



**REPUBLIC OF MALAWI**

**MINISTRY OF ENERGY AND MINING**

**DEPARTMENT OF ENERGY AFFAIRS**

**Accelerating Sustainable and Clean Energy Access Transformation in Malawi  
(ASCENT Malawi) Project**

**TERMS OF REFERENCE**

**Firm Consultancy – Consultancy Services for Independent Verification Agent  
(IVA) of Component 2, Off-grid connection through Solar Home Systems and  
Component 4, Clean Cooking Solutions, of the ASCENT Malawi Project**

**January 2026**

## 1. Background

Energy is the driving force for any economy, as it serves as a vital catalyst for industrial growth and socio-economic development. Access to clean, reliable, affordable and sufficient energy supply is key to enhancing socio-economic wellbeing through improved quality of life, access to public services, job creation, entrepreneurship opportunities and industrialization. However, inadequate generation capacity remains one of the major factors constraining access to electricity for a large segment of the population where only 25.9% of the population has access to electricity with 11.3% connected to the national grid and 14.6% connected through offgrid solutions. For the 80% of the people living in rural areas, access to electricity is around 3.8%. Considering this, Government of Malawi (GOM) has committed to scaling up electricity access in the country by, among other key strategies, deploying off-grid solutions in rural and offgrid communities.

In line with this ambition, GoM through the Department of Energy Affairs (DoEA) in the Ministry of Energy and Mining (MoEM) has received financial resources from the World Bank for the implementation of the Accelerating Sustainable and Clean Energy Access Transformation in Malawi (ASCENT Malawi) Project. Specifically, the US\$250.8 million grant is coming from the International Development Association (IDA) and the Energy Sector Management Assistance Program (ESMAP). The Project is supporting Malawi in achieving its strategic goal of reaching at least 70 percent electricity access by 2030, as outlined in the Malawi National Energy Compact and universal access to modern energy, as espoused in Malawi 2063.

The DoEA intends to apply part of the proceeds of this financing towards the procurement of an Independent Verification Agent (IVA) who shall provide consultancy services for independent verification of solar home systems and clean cooking solutions procured and installed with support from the Off-grid Market Development Fund (OGMDF) which is locally branded as the *Ngwee Ngwee Ngwee Fund (NNNF)*.

## 2. Project Development Objective (PDO)

The Project Development Objective is to increase access to sustainable and clean energy in Malawi.

### 2.1. Project Components

The project is comprised of the following components:

- a) **Component 1 – Grid Electrification:** 235,000 new households are expected to be connected with a US\$150 million investment. The component includes performance-based conditions (PBCs) to boost ESCOM Limited's efficiency and a sub-component for immediate grid densification for 157,000 households.
- b) **Component 2 - Off-grid Connection through Solar Home Systems (SHS):** This component bridges financing gaps for solar companies, connecting 811,000 households via the NNNF. The NNNF offers working capital and results-based financing (RBF) windows, managed by a fund manager. All claims by solar companies will be processed through the monitoring platform.

- c) **Component 3 - Energy Access for Schools and Health Facilities:** A total of 1,280 facilities comprising of 1,000 schools and 280 health facilities shall be electrified. Implementation of this component shall be coordinated by the Ministries responsible for Energy, Education, and Health, with a focus on sustainable operation and maintenance.
- d) **Component 4 - Clean Cooking Solutions:** This component aims to catalyse the expansion of the market for modern energy cooking solutions (primarily through the deployment of electric, LPG, pellet-based cookstoves), while supporting a sustainable, private-sector driven clean cooking market throughout the country. At the core of the component is the establishment of a dedicated clean cooking loan window under the NNNF. This financing mechanism is designed to support clean cooking companies offering higher-tier modern energy cooking solutions, contingent upon their transfer of ownership of their carbon credits to the NNNF which will serve as a carbon aggregator. Carbon revenues will be used to support loan sustainability and market expansion.
- e) **Component 5 – Technical Assistance and Capacity Building:** This component focuses on supporting both ESCOM Limited and the DoEA and other sector stakeholders have adequate technical, planning, and operational capacity to implement the electrification roll-out activities of the project. This includes updating the electrification monitoring platform, revising sector policies, enforcing market standards, and expanding outreach to rural communities to ensure comprehensive and inclusive progress in electrification efforts.

### 3. Purpose of the Assignment

The purpose of the assignment is to appoint external monitoring, reporting and verification experts ("Independent Verification Agent (IVA)"), to act as third-party verifiers of the proper implementation of Component 2 (Off-grid Solar Home Systems) and 4 (Clean Cooking Solutions) of the Project.

The objective of the IVA is to verify that recipients (hereinafter referred to as Participating Organisations (POs) of the RBF, Working Capital Facility, and Clean Cooking Loan Window are complying with the stipulated uses of funds, eligibility conditions, and contractual obligations as defined in the Project Operations Manual (POM). This includes verification that the SHS and clean cooking solutions financed by the Project meet product, service, price, and customer (household) eligibility conditions<sup>1</sup>.

The IVA shall also verify the number of people (disaggregated by gender and youth) reached by the Project through desk, telephone and field surveys, including accurate coordinates of their residence with accuracy of  $\pm 5$  m. The data will be analysed and put together in quarterly IVA reports that advise the DoEA on the level of compliance of POs. It will also highlight the numbers of non-eligible SHS and cookstove sales. The IVA will also assess the likelihood of intentional fraud by POs.

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<sup>1</sup> Eligibility conditions are provided in the POM, annexed to this ToR.

For loan-supported activities under Components 2 and 4, the IVA's findings shall be used by the Fund Manager to confirm achievement of agreed deployment and performance milestones, and to inform decisions on the release, adjustment, or withholding of subsequent loan disbursement tranches, in accordance with the applicable financing agreements.

#### **4. Scope of the Assignment**

The independent verification will be conducted in all project areas where POs will be operating under Components 2 and 4. The scope of work under this assignment is the independent verification of

- RBF claims by POs under Component 2.
- Compliance with loan eligibility, performance, and contractual conditions under Components 2 and 4.

