



# **MINISTRY OF ENERGY AND MINERAL DEVELOPMENT**

## **ELECTRICITY ACCESS SCALE-UP PROJECT (EASP)**

### **TERMS OF REFERENCE**

**FOR**

**CONSULTANCY SERVICES FOR INDEPENDENT VERIFICATION OF  
ELECTRICITY CONNECTIONS UNDER THE ELECTRICITY ACCESS SCALE  
UP PROJECT – RESULTS BASED FINANCING**

**JUNE 2022**

## **1. Introduction**

The Government of Uganda (GoU) has received funding from the World Bank towards the implementation of the proposed Electricity Access Scale-Up Project (EASP)

The EASP aims to increase access to electricity in all areas of Uganda through, among others, supporting attainment of Government's access goals in a timely manner thereby contributing towards achievement of Government's development goals outlined in the Electricity Connections Policy (ECP), Third National Development Plan NDPII and Uganda's Vision 2040. The EASP will finance at least 1 million grid connections in rural, peri-urban and urban areas.

The funding under the EASP project will go towards implementing infrastructure and connections under the new Electricity Connections Policy (ECP) and will be implemented on an Investment Project Finance (IPF) approach which Government continues to implement through the Ministry of Energy and Mineral Development (MEMD). Through the EASP, Government will provide funding for connections through a Results Based Financing (RBF). The RBF approach shall be implemented in the service footprint operated by UMEME Limited (a.k.a., Umeme).

The EASP facility intends to apply part of the proceeds towards consultancy services for independent verification of electricity connections. Therefore, MEMD wishes to procure the services of a competent and reputable company which will be contracted as an Independent Verification Agent (IVA) to verify the delivery of connections against which a subsidy will be disbursed.

## **2. Objective of the Assignment**

The objectives of the IVA assignment are to;

- (i) Verify that the eligible premises' connections, as detailed in the ECP Implementation Manual and or EASP Project Operations Manual (POM), have been physically installed in accordance with approved technical specifications, are working, and have been properly documented.
- (ii) Verify that the eligible premise connections and ready board installations have been installed using connection materials pre-financed by Umeme.
- (iii) Recommend to MEMD and financiers the reimbursement of appropriate connection costs.

## **3. Electricity Connection Implementation and Eligibility Criteria**

### **3.1. Implementation Approach**

RBF is a strategy for explicit, performance-based subsidies for delivery of basic services (e.g., connection to electricity, piped water supply, sanitation, etc.). Explicit because it is explicitly recognised why the subsidy is provided, who is receiving the subsidy, what is being subsidized and with how much. It is performance-based because the payment of the subsidy is directly linked to the delivery of verified output (the establishment of supply for eligible households) rather than the input.

The objective of the RBF approach is to provide improved access to electricity to Ugandans throughout the country. Ugandans living within no-pole and one-pole distance of distribution

grids, who are not able to pay the connection fees but can afford to pay the energy consumption costs once connected will be provided with a one-time electricity connection subsidy.

The RBF approach will provide subsidies to meet the connection cost as approved by the Electricity Regulatory Authority. The main features of the project are the following:

- a. The “output” against which subsidies will be disbursed is household/small and medium business connections to the low voltage electricity network and demonstration of electricity consumed. Umeme will be reimbursed 100% of the costs of a connection after independent verification of installation of a working connection.
- b. Umeme is an electricity distribution company that is licenced to make connections, provide electricity to households, businesses and undertake other aspects of electricity service provision, including billing, collections, and customer service.
- c. The subsidies will be channelled by the Government of Uganda through the MEMD.
- d. Umeme will be participating in the RBF approach. Umeme has the capacity and willingness to make these connections, and has estimated consumer demand. In addition, Umeme has a distribution operating license issued by the Electricity Regulatory Authority (ERA).

The RBF approach will be implemented in accordance to the ECP Implementation Manual and or the EASP POM.

