSHASHI
Head Procurement Management Services



Félix GAKUBA
Managing Director

11th Floor KCT, KN 2 ST, Nyarugenge District, P.O. Box 3855 Kigali, Rwanda
Tel.: + (250) (0) 787172265, email: info@edcl.reg.rw, website: www.reg.rw

Consulting Firm to Carry out Supervision of Engineering design Supply and installation of 15kV switching substations and Rehabilitation of associated Distribution of lines in KIGALI.

Terms of Reference

Rwanda Universal Energy Access Project (RUEAP)

1.0 INTRODUCTION

The Government of Rwanda has applied for financing from the European Investment Bank (EIB) toward the cost of the Rwanda Universal Energy Access Project (RUEAP) and intends to apply part of the proceeds toward payments under the Contract for Design and Supervision of works related to Power Distribution Lines Construction and Kigali distribution network Reinforcement under the European Investment Bank (EIB) Funding.

The services included under this project are:

Supervision of the **installation of 15kV switching substations in Kigali.**

This project will enable to improve electricity Distribution Network in Kigali.

The contract duration will be **32 months** from the commencement date of contract.

This period includes the following: **20 months** (1 month for construction contract commencement, **18 months** for contract duration, **1 month** for preparation of Project Completion Reports and **12 Months** of liability period.

The project forms part of the Government of Rwanda (GoR)'s Rwanda's National Strategy Transformation (NST1) which is aimed to achieve Universal Electricity Access to Rwandan households. To support this development, the GoR through Rwanda Energy Group (REG)/Energy Development Corporation Limited (EDCL) launched a programme to increase access to electricity as well as strengthen distribution system in Rwanda. This project will increase the capacity and ease of operation of distribution networks as well as improving the reliability of electricity supplies in the country and contribute to the target of having Universal Electricity Access by 2024.

2.0 PROJECT CONCEPT AND AREA / PROJECT DESCRIPTION

The Project funded by EIB shall involve the construction of new 15kV switching substations in the different parts of Kigali City. The selected cabins shall be equipped with Gas Insulated motorized breakers and SCADA that will enable remote switching from the control center, reinforcement of existing Over-head MV feeders that are poorly designed and need to be re-conducted or newly re-constructed, extension of MV lines and associated cabin to enable contingency supply and fault isolation, linking 2 existing cabins to create a switching mechanism that allows load transfer incases of contingencies The detailed descriptions are provided in Section (6) below alongside the location map shown in Annex-1 of the TOR.

3.0 PROJECT OBJECTIVE

The objective of this project is to reinforce the distribution network, improve the quality of power supply in Nyarugenge, Gasabo and Kicukiro Districts, Kigali City.

4.0 PROJECT EXECUTING AGENCIES

Rwanda Energy Group (REG) through Energy Development Corporation Limited (EDCL) has established its own project implementation unit (PIU). The PIUs will manage all aspects of project implementation, assisted by the project engineering and supervision consultant.

5.0 PROJECT FINANCING

The European Investment Bank will finance the total cost of the Project.

6.0 CONSULTANT'S SCOPE OF SERVICES

The Consultant's scope of assignment will include construction supervision services in relation the tender for design, supply, and installation of 15kV switching substations in the different parts of Kigali City which will be implemented into 1 Lot

6.1. Construction of 15kV Switching substations in different parts of Kigali City

S/N	District	Name of MV/LV Cabin	Scope of Works	Voltage Level (kV)	GIS Location Coordinates	
					X	Y
1	Nyarugenge	Kiyovu	New Switching Cabin	15/0.4	507113.56	4784286.2
2	Nyarugenge	Miniplan	New Switching Cabin		506334.22	4785300.4
3	Nyarugenge	Lue Elephant	New Switching Cabin		507812.18	4783867.6
4	Gasabo	Utexrwa	New Switching Cabin		508487.01	4787026.4
5	Gasabo	PH Paul	New Switching Cabin		507778.95	4785699.3
6	Gasabo	Kibagabaga 1	New Switching Cabin		512051.45	4786879.4
7	Gasabo	Urugwiro I	New Switching Cabin		509082.14	4785715.8

8	Kicukiro	Kanombe Airport	New Switching Cabin		515345.1	4781975.8
9	Kicukiro	Kanombe Military	New Switching Cabin		518492.58	4781021.3
10	Gasabo	Remera 2	Additional MV panels		512248.09	4783476.3

6.2. Construction of Medium Voltage and Low Voltage lines as following:

Length of lines			
MV LINES		LV LINES	SERVICE CABLE (km)
Overhead (km)	Underground (km)	Underground (km)	
22.3145	17.897	37.86	116.64

7.0 OBJECTIVE OF THE CONSULTANCY SERVICES

The objectives of this phase will include supervision and management of the design, Supply and installation of Low voltage and medium voltage lines and services connections of the whole scope of the project.