POs are required to submit periodic (quarterly) reports of eligible SHS and clean cookstove sales made within the period to support their claims under the relevant financing windows. The IVA shall be required to determine the extent to which these sales meet eligibility conditions (eligible product, agreed price, eligible household, satisfactory after-sales service, etc.) and are thus eligible for RBF payments or compliant with loan conditions. The verification will serve as a trigger for payments by the Fund Manager for RBF-supported SHS activities and for confirming compliance with loan conditions for both SHS and clean cooking companies.

The IVA will play a critical role in ensuring that the POs meet their obligations in the manner specified in the Fund's POM which will be made available to shortlisted firms to inform their preparation of detailed technical and financial proposals. The IVA will conduct verification through automatic verification/desk reviews, phone surveys, and field visits to ensure that: (i) the SHS and clean cooking products supported under the Fund comply with applicable standards (including Verasol-certified SHS products and Tier 3+ clean cooking solutions), and that agreed after-sales service is provided as per the agreement between the customer and the company benefitting from the Fund.

The IVA shall refer to the POM for guidance. The verification protocol providing an overview of the indicators, annual targets and data sources for verification as well as verification methodology is specified in the POM and in annexes 2, 3, 4, 5 and 6 in this TOR. Each target is specifically qualified and quantified. The primary task of the IVA will be to carry out transparent and impartial verification of results as agreed under the project. The POM (including the verification methodology) may evolve from time to time, primarily to improve processes so they are more effective or efficient in achieving project results. The IVA is expected to contribute to improving such processes.

The consulting firm will further be expected to compile periodic (quarterly) verification reports on the basis of the following activities;

- a) Review the claims and the internal data management (collection and storage) of each PO.
- b) Telephone survey to a sample of customers within each claim of each PO verifying the sales of SHS and clean cookstoves.
- c) Carry out independent site visits to a sample of customers (households) within each claim of each PO for verification of number of households (by gender and youth categories) reached/covered by SHS and clean cookstoves; and the fulfilment of eligibility conditions (eligible product, agreed price, satisfactory after-sales service, eligible household, etc)
- d) Prepare the IVA report explaining the validity of the claims from POs.

The IVA will work under the supervision of the DoEA Project Implementation Unit (PIU). The IVA is also expected to work closely and collaboratively with the Fund Manager so that verification is conducted effectively, efficiently and in a timely manner.

While the IVA will not undertake carbon credit validation or verification, it is expected to work closely with the Fund Manager and other relevant stakeholders to ensure that verified deployment, household, and usage data are consistent with carbon market framework requirements and contractual commitments.

## **5. Specific Tasks**

The consulting firm will be expected to undertake the following:

### **5.1. Development of verification methods**

The IVA will be required to familiarize themselves with project stakeholders (PIU, Fund Manager, POs) and existing procedures (POM, verification procedures under predecessor MEAP, etc) through document review and stakeholder meetings. Project procedures, systems and controls will be reviewed at this stage.

The output of this activity is the development of updated verification procedures for both Components 2 (SHS) and 4 (Clean Cooking). The IVA will produce, among others, a work plan, implementation strategy, methodology, relevant implementation tools and reporting templates. The proposed verification methodology will be guided by the POM. However, the IVA is encouraged to propose improvements to it that may result in conducting verification more effectively, efficiently and in a timely manner.

### **5.2. Desk Verification**

#### **5.2.1 Automatic Verification**

Desk verification is expected to be done through the Digital Monitoring, Reporting and Verification (dMRV) platform which will be linked to Customer Relations Management (CRM) System for all POs when fully operational. Such automatic verification will check, among others, that claims submitted are complete, that there are no duplicated entries, that no customers are benefitting from subsidized SHS and clean cookstoves more than once, and that product specifications and prices are per the agreement with POs. The

IVA is expected to collaborate with the dMRV platform provider in setting up processes for automatic verification.

Until the dMRV platform is operational, sub-sections 5.2.2 and 5.2.3 will apply for the IVA to carry out desk verification.

### **5.2.2 Systems Review**

The IVA will be given view access to the internal systems of both the Fund Manager and POs to review and verify the integrity and authenticity of sales and customer portfolio tracking systems.

The consulting firm will;

- a) Check that the details of SHS and clean cooking sales are complete, including but not limited to:
  - i. Full names of the customers and contact details;
  - ii. National Identification Number of the head of household;
  - iii. Exact geographic location of the customers;
  - iv. Specifications of the products that have been supplied, including serial numbers (where applicable);
  - v. Date of delivery;
  - vi. Type of sale (cash, PAYGo, other);
  - vii. Other terms and conditions of the SHS and clean cookstoves sold (price, payment schedule, etc);
  - viii. Details of warranty and after-sales services offered by the Pos; and
  - ix. For clean cooking solutions, the IVA shall additionally review:
    - a. technology type and model;
    - b. tier classification documentation;
    - c. fuel supply arrangements where applicable; and
    - d. documentation confirming compliance with carbon-related contractual obligations.
- b) Reconcile the above data with the eligible use of funds of the RBF facility, as well as the data sent to the FM as part of the PO's reporting obligations.

### **5.2.3 Data reconciliation and documentation review at PO level**

The IVA will:

- a) Reconcile all transactions in the claims with the data/records maintained by each PO;
- b) Determine and justify a statistically significant and representative sample of transactions to undergo documentation review; and
- c) Review the documentation of sampled transactions to ensure that they are adequately supported and in line with the data management process.

### 5.3. Phone Verification

The IVA will conduct phone verification to confirm the claim of the POs regarding their eligible SHS and clean cookstove sales. In undertaking this, the IVA will:

- a) Determine and justify an appropriate phone verification strategy and sample using justifiable sampling methods based on the relevant claims<sup>2</sup>;
- b) Verify the following during the phone calls:
  - i. That the identified person is the actual customer of the SHS or clean cookstove;
  - ii. That the contact and location details of the customer are correct;
  - iii. That the customer acquired the stated SHS or clean cookstove, at the stated date;
  - iv. Total price (total contract amount for PAYG) of the SHS;
  - v. Total price of the clean cookstove;
  - vi. Down payment/deposit/part-payment by customer;
  - vii. Credit and repayment period;
  - viii. Interest/mark-up costs on the credit (only for loans);
  - ix. That the customer is familiar with the product specifications and their capabilities;
  - x. That the customer is familiar with after-sales service terms and guarantee of the SHS or clean cookstove;
  - xi. Status of the use and functionality of the products;
  - xii. If there are any performance issues of the SHS or clean cookstove and if the customer requested after-sales service for said issues, that such service has been provided;
  - xiii. Status of the payment for the products; and
  - xiv. Other information (refer to POM).
- c) Carry out the phone interviews in a language familiar with the customer;
- d) Use a standardized questionnaire and make all reports in English;
- e) Highlight areas of doubt or further clarification after the phone verification process to form part of the targets for field verification;
- f) Make recommendations for rejection of specific claims based on the phone verification process;
- g) Give an assessment of the likelihood of fraud, which may require further investigations.; and
- h) In addition to the existing checks, phone verification for clean cooking shall include:
  - a. Type of cooking solution received;
  - b. Date of installation or delivery;
  - c. Functionality and current operational status;
  - d. Frequency of use;
  - e. Whether the solution is used as a primary or secondary cooking device;
  - f. Availability and affordability of fuel (where applicable);
  - g. User training, safety awareness, and satisfaction; and
  - h. After-sales service experience.

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<sup>2</sup> Refer to POM for guidance on sample size and methods

## 5.4. Field Verification

Field verification is required to confirm the claim of the POs regarding their SHS and clean cooking sales to Eligible Households to avail the RBF grant and clean cooking loans.

- a) Upon completion of the phone verification process, the IVA will proceed to undertake field verification. The specific locations to be visited will be based on:
  - i. An appropriate sampling process for field verification<sup>3</sup>;
  - ii. Specifically identified customers highlighted for follow-up during phone verification; and
  - iii. Other verification issues justifiably requiring field verification identified by the ASCENT PIU at DoEA.
  
- b) The IVA will carry out field visits to POs and/or their agents and a sample of customers; do interviews with customers and POs and/or their agents to verify if the customers have access to energy through the products supplied. Consideration shall be given to ensure that the IVA:
  - i. Carry out interviews in a language well understood by the customer;
  - ii. Collect answers to a set of pre-defined questions; and
  - iii. Carry out interviews with a sample of POs to verify details of the transactions.
  
- c) Additionally, the field visits will also be used to capture additional monitoring and impact data; as well as to collect data on the POs and market development to inform the review process of the RBF and debt facility projects.
  - i. The IVA will be required to provide GIS co-ordinates of the visited POs and customers by gender and youth categories that procured the products.
  - ii. After seeking consent, the IVA shall take pictures of customers and their SHSs.
  - iii. For clean cooking, field verification shall also assess:
    - a. proper installation and safe operation;
    - b. evidence of regular use;
    - c. condition of equipment and accessories; and
    - d. availability of maintenance or service support.

The IVA will ensure a statistically significant sample size for phone and field surveys. The determination of the sampling methodology and sample sizes may evolve over time. In particular, as the dMRV platform becomes fully operational, the DoEA, in phases, may reduce the sample size requirements for each verification modality.

## 5.5. Reporting of Independent Verification

The IVA will undertake monthly phone verification and quarterly physical verification of SHSs and clean cooking solutions under RBF and Debt facility. The verification protocol will be applied to all SHS and clean cookstove sales expected to be supported by the

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<sup>3</sup> Refer to POM for guidance on sample size

Project within the three-year duration of this IVA assignment. **About 550,000 SHS and 100,000 clean cookstoves are estimated to be sold and verified within the scope of this assignment.**

PO claims will be submitted on a quarterly basis, and all verification processes will be aligned to this cycle. To accelerate the verification of these quarterly claims, monthly phone surveys will be conducted by the IVA using customer data provided monthly by each PO. These surveys will be carried out in advance of the quarterly claim to ensure that key customer information is already validated, thereby significantly reducing the time required to verify each claim once submitted. Following receipt of the quarterly claim, the IVA will integrate the results of all verification activities, including the monthly phone surveys, document reviews, and any additional checks, into a single quarterly verification report corresponding to the specific claim period. This consolidated report will form the basis for confirming or adjusting each PO's quarterly claim. Verification reports shall clearly distinguish SHS and clean cooking results, identify verified versus non-eligible installations, highlight discrepancies and risks, and provide recommendations for corrective action. Quarterly verification reports shall explicitly indicate whether verified results support the achievement of specific milestones of each PO relevant to loan disbursement decisions under the clean cooking and SHS loan windows.

## **6. Approach and Methodology**

In their technical proposal, the consulting firm is expected to present a detailed methodology and work plan for conducting the assignment communicating the understanding of the scope of the project, and how the IVA will execute the assignment.

## **7. Deliverables**

The assignment deliverables shall comprise the following:

### **Inception Report, including verification procedures:**

This will describe the approach to verification of SHS under component 2 of the Project and of clean cookstoves under component 4 and a reconfirmation of the required reports. It will comprise a work plan, implementation strategy and methodology including the relevant tools and reporting templates. Such inception report will be reviewed by and discussed with the PIU and Fund Manager.

### **Quarterly Verification Reports:**

- a) These will contain verification reports of the agreed outputs of POs in the scope of work and include an assessment of the likelihood of fraud, which may require further investigations, pictures of customers and the SHSs purchased.
- b) The report will include any significant anomalies in the monthly phone verification exercise with detailed percentages of customers in the sample that were unreachable and/or other discrepancies found.

- c) Verification reports for each quarterly RBF claim of each PO for the indicators verified including:
  - i. Results of the verification exercise capturing the percentage of SHS sales verified, and discrepancies, among others;
  - ii. Analyses of the findings of the verification exercise and complete survey datasets to be made available.
  - iii. District-level results (verified);
  - iv. Brief summaries of verification activities undertaken to check the accuracy of verified results for the relevant indicator;
  - v. Summaries of major discrepancies between gross and verified results along with short explanations for such discrepancies, and provide recommendations and a constructive critical analysis for why achievement against specific indicators may be above or below target including a summary on whether the indicators have been achieved as per the set target; and
  - vi. Identification of impediments (if any) to the timely achievement of the benchmarks and possible remedial measures.
- d) Optional: suggestions to improve the verification methodology so that verification can be done more effectively, efficiently or in a timely manner.