### **3.2. Eligibility Criteria**

#### ***a) Connection eligibility***

Eligibility criteria will be as follows for low voltage Single Phase customers - no pole and one-pole service connections:

- (i) Premise is located within Licensed Area of Umeme.
- (ii) Owner of the premise has applied for and can be serviced by a no pole or a one-pole service connection from the nearest distribution line.
- (iii) Premise has completed internal wiring at the time of application for a connection or a ready-board has been installed.
- (iv) Premise has paid the cost of inspection.

#### ***b) Ready board eligibility***

The eligibility criteria for a ready board installation on customer premises shall be;

- i) Premises is located within Licensed Area of Umeme
- ii) Customer has either a one or two roomed structure (household or commercial premises)
- iii) Customer has applied for a ready board installation

The prevailing approved guidelines by ERA on ready board installation and use shall apply.

### **3.3. Subsidy Amount**

Connections that comply with the eligibility criteria will be eligible for a subsidy, payable to Umeme upon verification. The applicable subsidy shall be determined based on approved rates by ERA. The reimbursement will cover:

- 1) Connection cost as approved by ERA
- 2) Pre-financing cost

The ECP Implementation Manual and the EASP POM provides further details of the RBF approach on subsidy calculation methodology including pre-financing costs.

#### **4. Scope of Service**

The IVA shall verify completed service connections implemented by UMEME on RBF. The IVA will be required to complete a desk-based verification of all eligible connections installed by UMEME in their footprint, and to physically inspect and verify at least 10% of the connections in each batch submitted.

The IVA will be provided with a list of connections made (on conventionally wired premises or where a ready board had been installed) together with supporting documentation. The IVA will be requested to perform verification of these connections.

Umeme shall provide detailed information to MEMD about the connections made and ready boards installed. The IVA will verify Umeme claims and report to MEMD who will scrutinize the findings. The IVA will ensure that there is no duplication of connections to be reimbursed. In doing this, the IVA will carry out a duplication test across the electricity connections master database.<sup>1</sup> The IVA will maintain an up-to-date database for all the connections verified and will submit this to MEMD at the end of each quarter as part of quarterly reporting.

It is expected that 250,000 connections (including ready board connections) implemented countrywide shall be verified and the IVA shall be required to carry out the following activities based on data supplied by Umeme– electronic and or physical:

The IVA will as well verify the connections’ unique identifiers which will include among others barcode / serial numbers of the meters, ready boards, poles, cables, circuit breakers including GPS location coordinates.

##### **a. Task 1 Desk based verification:**

Desk-based verification of all (100%) connections and ready board installations made using RBF:

- (i) Customer identification number in UMEME’s database
- (ii) Name of the customer
- (iii) Meter number, type and serial number
- (iv) Manufacturer of the energy meter.
- (v) Metering type used for the customer (wired/wireless/PLC or other-specify type)
- (vi) Telephone contact of customer
- (vii) Date of first entry of customer in UMEME’s database or application date
- (viii) Date of installation of connection
- (ix) Ready board serial number & type
- (x) Date of installation of ready board

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<sup>1</sup> The IVA will be granted access to the master connections database.

- (xi) Location of connection shall include political district, sub-county, parish and village
- (xii) Customer demographic data including gender, main purpose for utilisation of electricity.
- (xiii) GPS coordinates of premise and or pole positions. This will also be validated and confirmed by the IVA. A GPS plot shall be generated by the IVA per batch of connections verified.
- (xiv) Connections from refugee host districts or non-refugee host districts.
- (xv) Type of connection (pole or no pole, one-phase household/commercial enterprise/public institution connection with: (a) pre-paid meter; (b) post-paid meter; (c) LV Single Phase ready-board connection with a pre-paid meter for the eligible premises structure (household or commercial premises).
- (xvi) Wiring Certificate available and in addition a Certificate of Compliance (CoC), where ready boards are installed
- (xvii) Inspection Certificate available (either for a conventionally wired premises or where a ready board had been installed)
- (xviii) Network configuration (bare conductor/ ABC) where a pole service connection has been made.
- (xix) Generate and verify the barcode / serial numbers / unique identifiers for meters, poles and ready boards used under the EASP. The pole type and pole suppliers' data must also be verified.