The end objective is to ensure the client (EDCL) obtain economic solutions of high technical standards, achieve the intended project outputs and outcomes.

8.0 REQUEST FOR BANK'S REVIEW

"Candidates should alert the promoter in writing, with a copy to the European Investment Bank to procurementcomplaints@eib.org, in case they should consider that certain clauses or provisions of the REOI might limit international competition or introduce an unfair advantage to some candidates."

9.0 SCOPE OF THE CONSULTANCY SERVICES

In general, the scope of consultancy services shall include, but not limited to:

- a) Assessment and approval of the contractor's/suppliers detailed design documents and drawings for compliance with the specifications in accordance with sound engineering practice.
- b) Supervision of all types of site construction activities and ensure that the works are done in compliance with the contract plans and specifications with regards to both quality and timing.
- c) Inspecting and witnessing with EDCL representatives the factory acceptance tests (FAT) during the manufacture of major items of equipment and at the

- d) manufacturers' premises.
- d) Monitor procurement, delivery and management of materials and equipment at field sites.
- e) Supervise and approve the testing and commissioning of works.
- f) Check and approval of complete set of "As-Built" drawings, and documentation; and hand over formalities to the executing agency including the required quantities as specified in each contract document.
- g) Holding regular planning and progress meetings to monitor progress and prepare minutes of meetings that shall be shared between the project executing agency representatives, contractors for review and approval.

General assistance for administration of the Project including: -

- i) Giving all necessary instructions to the Contractor, provided that the Consulting Engineer shall not without the prior approval of the "Client" give any instructions which in the opinion of the Consulting Engineer are likely to substantially increase the cost of the Works. Impartially advise on any dispute or differences that may arise between executing agency (EDCL) and the contractors.
- ii) In case of change (variation) orders, completion time extension and/or financial claims arising from the contractors, make in depth assessment and recommendations to the executing agencies based on the day-to-day records and applicable conditions of contract.
- iii) Establishment of contract billing procedures, verification and certification of all contractor/suppliers billing before submission to executing agency for issue of authorization of payment,
- iv) In consultation with the executing agency, issue completion certificates and final acceptance certificates to contractor as per the terms and conditions of the contracts,
- v) Review, approve, monitor and supervise the implementation of the occupational Health and Safety Management Plan proposed by the contractors.
- vi) Monitor and supervise the implementation of the Environmental and Social Management Plan outlined in the Environmental and Social Impact Assessment Study, make proposals for amendments as deemed necessary by the consultant due to his professional experience and/or evidence of need during project implementation.
- vii) Monitor compliance by contractors during construction and commissioning for applicable legal requirements of Rwanda.
- viii) Confirmation that the project is in compliance with the guidelines of EIB referring to the applicable Environmental, Social, Health and Safety, Labour and Safeguard policies.
- ix) Examine invoices submitted by contractors on the basis of supply and service contracts to determine whether the services, works, and supplies being invoiced were actually performed with supporting documents. Henceforth a payment certificate shall be issued by the consultant accordingly.
- x) Establishment of contract billing procedures, verification, and certification of

- all contractor billing before submission to executing agency for issue of authorization of payment,
- xi) In consultation with the Executing Agency, issue completion certificates and final acceptance certificates to contractor as per the terms and conditions of the contracts,
 - xii) Preparation of monthly and quarterly project progress reports as required by the Executing Agency, and to address issues identified by other stakeholders.
 - xiii) Prepare and submit the Project Closure Report, that outlines, inter-alia, achievements in meeting the objectives and target set out for the implementing agency under the European Investment Bank (EIB) requirements.

10. DETAILED DESCRIPTION OF SCOPE OF SERVICES

10.1.1 SUPERVISION AND APPROVAL OF TECHNICAL DESIGNS AND DRAWINGS

The consultant shall:

- Check whether all the calculation notes and hypotheses are taken into account, the drawings, diagrams and documents submitted for his approval are prepared in agreement with the contract specifications and accepted codes of practice. The staff of EDCL shall participate in the assessment and approval works, and the consultant shall provide to them the general guidelines and widely accepted principles in the approval of detailed design documents.
- Coordinate the civil works detailed designs with the civil works subcontractors' (if any) working methods and equipment, if necessary,
- Coordinate the civil work design considering information provided by the equipment's manufacturer,
- Ensure that the civil works detailed designs are prepared taking into account the mitigation measures provided in the Environmental and Social Management Plan and the RAP,
- Approve detailed designs, drawings, manufacturing and assembly documents as well as quality plans of all equipment covered by each contract,
- The consultant shall ensure that all the project systems can be integrated into the existing SCADA system for EDCL and advise on any extensions to such SCADA systems,

10.1.2 SUPERVISION OF SITE ACTIVITIES

The consultant shall:

- Review and approve contractor's works schedule and then prepare a coordinated work schedule. In addition, in consultation and collaboration with the Client's Engineer, prepare the coordinated work schedule for the whole project.
- Define the management methods and budget monitoring as well as the schedules for defining any corrective measures that may need to be taken sufficiently well in advance,

ensure coordination and supervision of all the works, materials and equipment delivery and storage, construction procedures in compliance with the relevant Standards (including environmental and social standards) and Codes of practice,

- Ensure interfacing and compatibility between equipment supplied by the substation contractor and distribution line contractor. In addition, ensure the interfacing and compatibility of the new equipment and system with the existing substations control, communication, protection and SCADA system.
- Check the conformity of the drawings with contractual arrangements on site;
- Interpret and evaluate additional work carried out by contactors, taking into account the construction methods used; if necessary, adapt the drawings and working design documents to actual site conditions; approve Contractors' construction methods.
- Check all final layouts of structures built by the Contractors, on the basis of the layout drawings they provide.
- Settle as far as possible any conflict arising between the contractor, subcontractors and EDCL,
- Assist the EDCL with regard to all questions relating to the contract, in particular compliance with performance bonds, advance payment guarantees, insurance and time extensions and claims, etc.
- Supervise all construction and installation activities and schedules,
- Supervise the performance of all tests required to ensure the good quality of all materials used in construction, in particular soils, rocks, aggregates, cement, etc. and analyze test results to ensure good-quality construction; Check the quality control, environmental, health and safety procedures proposed by Contractors, paying special attention to the following tasks.
 - Checking of preliminary tests prior to the works on the concrete formulas and doses proposed by the Contractor.
 - Acceptance of excavations (areas to be backfilled, foundations for towers and base blocks) including environmental aspects (erosion, roads crossings)
 - Checking of reinforcement drawings and assembly drawings.
 - Checking of the thickness of the various sections before assembling towers
- Perform the necessary checks to assess the progress of works and conformity with the corresponding regulations and standards (including environmental regulations and standard), approve the equipment acceptance procedures to be followed on site by Contractors, issue payment certificates record of payments made by the Execution Agency to contractors.
- Check the quantities of work carried out and certify invoices issued by Contractors.
- Chair site meetings, draw up minutes of meetings, prepare periodic site monitoring reports and acceptance reports; check the quality insurance system applied by all the Contractors during the works.
- Recommend any additional modification judged to be necessary in relation to the provisions set forth in the contract, after consultation with Project EDCL, draw up monthly progress reports according to PEAs format, quarterly progress reports according to Financiers' format record all site activities,
- Assist the PEAs with all contractual aspects relating to Contractors (guarantees, test certificates, insurance, claims, Environmental and Social Management Plans, etc)

- Check and supervise the measures needed to ensure health, safety and environment protection in accordance RBB or REMA's approved report (approval conditions) to ensure that all arrangement required by the environmental and social management plan (ESMP) have been made by the Contractors' responsible for carrying out the works,
- Monitor project-related impacts to environment, project affected people, cultural heritage, propose management of these impacts and design additional contingency/mitigation measures in accordance with the ESMP, if deemed necessary
- Witness and approve the contractor's on-site tests and commissioning for each equipment, materials, and system (protection, communication, control, etc.) covered by the Project.
- Be flexible to render technical services to the owner e.g. negotiating similar assignments.
- Supervise the preparation of as-built drawings, issue completion and pre-commissioning certificates for the equipment,

10.1.3 ENVIRONMENTAL, SOCIAL, GENDER AND HEALTH & SAFETY MITIGATION MEASURES AND REPORTING

The consultant must ensure that all the environmental and social impact mitigation and monitoring measures in the Project's Environmental and Social Management Plan (ESMP) and Environmental and Social Impact Assessment (ESIA) are appropriately executed by the contractors.

The consultant shall perform environmental, social, gender and health & safety monitoring during all stages of the Project. The consultant shall perform, among others, the following activities during the construction phase of the Project.

- Check whether all environmental and social issues are taken into account, including compliance with local laws, and compliance with the European Investment Bank (EIB) safeguard requirements.
- The required permits are available on time to the contractors and that the EDCL is fully involved in the monitoring process.
- The ESMP implementation reports are dully delivered to the National Environmental Agency on an agreed periodicity and that comments provided are taken into consideration by the contractor.
- Environmental Agency is facilitated in its work of conducting environmental monitoring audits of the project.
- Checking availability of adequately equipped first aids kits and training and appointment of first aiders by each contractor.
- Checking health and safety awareness of the workers regarding the relevant hazards of their work,
- Ensuring full participation of affected people in the planning and implementation processes.
- Ensure that during the commissioning and operation phase the contractor has undertaken the final cleanup operation.
- Ensure that all construction contractors include a general environmental, social, health and safety management plan (ESHS-MP) in their bid proposal, based on the ESMP for the Project.