## **8. Management of the Assignment**

- a) The IVA will be contracted by the DoEA. Legal or administrative issues with respect to the contract or payment shall be handled by the DoEA.
- b) Day-to-day supervision and the approval of all the outputs shall be the responsibility of the PIU through the Project Manager.
- c) The IVA will report to the Project Manager and coordinate with the Fund Manager and other stakeholders deemed relevant by the Project Manager in the fulfilment of their responsibilities.
- d) The Project Manager supported by the M&E Specialist will liaise with the IVA and the POs to ensure collaboration, compliance and successful fulfilment of the assignment.
- e) The reports will be submitted in triplicate to the Project Manager.

## **9. Firm Qualifications and Experience**

To perform the required verification tasks, the consulting firm should possess the following qualifications and experience:

- a) Be a registered firm operating under either international regulations or the laws of Malawi.

- b) Have a minimum of ten years of experience in monitoring, reporting and evaluation of development projects carried out by governments or development agencies. Firms with fewer years of experience but having proposed key experts with the required experience will be considered.
- c) Have undertaken at least 3 programmatic evaluations/ audits and verifications of a similar size and complexity for Development Projects in developing countries with contract sum of above US\$250,000. The firm should indicate whether they were a lead consultant or a subcontractor, and if they were a subcontractor their contract sum should be as stated above,
- d) Previous experience with verification for World Bank projects or previous experience of working with the World Bank, other international organizations and/or major institutions in survey design, survey management, data processing, data analysis, and report writing shall be advantageous.
- e) Have demonstrated experience in verification exercises, results-based financing, socio-economic studies and field/on site studies.
- f) Must have experience working with national and subnational governments.
- g) Have an evaluation team that has all relevant expertise and skills to carry out the verification exercise.
- h) Have the ability to clearly communicate, both oral and written, in English and in other local dialects.
- i) Have the ability to generate clear and concise reports and communicate content effectively.
- j) Have capacity to organize logistics in remote parts of Malawi.
- k) The consulting firm shall comprise of experts with stipulated academic qualifications and professional experience. Experience of working in Malawi and other developing economy in energy sector will be an added advantage.
- l) The specific experience of the firms/ JVs (separate from key staff) should be provided.

## 10. Team Composition and Qualifications and other Requirements

The consulting firm should comprise qualified personnel with the appropriate team composition, qualifications, and experience required for the key expert positions. The firm must provide well-qualified and experienced experts suitable for completing the assignment. Additionally, the firm should possess all necessary resources to deliver services of this nature, including relevant software, tools, and equipment needed to execute the task effectively. The key experts to be provided by the Consulting firm shall include the following:

Expert	Required attributes
a) <b>Team Leader (1 position)</b>	a) a minimum of a Master's degree in Economics, Development Economics, Renewable Energy, Auditing, Financing, Monitoring and Evaluation (M&E) or related field from recognized university

<b>Expert</b>	<b>Required attributes</b>
	<ul style="list-style-type: none"> <li>b) over 10 years of experience in relevant project management and implementation assignments.</li> <li>c) previous experience, including team-leader positions, in monitoring and evaluation of large projects; verification and certification assignments.</li> <li>d) Experience in rural off grid solar solutions in Malawi and/or other developing countries will be an added advantage.</li> </ul>
<b>b) Verification Auditor (1 position)</b>	<ul style="list-style-type: none"> <li>a) at least a Master's Degree in Auditing, Accounting, Energy Financing, Monitoring &amp; Evaluation (M&amp;E), or a related field from a recognized university/institution</li> <li>b) at least seven (7) years of general experience in undertaking verification and validation of impact results, auditing or any other monitoring and evaluation assignment.</li> <li>c) Demonstrated experience in verifying grant-funded projects, particularly in the energy access or development sectors.</li> <li>d) Experience in auditing energy access projects, especially those involving renewable energy technologies such as SHS, mini-grids, and clean cooking solutions.</li> <li>e) Familiarity with RBF and milestone-based financing mechanisms.</li> <li>f) Proficiency in the use of digital tools and platforms for conducting remote verifications.</li> <li>g) Strong analytical skills to assess financial claims and their alignment with RBF and Catalytic Grant milestones.</li> <li>h) Expertise in identifying and addressing potential fraud risks within financial claims, particularly in the context of milestone-based grant disbursements.</li> </ul>
<b>c) Monitoring and Evaluation Expert (1 position)</b>	<ul style="list-style-type: none"> <li>a) At least a master's degree in Social Sciences, Economics, M&amp;E, Statistics, Demography, Development Studies, Project Management, or related fields from a recognized university/institution</li> <li>b) At least seven (7) years of general experience conducting impact evaluations, independent verification of results and working with energy access projects.</li> </ul>

Expert	Required attributes
	<ul style="list-style-type: none"> <li>c) Proficiency in data collection and analysis tools, including experience with digital platforms and GIS for tracking and reporting on project performance.</li> <li>d) Familiarity with energy access projects, particularly those involving off-grid solar systems, and rural energy access.</li> </ul>
<p><b>d) Junior Verification and Telephone Auditor (3 positions)</b></p>	<ul style="list-style-type: none"> <li>a) At least Bachelor’s Degree in Auditing, Accounting, Energy Financing, Monitoring &amp; Evaluation (M&amp;E), or a related field from a recognized university/institution</li> <li>b) Minimum of five (5) years of experience in conducting monitoring and evaluation activities, data verification and validation, and auditing of impact results and field verifications, particularly in RBF projects and energy access programs.</li> <li>c) Proven experience working in rural settings and conducting verifications in remote areas is essential.</li> <li>d) Ability to work in challenging environments with limited infrastructure.</li> <li>e) Experience in collecting and analysing field data with a focus on accuracy and integrity.</li> <li>f) Strong understanding of risk management in field verification activities, including fraud detection and prevention.</li> <li>g) Experience leading, training, and supporting the work of the team conducting field and phone surveys.</li> </ul>

The consulting firm should provide details and plans for a team of surveyors conducting desk, phone and field verification. Such team needs to be suitably trained for verification tasks. The team conducting customer phone and field surveys need to be able to communicate in local languages (Chichewa, Chitumbuka, yao e.t.c) and must be conversant with local Malawi culture.