**b. Task 2 Physical Verification:**

Physical inspection shall cover 10% of the connections in each batch. This will be a random sample picked by the IVA. The methodology used for picking the sample shall be detailed in the report. This inspection shall be evenly distributed and not just restricted to non-remote areas.

The IVA shall prepare a random sample ensuring route optimisation and balance between rural, urban and peri urban areas and travel to the location where the connections have been installed and physically verify their existence, functionality, integrity and compliance to technical specifications. At the site of the installation, the IVA will obtain the following information pertaining to the connection by physically examining the installation and interviewing the customers:

- (i) Customer identification number in UMEME's database
- (ii) Name of customer
- (iii) Meter number, type and serial number
- (iv) Telephone contact of customer
- (v) Date of installation of connection
- (vi) Ready board serial number & type
- (vii) Date of installation of ready board (where applicable)
- (viii) Location of connection shall include political district, sub-county, parish and village
- (ix) GPS coordinates of premise at the customer service point/ point of supply to the premises. Will include both GPS coordinates for meters and poles.
- (x) Type of connection (no pole, one-phase household/commercial enterprise/public institution connection with a pre-paid meter, post-paid meter or metered ready-board)
- (xi) Metering type used for the customer (wired/wireless/PLC or other-specify type)

- (xii) Network configuration (bare conductor/ ABC) where a pole service connection has been made
- (xiii) Premise has completed internal wiring at the time of application for a standard metered connection, or it had applied for a ready-board connection
- (xiv) Connection is in compliance with the ECP Implementation Manual regarding technical Specification for the specific type of connection and eligibility criteria for a ready board installation
- (xv) Check where the customer received information about the opportunity to connect under the ECP program (consultant, distribution company, radio, friends, service provider other – specify source)
- (xvi) Check if the customer was given explanation of the ECP program (in case the explanation was not given, the IVA will give a short description of the ECP programme).
- (xvii) Check if the customer has paid any money for the connection or ready board installation and how much (note: amount paid)
- (xviii) Check if the connection installation is safe for the customer
- (xix) Generate and verify the barcode / serial numbers / unique identifiers for meters, poles and ready boards used under the EASP. The pole type and pole suppliers' data must also be verified.
- (xx) Confirm the name of the manufacturer on the labels for meters, cable and circuit breakers.
- (xxi) Check and establish actual installation of new meter, ready board, earthing CB box and length of service cable in line with ERA requirements.

The IVA will be required to verify resolution actions undertaken by UMEME in line with recommendations made after the verification process during contract implementation. The IVA shall provide a summary report on the activity accordingly.

## **5. Duration of the Assignment**

The IVA will carry out the verification services for a period of two (2) years.

## **6. General Experience of the Firm**

The assignment is open to companies or consortia that have at least ten (10) years general experience in verification/audit and monitoring RBF programs, as well as management of large databases. The companies or consortia should have completed at least three (03) similar assignments involving independent verification or auditing RBF approaches completed in the last ten (10) years. Documentary evidence in form of completion certificates or the equivalent will be required.

The IVA should have the expertise in developing surveys, sampling, collecting, compiling and analysing data; knowledgeable in working with communities of different diversities in sub-Saharan Africa.

### **a) Key Personnel**

The IVA should have adequate personnel including the following key personnel:

- i. **Team Leader** with Master’s degree in business, accounting or management and with over ten (10) years post graduate working experience out of which five (5) years should be in audit related work and monitoring of results under results based financing approaches.
- ii. **Electrical Engineer** with a BSc Electrical Engineering with at least ten (10) years working experience, of which five (5) years are in power distribution.
- iii. **Financial Analyst/Auditor** with a Bachelor’s degree in Accounting, Finance with at least ten (10) years of post-qualification experience in financial analysis, audit and management.
- iv. **Database Specialist** with a Bachelor’s degree in Information Technology, Computer Science, Business Computing or statistics with at least five (5) years of experience in management of databases and GIS based systems.