- Ensure that all construction contractors prepare an acceptable, detailed ESHS-MP and an HIV/AIDS Awareness and Prevention Plan prior to commencement of site preparation and construction activities.
- Ensure that all construction contractors implement the detailed HSES-MP and HIV/AIDS Awareness and Prevention Plan and otherwise adhere to sound construction management guidelines.
- Prepare a baseline for monitoring the socio-economic changes that will occur to communities due to the project with regard to economic status, employment and income levels by gender (where feasible), knowledge, attitudes and practices (k.a.p.) about communicable diseases such as HIV/AIDS, etc
- In collaboration with EDCL, follow up and evaluate the implementation of compensation and livelihood restoration plans to get an update on the project affected peoples (PAPs) socio-economic status regarding their livelihood even those who have moved out of the area to assess if the project has made them worst off or better and recommend appropriate action.
- Conduct a labor audit in terms of bonded labor or employment of children underage.
- Keep record of and report on industrial accidents and incidents including tracking the LTIFR (Lost Time Injury Frequency Rates) and incidence trends; The consultant shall carry out the necessary environmental monitoring activities together with EDCL.

In addition, the consultant shall:

- Include in his monthly and quarterly progress reports, activities performed concerning environmental and social mitigation measures.
- Ensure that EDCL has conducted a clear public notifications and involvement of local authorities; including ensuring that the grievance reporting and redress mechanisms are known to the affected persons and communities.

10.1.4 INSPECTION, TESTING AND ACCEPTANCE DURING MANUFACTURING

The work includes inspection and factory test witnessing of equipment and material for the project. The equipment to be supplied under this project should be inspected and tested in the manufacturers testing stations.

The consultant shall be responsible for quality assurance of all equipment and material to be supplied under all contracts.

The consultant shall:

- Ensure contractor's compliance with deadlines for manufacturing, testing, shipping and supplying equipment on site.
- Ensure that equipment and materials conform with contract specifications and standards.
- Examine any modification in relation to the contract specifications that the contractor may wish to make. Any modification leading to additional costs must be submitted to EDCL for approval.

- Examine and approve the program for factory testing and acceptance proposed by the contractor, participate in works acceptance procedures and draw up the reports for each works inspection.
- Acceptance procedures for all High Voltage (HV) equipment are to be carried out in the manufacturer's site. For the rest of the works, EDCL shall hand the Consultant a list of the main materials for which the Consultant is to carry out acceptance procedures at the manufacturer's site.
- Ensure that all equipment and materials have been subjected to type tests already and certified and all additional test described in the tender documents have to be performed accordingly.
- Participate at factory tests and others for main items of equipment at contractor/suppliers' factories in collaboration with the executing agencies. The consultant price proposal for factory test witnessing shall include all consultant personnel expenses, travel, hotel, and allowance expense.
- Written reports shall be provided by the consultant on each factory inspection and testing.

10.1.5 INSPECTION OF MATERIAL AND EQUIPMENT DELIVERIES

- Ensure that materials delivered on site are in conformity with stipulated specifications and work schedules.
- Inspect and monitor damages, defects and the corresponding replacement of damaged equipment and materials
- Issue acceptance certificates of goods.
- Checking proper storage of materials and equipment as per the manufacturer's storage procedure and recommendation.
- Check the quantities of equipment/materials supplied and certify contractor's invoices.

10.1.6 WORKS COMPLETION AND SITE TESTS AND COMMISSIONING

At the end of the construction works the consultant shall:

- Perform acceptance procedures for all the structures and equipment and issue the corresponding completion certificates in accordance with the relevant conditions of contract with prior consent of EDCL.
- Review and approve contractor's as-built Documentation are as per the Contract: drawings, maps, BoQs, Stacking tables operation and maintenance manuals, etc.

Site inspection, tests and commissioning of distribution lines shall be the responsibility of the contractors. However, the consultant shall:

- Review and approve the commissioning test procedure proposed by the contractors. This shall set out:
 - The roles and responsibilities of each party involved.
 - Coordination of tests on the various lots/contracts.
 - A detailed program of commissioning tests for functional sub-assemblies or parts of works, in accordance with the Contractor's works schedule.
 - Protection system coordination and settings calculations.

- Commissioning test and inspection formats prepared by the contractors,
- Define commissioning conditions such as the state and availability of the power network, interference with other structures in progress, safety procedures, etc.
- Coordinate all the tests to be performed by contractors
- Witness and approve the site inspection, commissioning test and final functions operation with the participation of EDCL staffs.