The Verification Auditor and the M&E Expert must be based in Malawi for the duration of the assignment to ensure effective coordination and day-to-day engagement with the PIU. If the Team Leader is internationally recruited and home-based, the consulting firm shall designate either the Verification Auditor or the Monitoring and Evaluation (M&E) Specialist to also serve as the Project Manager and a primary point of contact for continuous operational interaction with the PIU.

The designated Project Manager must demonstrate a strong track record in training, supervising, and managing teams of phone-based and field-based surveyors, including experience overseeing large-scale verification, data collection, and quality assurance processes.

### 11. Estimated time-inputs

In their technical proposal, the consulting firm shall clearly indicate estimated time inputs associated to each task. This includes estimated time inputs for the development of verification methods (fixed) and for actual verification tasks (variable, depending on how many SHS and clean cookstoves are sold and have to be verified within the contract period). Similarly, in their financial proposal, the firm shall indicate fixed and variable costs. The latter will be used for the basis of contract addenda if actual sales differ significantly from the costing assumptions in the consultant’s proposal.

The table below provides estimated time inputs for key and non-key experts based on the estimated SHS and clean cookstove sales to verify within the three-year period covered by this assignment.

Table 1. Estimated Time Inputs for Key and Non-Key Experts

No.	Key Expert	Estimated Number of Staff	Estimated Time Input in Person-Days per month	Estimated Total Time Inputs (Person-Months)
K-1	Team Leader	1	7.5	13.5
K-2	Verification Auditor	1	15	27
K-3	Monitoring and Evaluation Expert	1	15	27
K-4	Junior Verification (Field and Telephone) Auditor	3	10	54
NK-1	Phone and Field Survey Staff	20	4	180

The cost for non-key staff shall be included in expenses budget and not professional fees.

### 12. Data Privacy and Security

The IVA shall comply with the Malawi Data Protection Act, 2024 and World Bank guidelines.

### **13. Dispute and conflict resolution**

From time to time, issues may arise regarding interpretation of the Project Operations Manual and technical matters that may include verification findings issued by the IVA; eligibility of outputs for RBF; data quality, sampling methods, or site inspection outcomes; payment calculations or withholding decisions by the Fund Manager; and alleged procedural non-compliance that excludes fraud. The IVA shall resolve all disputes amicably through contact and dialogue. Disputes that cannot be resolved amicably shall be fully described in a summary report and submitted to the Project Manager. The Project Manager shall, within 14 working days, mediate the issues and seek resolution with the concerned parties. Any aggrieved party may also use the World Bank's grievance resolution procedures.

### **14. Working Language**

The working language for this assignment will be English, but the verification team should include members who are able to communicate in local languages.

### **15. Selection Method**

The attention of consultants is drawn to section III, para 3.14, 3.16 & 3.17 of the World Bank's *Procurement Regulations for IPF Borrowers: Procurement in Investment Projects Financing Goods, Works, Non-Consulting and Consulting Services, "Procurement Regulations for IPF Borrowers" July 2016, revised November 2017, August 2018 and September 2023* ("Procurement Regulations"), setting forth the World Bank's policy on conflict of interest.

Consultants may associate with other firms in the form of a joint venture or a sub consultancy to enhance their qualifications. Firms may partner either during the expression of interest or thereafter but the conditions applicable to the firm whose application is received will be applicable to the partnering firm. Firms are particularly encouraged to partner with local experts. A specific score on inclusion of local experts shall be included in the technical evaluation criteria.

This is a lumpsum contract and a consulting firm will be selected in accordance with the Quality Cost Based Selection (QCBS) method, following shortlisting, as set out in the above procurement Regulations.

### **16. Eligibility**

A firm declared ineligible by the World Bank group in accordance with the Bank Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants shall be ineligible for short listing.

## **17. Obligations of the Client**

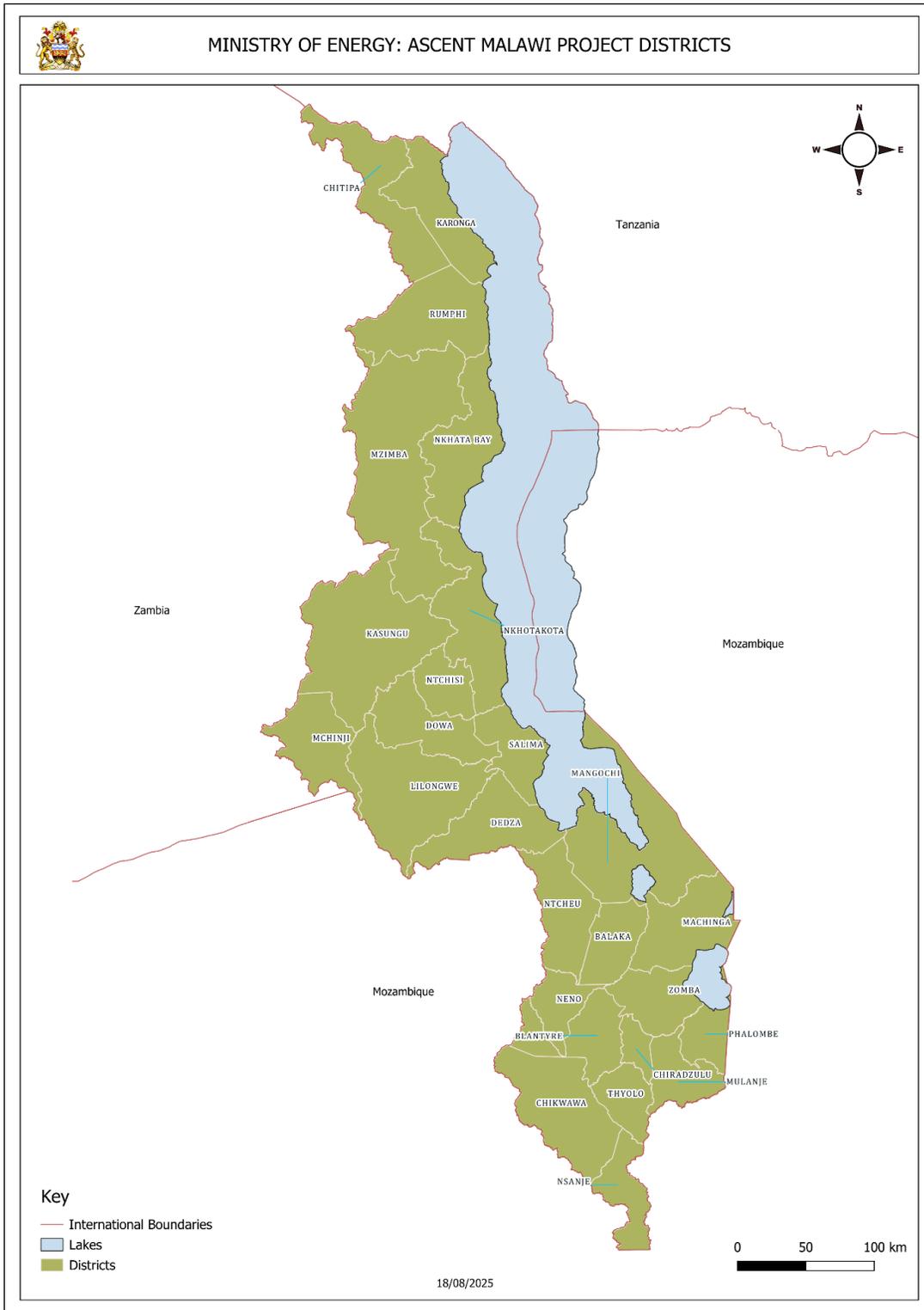
The Client will:

- a) provide the necessary reference documents, supporting letters to facilitate the consultant's travel, monitor the work, and release contractual payments in a timely manner.
- b) Provide the IVA with relevant information related to the consultancy, such as Project Appraisal Document, Project Implementation Manual, Project Operations Manual, Financing Agreement, reports, evaluations and documents relevant to the assignment
- c) Ensure that relevant officials from the POs in project implementing districts are available for periodic meetings and interviews as and when needed during the execution of the assignment.

## **18. Duration of the Assignment**

The duration of the assignment shall be three (3) years from the contract commencement date, with the possibility of extension for the full duration of the RBF grant facility, subject to project requirements, satisfactory performance, and the availability of project funds. The firm is expected to start the assignment by April 2026.

# Annex 1: ASCENT Project Districts



## Annex 2: Summary Table for IVA Report

#	Verification Method	Sample Size	Findings	Total Count	Percentage of Sample Size
1	Automatic/Desk	100%	Authentic sales	[ ]	[ ]%
			<b>Non-authentic sales</b>	[ ]	[ ]%
			(i) Repeat sales/Duplicates	[ ]	[ ]%
			(ii) Sales Coordinates mismatched from declared Villages	[ ]	[ ]%
2	Telephone	5%	Verified customers	[ ]	[ ]%
			<b>Discrepancy customers</b>	[ ]	[ ]%
			(i) Unverified customers	[ ]	[ ]%
			<i>Unreachable customers</i>	[ ]	[ ]%
			<i>Verified in CRM system</i>	[ ]	[ ]%
			(ii) Purchased before the reporting period	[ ]	[ ]%
			<i>Verified through customer responses</i>	[ ]	[ ]%
			<i>Verified in CRM system</i>	[ ]	[ ]%
			(iii) Overcharged beyond ceiling price	[ ]	[ ]%
			<i>Verified through customer responses</i>	[ ]	[ ]%
			<i>Verified in CRM system</i>	[ ]	[ ]%
			<b>Customers with unresolved technical issues</b>	[ ]	[ ]%
			<i>Reported technical issues</i>	[ ]	[ ]%
			<i>Resolved technical issues</i>	[ ]	[ ]%
3	Field	5%	Verified customers	[ ]	[ ]%
			<b>Discrepancy customers</b>	[ ]	[ ]%
			(i) Unverified Customers	[ ]	[ ]%
			<i>Traced but found not in possession</i>	[ ]	[ ]%
			<i>Untraceable customers</i>	[ ]	[ ]%
			<i>Verified in CRM system</i>	[ ]	[ ]%
			(ii) Purchased before the reporting period	[ ]	[ ]%
			<i>Verified through customer responses</i>	[ ]	[ ]%
<i>Verified in CRM system</i>	[ ]	[ ]%			

#	Verification Method	Sample Size	Findings	Total Count	Percentage of Sample Size
			(iii) Overcharged beyond ceiling price	[ ]	[ ]%
			<i>Verified through customer responses</i>	[ ]	[ ]%
			<i>Verified in CRM system</i>	[ ]	[ ]%
			(iv) Installation in ineligible households by gender and youth categories	[ ]	[ ]%
			(v) Beneficiaries with coordinates no accurate to ±5 m	[ ]	[ ]%
			<b>Customers with unresolved technical issues</b>	[ ]	[ ]%
			<i>Verified technical issues</i>	[ ]	[ ]%
			<i>Resolved technical issues</i>	[ ]	[ ]%

### Annex 3: ASCENT indicator Verification Protocol

Indicator	Definition/Description of achievement	Protocol to evaluate achievement and data verification		
		Data source/ Responsible Entity	Verification Entity	Procedure
Off-grid connection through solar home system	This indicator will measure the number of households by gender and youth categories provided with new access (with accurate coordinates) to off-grid energy solutions under the project.	NNNF Data Platform and IVA customer surveys	IVA	NNNF participating companies will collect the data. The Fund Manager will periodically feed the data into the NNNF Data Platform. The IVA will verify the data accuracy by surveying a sample of customers
People provided with access to clean cooking solutions	This indicator will measure the number of households provided with access to clean cooking solutions under the project	NNNF Data Platform and IVA customer surveys	IVA	NNNF participating companies will collect the data. The Fund Manager will periodically feed the data into the NNNF Data Platform. The IVA will verify the data accuracy by surveying a sample of customers.

## Annex 4: Results Verification (RBF Grant)

2.01. The verification will be conducted by an IVA appointed by the ASCENT Malawi PIU on a continuous basis based on verification reports submitted by the POs. The verification process will include a desk check of all customers submitted in a claim, for a) completeness and accuracy; b) the establishment of the sample size for phone verification and field verification. The desk verification may be conducted automatically by the dMRV platform when it is fully operational.