**Person Months**

No.	Key Expert	Person Months
1	Team Leader	10
2	Electrical Engineer	12
3	Finance Analyst/Audit	8
4	Database Specialist	8
	<b>Total Person Months</b>	<b>38</b>

**7. Deliverables**

- i. **Inception Report:** The IVA shall submit an Inception Report detailing the methodology and approach to be applied in the verification of connections and inventory. This will include sampling methodology/criteria to be applied for determination of 10% of connections that will be subjected to physical verification, check-list of supporting information/data to be provided by UMEME for each connection batch requiring verification, draft questionnaires and draft pro forma verification reports, etc.
- ii. **Connections or ready board installations Reports (Task 1 -2):** The IVA shall submit Verification Reports containing information as detailed above on each batch of connections or ready board installations. The Reports will list all customers connected and or ready boards installed (Task 1) and all those physically verified (Task 2). The reports will confirm the number of eligible connections or ready board installations verified for subsidy payment by connection type (ready board or conventional wiring).
- iii. **Progress Reports:** The IVA will provide quarterly reports indicating the number of connections verified in a quarter and the cumulative connections, challenges and proposed solutions to challenges.
- iv. **Project completion report:** The IVA shall issue a project completion report that will highlight the full project implementation, challenges encountered, lessons learnt and possible areas of improvement in future projects.

## 8. Timeline of Deliverables

The IVA will carry out the assignment under the supervision of the Connections Manager under the EASP Project Implementation Unit.

The IVA shall submit for each required report, four hard copies and one soft copy on CD ROM to MEMD in accordance with the following timelines.

<b>Report</b>	<b>Timing</b>
Inception Report acceptable to the client	Within the first three weeks of effectiveness of contract
Draft Connections Verification Reports acceptable to the client	Within 30 calendar days after receiving the list of connections from the MEMD and the associated documentation from UMEME.
Final Connections Verification Reports acceptable to the client	Within 5 working days after receiving comments on the draft verification reports from the MEMD and respective stakeholders. <sup>2</sup>
Quarterly Progress Reports acceptable to the client	Within 10 calendar days after the end of the quarter.
Completion Report acceptable to the client	30 calendar days from the time of project/contract closure.

## 9. Services, Facilities and Resources to be provided by MEMD

- (i) Provide up-to-date service territory maps, key information/data on the grid extension lines and grid intensification schemes, etc.
- (ii) Provide the ECP Implementation Manual and the EASP POM.
- (iii) Provide contacts of UMEME and any additional information that is essential for the implementation of the assignment.
- (iv) Assign a Contract Management Team under the leadership of the Connections Manager, EASP PIU which will handle day to day coordination matters relating to the assignment.
- (v) Provide letters of introduction to UMEME, Local Authorities and other relevant offices as need may arise.
- (vi) Access to the master connections database.

## 10. Services, Facilities and Resources to be provided by the IVA

- (i) Employ well qualified and competent professional staff at all times in the execution of the services.
- (ii) Facilitate the IVA's staff. This shall include office and living accommodation, equipment, transport, telecommunications, office and other supplies etc.
- (iii) Ensure that the Team Leader and Experts have the full authority to make decisions necessary to complete the services as required.

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<sup>2</sup> MEMD shall provide comments within 5 working days after receiving the draft verification reports.



## **11. Cross Cutting Issues**

The IVA shall ensure implementation of the health, Safety and Gender considerations during the implementation of the consultancy services. These shall be among others:

- (i) Ensure provision of Personal Protective Equipment (PPE) to the workers
- (ii) Sensitization of workers on the HSE aspects in relation to the implementation of the assignment.
- (iii) Collect and report on gender disaggregated data during verification of the connections made.