10.1.7 PAYMENT CERTIFICATION

Check the quantities of work carried out and equipment/materials supplied and certify contractor's invoices. Each contractor shall submit to the respective consultant's Resident Project Manager/Engineer,¹ statement showing costs of the work executed up to the end of the month. The form of the statement shall be in accordance with standard format agreed by EDCL and the consultant. All relevant measurement sheets and quality schedules shall be submitted together with the statement. The Resident Project Manager/Engineer of the consultant shall compare the statement with his own records and solve issues of differences with the contractor's representative. The updated master copies of progress charts shall be submitted to EDCL along with the monthly statement, the timetable progress charts (with planned and actual progress), the works diary, the monthly site financial statement, etc.

10.1.8 SITE MEETINGS

The consultant shall:

- Consultant's Resident Project Manager/Engineer shall hold site meetings regularly as required with the contractors' site representatives and EDCL staff.
- Chair site meetings and draw up minutes of meetings,
- The meeting shall deal with (i) approval or rejection of executed work elements; contractor's work schedule, contractor's work method, temporary works, and additional works (if any), etc.

Minutes of the meeting shall be prepared and signed by the participating parties. Copies of the minutes shall be given to the participants. Other members of the Resident Project Manager's/Engineer's field staff shall also attend the meeting.

10.1.9 LIAISON MEETING

The Resident Project Manager, based in Kigali, shall hold quarterly meetings with all contractors' site managers and EDCL. The objectives of the meetings are:

- To thoroughly review and discuss on the work progress of contractors.
- To resolve problems (if any),

¹ See the list of staff of Section 12.3 below and clause 17.1 of the General Conditions of Contract in SBD Procurement of Plant, Design, Supply and Installation

- To review financial matters.

The consultant's Resident Project Manager, assisted by PIU coordinator of EDCL, shall be responsible for the preparation of the minutes of such a meeting.

The Resident Project Manager is responsible to ensure all works are completed within the contractually agreed timeframe.

10.1.10 SITE DIARY

A one page, one-day duplicate diary shall be maintained on site by the consultant site supervisors. The site diary shall include:

- The weather conditions.
- Major works completed, accepted, or rejected.
- Written instructions given to the contractors.
- Problems encountered; and
- Site meetings and other events, which have bearing on the project implementation.

10.2 REPORTS

10.2.1 GENERAL

All documents and reports to be prepared and submitted including the contract documents must be in English.

All reports shall be submitted in 3 copies. Content of technical reports must be discussed and agreed upon with EDCL.

10.2.2 PROGRESS REPORTS

The consultant shall prepare and submit a coordinated monthly and quarterly progress report to EDCL. The Consultant shall submit a monthly report each month including the state of progress of the works including financial aspect and the minutes of site meetings. The quarterly progress reports shall be prepared covering the technical and financial aspects of works in accordance with the Bank's guidelines. The reports by contracts shall at least include.

i. Written description of:

- Progress of the works and expenditure to-date.
- Progress of the works during the month.
- Future planned works and expenditure.
- Summary of the prevailing weather conditions at site during the reporting period.
- Technical problems, if any.

- Delays of any kind if any
 - List of consultant's and contractor's personnel
 - List of machinery and equipment scheduled and made available of the works by the contractors; and
 - Any other issues, which could facilitate or affect the progress of the work.
- ii. Tabulated summary of work progress
- iii. Graphical presentation of:
- Physical progress planned/actual.
 - Cash flow planned/actual
 - Expected future progress and expenditure; and
 - Labor force size.

10.2.3 PROJECT CLOSURE REPORT (PCR)

Upon completion of the project construction activities, the consultant shall prepare a provisional Project Closure Report (PCR) within a period not exceeding two months. The PCR will form a comprehensive record of the design, construction and erection works accomplished including: -

- i) A description of changes or modifications to the design.
- ii) Problems encountered and solutions adopted; and
- iii) Overall construction volume, quantities, and costs
- iv) Lesson learnt on Project design and implementation,

The procedure for preparing this report is as follows:

- (i) The Consultant shall submit the table of contents to the Owner for approval before starting to write the report.
- (ii) After receiving approval of the table of contents, the Consultant shall draw up a provisional report in three copies. This will be submitted to the Owner, who will then have a period of 30 days to make any observations.
- (iii) On the basis of the Owner's observations, the Consultant shall print copies of the provisional completion report whose number shall be determined by EA.

10.2.3 FINAL COMPLETION REPORT

At the end of the guarantee period and after final acceptance, provisional completion report drawn up after the provisional acceptance of the works shall be updated to form the final completion report for the works. This will then in soft and hard copies with number of copies determined by EA.

10.3 KNOWLEDGE TRANSFER AND TRAINING OF THE EMPLOYER'S STAFF

EDCL consider this consultant services contract as an opportunity for knowledge transfer to a number of their staff through in country on the job training working with the consultant and contractors. Such training and knowledge transfer shall be conducted during both the stages of review & approval of the contractor's detailed design, as well as during the construction stages of the Project.