2.02. Field and phone verification are required to confirm the claim of the POs regarding their system installations in Eligible Households to avail the RBF grant. Verification samples for each verification modality are as follows:

**Table 1: Samples for Desk, Phone and Field Verification**

Desk Verification	Phone Verification	Field Verification
100% of the claims submitted	Minimum 5% sample size	Minimum 5% sample size (will not include the customers verified over phone)

IVA is to ensure a statistically significant sample size. In addition, as the dMRV platform becomes fully operational, the MOEM, in phases, may reduce the verification samples for each verification modality.

### *Desk Verification:*

2.03. IVA will conduct a desk-based verification of 100% claims submitted by the POs for all disbursements. The verification will be conducted to confirm the following:

- Authenticity of the customer (name, identification, location including GPS coordinates and contact details of the customer)
- Installation's coordinates mismatched from declared village (to be rolled out progressively)
- The date of sale corresponds to claim period
- The correct grant amount is claimed for each household (based on system size and districts)
- Customer down-payment has been collected and SHSs were sold at the agreed subsidized price

- Compare the various claims of the POs, including all installations under MEAP, to make sure there are no duplications in batch data and across the batch data in different periods (check will be done for unique National ID numbers).

2.04.A Discrepancy shall not include instances where, due to no fault of the PO, an installation could not be verified following the IVA's failure to utilize accurate customer information provided by the PO.

2.05.IVA will resolve the discrepancies identified through desk verification after direct consultations with the POs and then identify customers for the next phase of phone and field verification.

*Phone Verification:*

2.06.The verifier will call customers and will ask them a series of questions, as per the Phone Verification Survey Questionnaire to be developed by the IVA, to determine whether they have bought and received a subsidized system and whether the systems are functioning or not.

2.07.Some customers may not be immediately reachable due to different reasons (incl. e.g. poor network, unavailability, low battery, phone being turned off, etc.). Hence, the verifier should try to reach the customer four times, taking care to call at different times during the day (morning, lunch time, afternoon, evening) and on different days. If a customer has not been reached after four attempts, s/he will be marked as 'unreached'.

2.08.If the list of unreached customers is less than 10% of the total sample of phone verification, they shall automatically be considered as valid sales. If the unreached customers are more than 10% of the total sample of phone verification, the IVA will check records of these customers in the PO records/customer management system. IVA will check the date of sale, receipt of down payment (for PAYGO sale) or full payment (cash sale) through mobile money transaction record or bank record, area of sale and customer details. If a PO can provide satisfactory proof to the IVA that it is an authentic sale, IVA shall mark the sales of those respective unreached customers as authentic sales. After cross-checking the records, if the POs cannot provide satisfactory proof to the IVA of an authentic sale, those customers are to be traced and followed-up during field verification. For avoidance of doubt, the follow-up of unreachable customers will be on top of minimum 5% field verification sample size.

2.09. Once a customer is reached over phone, the verifier will go through the questions in the Phone Verification Survey. All questions need to be asked and answers recorded accurately. Particular attention should be paid to the “date of sale”, “system size”, “household district (urban/rural)”, “PAYGO/cash price of the system” and “the condition of the system”. It should be noted that customers sometimes don’t remember the exact date. Hence, a difference of one month between the date of sale indicated by the customer and the PO is permissible. Customers might also report a different PAYGO monthly instalment than the reported amount by the POs as some customers pay a one-off amount based on availability of excess income. IVA is to cross check with the POs in the CRM system of the PO the reported instalment amount or cash sale amount before marking the sale as non-authentic.

2.10. Once all customers have been reached or called a maximum of four times, PO records have been cross checked and unreachable customers have been added to the field verification sample, the IVA will first share the findings with the POs for feedback. Subsequently, after resolving the discrepancies with the POs to the best extent possible, the IVA shall notify MOEM that phone verification is completed. The outcome of the phone verification for each customer will be determined based on the following criteria:

**Table 2: Phone Verification Criterion, Condition and Next Step**

Criterion	Condition	Next Step
Verified Customers	Customers called are reached and confirmed that they have bought a system which is functioning properly	All the verified customers will be recorded in the “Verified Customer List”.  A list of all the discrepancy customers who have reported not buying a system will be given to the PO to provide an explanation.
Discrepancy Customers	Customers are unreachable, or reached and informed that they have not bought a system, and POs failed to provide satisfactory evidence of an authentic sale.	Unreached customers after checking the company records, will be followed up by the IVA during field visits.  IVA will cross-check and resolve all the discrepancy customers issues with the POs in accordance with the process stipulated in Table 10.
Customers with	If a customer confirms buying a system, but claims that the system is	The POs will be requested to repair the issue within 1 month. After 1 month, the IVA will call “Customers with Technical Issues” to verify

<p>Technical Issues</p>	<p>no longer working due to technical issues, the customer will be recorded in “Customers with Technical Issues List”. The list is to be shared with the POs prior to submitting the draft report to MOEM.</p>	<p>whether repairs have been made and document the result of the call. If the customers can be reached and confirmed that system has been repaired and is functioning, the customer will be changed to “Verified Customer List” and the incentive will be paid out with the next claim or in a separate payment if there is no additional claim.</p> <p>The customers will be marked as “unreached” if they are not reached in maximum four attempts of phone calls (at different times during the day (morning, lunch time, afternoon, evening) and on different days). The subsidy for all unreached customers will not be paid unless POs provides alternative phone number and the customers confirm that the technical issues of their system have been fixed by the PO.</p>
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2.11. The customers that claim over phone of having grid connection at the point of installation/registration, IVA is to visit the households and take pictures of the grid connection, gather dates when the HH was connected to the grid vs date of SHS installation and GPS Coordinates of the connected HH. For avoidance of doubt, these field visits are to be conducted on top of the minimum 5% field verification sample size. IVA is to share the list of the customers having grid connections, pictures and GPS coordinates of the HH with the POs prior to submitting draft report to MOEM and agree on the findings with POs to the best extent possible.