During execution of the consultant's service contract, the consultant shall:

- Pay special attention to training and involving EDCL staff,
- organize training on the job for the EA's engineers responsible for the works and those responsible for the operation and maintenance of the equipment by integrating them into his works supervision team,
- monitor the training courses provided by Contractors in the framework of their contracts,
- organize/supervise and monitor training to increase awareness of occupational health and safety issues to minimize health risks according to ESMP,
- Organize/supervise and monitor training in the executing agencies to increase awareness of environmental and social issues according to ESMP.

10.4 ASSISTANCE DURING THE DEFECTS LIABILITY PERIOD

The consultant shall:

- Ensure that all defects and remarks are properly cleared/removed by the contractors as per the contract and submit quarterly reports to EDCL.
- Ensure that all operation and maintenance manuals and all type of as-built drawings are submitted and handed over to EDCL as per the requirement and quantity specified in the contracts.
- During the guarantee period, the Consultant shall answer questions sent to him by fax or email from his present location.
- At the end of the liability period, the consultant's Resident Project Manager shall perform a one-week assignment in Rwanda to prepare final acceptance certificate and prepare a final report on this basis.

10.5 ASSISTANCE TO THE OWNER WITH OPERATION MAINTENANCE

- The Consultant shall draw up a general operation and maintenance manual giving references to the operation and maintenance manuals for the key equipment supplied and installed by Contractors.
- The Consultant shall assist the Owner in classifying and archiving all the operation and maintenance manuals received.

11. CONSULTANT'S TEAM, QUALIFICATION REQUIREMENTS AND MAN-MONTHS ALLOCATION

The Consultant shall finalise his organisation chart in accordance with the needs of the project

All positions shall be assigned to highly qualified staff, in view of the works implementation schedule, the Consultant shall draw up a table showing the man-months required for all

staff assigned to the tasks described above

11.1 GENERAL

The consultant must be highly qualified for design, supervision, and implementation of the Project (at least 10 years of experience in the field), and for that purpose should submit evidence of firm's previous experience in works associated with design, supervision and construction management of similar nature (experience in distribution Substations projects).

The consultant firm should have also at least 3 similar projects executed in the last 6 years.

The consultant's technical proposal shall contain an organization chart in accordance with the needs of the Project, with detailed description and list of key personnel with their Curriculum Vitae (CV). All positions shall be assigned to highly qualified staff. The technical proposal shall also, include a table draw up showing the man-months required for all staff assigned to the tasks described above.

The consultant shall assign a Resident Project Manager to be based in Kigali.

The consultant's Site Supervision Staff should be available full time during the construction activity of the Project.

The consultant shall assign the following site supervisors during the progress of various activities as required.

- (i) Distribution substation and civil works design engineers with proven experience in distribution system.
- (ii) These shall be electrical and civil engineers
- (iii) Protection, control and SCADA test and commissioning engineers with proven experience on protection settings calculation, testing and configuration of SCADA system
- (iv) Communication test and commissioning engineers with proven experience on fibre optic communication system
- (v) Environmental Specialist and Social Specialist

All site supervision staff should have adequate experience, similar to this Project area.

11.2 STAFF AT HEAD OFFICE

The consultant shall set up a support group at his head office comprising specialists in all the relevant fields, in particular specialists in designs of Substation design, optical ground wire telecommunications, occupational and community health and safety, social issues (particularly resettlement) and the environment. This team at head office shall provide permanent support to the staff on site and shall be managed by the consultant's Project Director or Manager. In collaboration with the site engineers, this team shall take part in the technical inspection of the working design studies.

11.3 KEY PERSONNEL

The consultant should be assured that the proposed key personnel for this consultancy service agreement should be available for the duration of the contract. Therefore, after contract award, the consultant cannot issue a request for replacement of any key personnel, unless it is beyond the consultant's reasonable control such as retirement, death, and medical incapacity that shall be justified with sufficient evidence. The consultant, when nominating the key personnel on his technical proposal, should carefully check the medical fitness and the age of the key personnel to avoid unnecessary dispute with the Clients for replacement of the key personnel after contract award. This issue has become of prime importance from recent experience and has become intolerable for the clients.

(i) Resident Project Manager

The consultant shall assign one Resident Project Manager. The consultant's Resident Project Manager must be an electrical engineer, with at least 10 years of experience in the field of engineering and construction of distribution lines and construction of Distribution Substations and should have an extensive experience in management of power projects. He/she must have managed assignments similar to the present services and should be proficient in writing and fluent in speaking the English language.

Must be at least a graduate on Master of science in electrical engineering or related field.

Adequacy for the assignment

Must have minimum of Eight (8) years of experience in the field of electricity distribution substations projects and should have an extensive experience in management of power projects,

Must have a minimum experience of working on Five (5) similarly projects (MV distribution lines) as Project Manager.

(ii) Resident Engineer

The Resident Engineer should be available full time starting from the Supervision Service Contract commencement date. He is responsible for day-to-day communication with contractors and executing agencies.

The Resident Engineer must have at least 10 years of experience in the field of electricity distribution substations projects and should have an extensive experience in engineering of power projects, He/she must have supervised assignments similar in complexity to the present services, should be proficient in writing and fluent in speaking in English language.

He must be at least a graduate on bachelor's degree in science in electrical engineering or related field.

Adequacy for the assignment

- Must have minimum of seven (7) years of experience in the field of electricity distribution substations projects and should have an extensive experience in management of power projects and 5 years of which as project management and construction supervision.
- Must have a minimum experience of working on Three (3) similar projects (power distribution system projects) as Resident Engineer.

(iii) Civil Engineers comprising the following:

Civil works design engineer must have a minimum experience of seven (7) years of experience on electricity distribution substations civil works design. He/she Must have designed a minimum of three (3) electricity distribution substations projects as civil works design engineer.

Must be at least a graduate on B.Sc. in Civil Engineering from a recognized University

Civil works construction supervisor must have a minimum experience of seven (7) years of experience on electricity distribution substations civil works construction supervision. He/she Must have supervised at least three (3) electricity distribution substations projects as civil works supervisor. The civil engineer should be proficient in writing and fluent speaking in English.

Must be at least a graduate on B.Sc. in Civil Engineering from a recognized University

(iv) electricity distribution substations Experts comprising the following:

a) The electricity distribution substations **design engineer** shall be at least a graduate on B.Sc. in electrical engineering with at least 7 years of experience in the field of 30kV or 15kV / 0.4kV electricity distribution substations designs. They must have designed at least five (5) assignments similar in complexity to the present Project. They shall provide expertise in the designs of medium voltage distribution lines in the project.

b) The electricity distribution substations **construction supervisors (Engineers) (x4)** with at least 7 years of experience in the field of 30kV or 15kV/0.4kV electricity distribution substations construction, preferably with experience with local

conditions. They must have carried out five (5) assignments similar to the present Project.

The electricity distribution **substations** Experts should be proficient in writing and fluent speaking in English.

Shall be at least graduates on B.Sc. in electrical or Mechanical engineering

i. Telecommunications Expert

Must have seven (7) years of experience on fiber optic communication equipment design, installation, testing and configuration. The engineers should be proficient in writing and fluent speaking in English. Must have a minimum experience of working on three (3) similar projects.

He/she must be at least a graduate on B.Sc. in telecommunications or electrical engineering from a recognized university

ii. Environmental and Social Experts comprising the following:

a) Environmental Specialist

These specialists should have 10 years of experience in environmental and social analysis of large infrastructure projects including distribution lines. They must have been participated in the implementation of environmental and social management plans and resettlement action plans on the ground for at least four similar projects. The experts must be fluent in English.

She/he must be at least a graduate on B.Sc. in Environmental, Social or related studies

b) Social Specialist

The specialists should have 5 years of experience in environmental and social analysis of infrastructure projects including distribution networks. They must have been participated in the implementation of environmental and social management plans and resettlement action plans on the ground for at least four (4) similar projects. They must be fluent in English.

She/he must have a BA Social Science or Social Work and Administration or Arts in social sciences or related studies

11.4 PERSON-MONTH ALLOCATION

Since the Government of Rwanda through EDCL is the beneficiary of the financing from the European Investment Bank (EIB), for proper administration and disbursement of the service contracts, one contract for the entire scope will be signed with the selected supervision consultant corresponding to the services to be provided.

For the selected consultant's firms, during the preparation of technical proposal shall indicate, the man-months for proper execution of the project. Considering the technical and financial evaluation, contract shall be awarded to a consulting firm whose entire result reflects the combined (technical and financial) evaluation criteria.

The Consultant should assume that all contractors and suppliers should be mobilizing at the same time to all Project sites. To achieve this, the consultant is responsible for preparation of all design, specifications and bid documents of all contract packages at the same time and plan that all contract to start at the same time.

The consultant's assignment up to issuing operational certificate to all contractors shall be **Thirty-two months (32)**.

20 months of supervision of construction works starting from the date of commencement of the supervision services contract up to the date of provisional reception of the services; **and 12 Months of liability period.**

Construction Phase:

This period starts from the construction contract signing date up to operational date of the last construction contract and submission of Project Completion Report to the client. This period shouldn't take more than 20 months (1 months for construction contract commencement, 18 months for contract duration, 1 months for preparation of Project Completion Reports).

Defect Liability Period:

Even though the defect liability period is twelve (12) months, the consultant will be required only for short-term periods. The consultant must propose and provide a schedule with breakdown for the various activities called for in the TORs, including the home office and field activities.

Table 1: Summary of Person-months

No.	Key Expert			
		Access Component	Network Reinforcement	Estimated Person month
1	Resident Project Manager (1)	13.5	11.25	38.25
2	Resident Engineer (1)	24	20	68
5	electricity distribution substation construction supervisor (engineer) (1)	72	24	96
6	Civil works construction supervisor (engineer) (1)	0	12	48
9	Telecommunication expert (1)	0	0.5	2
10	Environmental Specialist (1)	6	5	17
11	Social Specialist (1)	6	5	17
Total Minimum Person-month		121.5	102.75	411.25
No.	Key Expert			
		Access Component	Network Reinforcement	Estimated Person month
1	Resident Project Manager	1.5	1.25	4.25
3	electricity distribution substations construction supervisor (engineer)	1.5	0.75	2
4	Civil works construction supervisor (engineer)	0	0.5	2
Total Minimum Person-month		3	3	11.5
462.55				

For the second stage, the selected consultant firms will complete the following:

The Financial Proposal (FIN-2, FIN-3, and FIN-4) shall clearly show the breakdown of costs for each component {i.e., (ii) **Access Component** (iii) **Network Reinforcement**} for all the two stages namely Phase II (Construction) and Phase III (Post-construction).

During the preparation of the financial proposal, consultant firms will clarify the following:

11 .5 CONSULTANT’S FEES AND EXPENSES

The fees and expenses of the consultant should be read in conjunction with the relevant sections of the Request for Proposal (RFP) and shall include:

- i. Home office coordination.
- ii. All travel expenses.
- iii. All personnel expense.
- iv. All field expenses including working equipment and materials, vehicles running cost, house accommodation, etc.
- v. Expenses of the workshop, meetings including, travel expenses, accommodation, meals, international transport, allowances/per diem, travel insurance, cost of venues, etc.
- vi. Project office costs

The Financial Proposal shall be clear and formal as possible with breakdowns of each subtotal into remuneration, reimbursable, miscellaneous, and grand total. The client during proposal evaluation will take care to consider all items on the same basis and on equal ground for comparison. All items in the Technical Proposal incurring expenses must be supported in the corresponding Financial Proposal.

12 DATA, LOCAL SERVICES AND FACILITIES TO BE PROVIDED

The consultant shall supply all necessary equipment for a high-quality performance of its mandate.

The consultant in his financial proposal should include notably the cost of: (i) vehicles for permanent use by the Resident Project Manager /Engineers and temporarily vehicles for other staffs (ii) office equipment such as scanners, plotters, computers; printers, platforms, etc. (iii) surveying instruments such as GPS devices, Total Stations; graphic scanning and other necessary tools for the performance of the consultancy services.

All communication related costs made by the consultant (telephone, fax, courier, internet, etc.) shall be covered by the consultant.

The consultant shall open its office Kigali – Rwanda and all related costs shall be covered by the consultant.

For the site supervision staff of the consultant and the site supervision staff of the executing agency, it is planned that such staff will share vehicles or be transported in vehicles supplied by the supervision firm. Such transport vehicles should be available within three (3) months after the consultant firm sign the contract. During the stated period, the consultant firm shall ensure that transportation is availed to the site supervision for staff. The cost of these three vehicles’

insurance and maintenance throughout the period of the works shall be borne by the consultant firm.

The vehicles shall be the property of the Consultant firm.

The consultant shall in addition provide the following.

The following equipment shall be purchased and handed over to the Owner at the end of the works/project:

- 2 GPS devices with software and accessories for restoring data on microcomputer,
- 4 PC-type Lap top computers whose specifications shall be set out by the EA,
- 1 A4 laser printers coloured printer whose specifications shall be set out by the EA,
- 1 A3/A4 ink jet colour printers,
- 1 black/white photocopying machines, A4 and A3 format, with loader and sorter.

13. CLARIFICATION REQUEST

Clarifications may requested by candidates in 21 days before its submission via Email: procurement@edcl.reg.rw, jmujawase@edcl.reg.rw copy to cuwajeneza@edcl.reg.rw and also informing or notifying the evaluation result where stand still period will be seven days .

14. REMEDY MECHANISM (ADMINISTRATIVE AND/OR JUDICIAL)

The Parties shall seek to resolve any dispute amicably by mutual consultation and if can not be settled the consultant can raise a complaint to independent panel review at Rwanda Public Procurement Authority ; <https://www.rppa.gov.rw/independent-panel-reviewirp>.

Client/EDCL will provide the following facilities to the consultant:

- a) Access to the project area covered by this Project,
- b) All available Feasibility studies, ESIA, ESMP and RAP studies
- c) Liaise with the government and facilitate all requirements/supports needed for the consultant or his team to perform their duties in Rwanda.
- d) Counterpart staff to work with consultant's team.
- e) With work permits and visas for Rwanda plus introductory letter for travels in the region related to the project