*Field Verification:*

2.12. Field verification will be conducted on all claims as per the sample percentage for the full project duration. The outcome of the field verification for each customer will be determined based on the following criteria:

**Table 3: Field Verification Criterion, Condition and Next Step**

Criterion	Condition	Next Step
Verified Customers	<p>Customers are reached in field verification, confirming the sale, area of sale is confirmed and in accordance with the eligibility criteria and confirming that the system is working properly.</p> <p>Customers GPS coordinates are verified as being <math>\pm 5m</math> accurate to the location of the beneficiary (to be rolled out progressively).</p>	<p>All the verified customers will be recorded in the “Verified Customer List”. IVA will cross check and resolve all the discrepancy customers issues with the POs in accordance with the process stipulated in Table 10.</p>
Discrepancy Customers	<p>Customers denied having the system / having grid connection at the household during date of installation / prices do not reflect subsidies</p>	
Customers with Technical Issues	<p>Customer confirms having bought a system, but claims that the system is no longer working due to technical issues, the customer will be recorded in “Customers with Technical Issues List”. The list is to be shared with the POs prior to submitting the draft report to MOEM.</p>	<p>The POs will be requested to repair the issue within 1 month. After 1 month, the IVA will call “Customers with Technical Issues” to verify whether repairs have been made and document the result of the call. If the customers can be reached and confirmed that the system has been repaired and is functioning, the customer will be changed to “Verified Customer List” and the incentive will be paid out with the next claim or in a separate payment if there is no additional claim.</p> <p>The customers will be marked as “unreached” if they are not reached in a maximum of four attempts of phone calls (at different times during the day</p>

		(morning, lunch time, afternoon, evening) and on different days). The subsidy for all unreached customers will not be paid unless POs provide an alternative phone number and the customers confirm that the technical issues of their system have been fixed by the PO.
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2.13. Tracing of a household during field verification and finding the customer will be the sole responsibility of the IVA. If a customer or a household cannot be traced despite being provided with correct location information by the POs, the sales shall be considered valid and authentic.

2.14. IVA will submit the Quarterly Verification Report as per the following timelines:

- Full Quarterly Verification Report: Within 90 days of receiving the three months verification data from the MOEM. The report should contain a summary table as mentioned in [Annexure 2.03](#) for each PO.

2.15. If the percentage of “Discrepancy Customers” goes above 20% in consecutive two verification batches, the Fund Manager will opt for introducing strict measures that can include withholding further disbursement of the RBF grant.

2.16. The following table gives an illustration of valid technical issues of SHSs (inclusive but not limited to):

**Table 4: Illustration of Valid Technical Issues of SHSs**

Can be listed as a Technical Issue	Cannot be listed as a Technical Issue
One bulb is always on and cannot be switched off	Control unit was stolen
Solar panel is broken or not functioning	Battery does not charge in full in a cloudy day
Battery is not being charged in full even if it is a sunny day	Radio has not been provided / Radio is not functioning or unable to pick up stations (IVA will have to check first whether the area is within radio network coverage)

Can be listed as a Technical Issue	Cannot be listed as a Technical Issue
Switch is faulty	Battery does not last long when all the lights are on (IVA will have to check the capacity of the solar panel and check specifications of how much back up it will give when all the lights are on)
One light is not working	Bulb decreased brightness (IVA will have to check in what mode of switch the customers are using, usually if a customer presses the switch more than once luminescence increases)
Phone charging cable is not working	Light flickers when switched on

2.17. *Resolving of Verification Discrepancies:* Following processes are to be followed by the IVA for the identified discrepancies in phone and field verification. Only after following all the steps, the report can be submitted to MOEM for final approval.

**Table 5: Process for Resolving Verification Discrepancies**

Discrepancy Type	Follow-up Action
Untraceable or Unreachable Customers	IVA to cross check PO records / CRM software for checking evidence of down payment and monthly instalment receipt (for PAYGO) or cash sale receipt to resolve the discrepancy. If the POs fail to provide satisfactory evidence to IVA regarding the proof of sale, the customers are to be recorded as non-authentic.
Products sold in an ineligible household / grid connected household	IVA to take pictures of the existence of a grid connection and collect the GPS coordinates of the HH and make sure that the HH ineligibility criteria related to grid connection existed during the date of installation/registration. IVA is to share the pictures and list of the grid connected households with the POs prior to submission of the report to MOEM and agree on the findings with POs at the best extent possible. If the POs fail to provide satisfactory evidence regarding the proof of household eligibility, the customers are to be recorded as non-authentic.
SHSs purchased before project date	IVA will collect the mobile money transaction data from customer management system or PO record to substantiate down payment receipt (for PAYGO) or cash sale receipt

Discrepancy Type	Follow-up Action
	within the project period for the identified discrepancy customers. Subsequent follow-up will not be required if the POs can provide proof of receipt of down payment or cash sale within the project period. If the POs fail to provide satisfactory evidence regarding the proof of purchase, the customers are to be recorded as non-authentic.
Customers Overcharged	IVA will crosscheck customer contracts in the PO's CRM system or with PO records. The POs will be required to provide evidence, by means of the contract data to the IVA that the customers are being charged within the capped after subsidy SHS price reported to MOEM. The POs will also deliver a signed customer agreement copy at the households with details of SHS price, monthly instalment, tenor and agreement date.
Technical Issues	POs will be required to resolve the technical issues and reapply for the grant for the identified customers which shall be disbursed only after IVA phone verification for the identified households. IVA is to share the list of customers with technical issues with the POs prior to submitting the draft report to MOEM.
Repossession of Systems	Repossessed systems under PAYGO agreements are not to be identified as a discrepancy as long as repossession clauses are mentioned in the agreements. IVA will verify that companies are not claiming RBF grants for resale of repossessed systems.

2.18. As the dMRV platform becomes fully operational, MOEM may progressively adopt a risk-based approach, applying verification efforts according to the risk profiles of the POs.

2.19. *Payment Procedure:* After receipt of the final verification report, Fund Manager shall calculate the Corresponding Amount for RBF deduction that shall be extrapolated from the discrepancy percentage of the IVA report. Following table illustrates the procedure:

**Table 6: Calculation of RBF Grant Payment**

Period	[Insert period]
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Phone Verification Discrepancy Customers (a)	[ ]
Field Verification Discrepancy Customers (b)	[ ]
Telephone and field Verification Sample Size (c)	[ ]
<b>Discrepancy Percentage (d) = {(a)+(b)}/(c)</b>	<b>[ ]%</b>
No. of SHSs Installed (e)	[ ]
Desk Verification Discrepancy Customers (f)	[ ]
Verified SHSs after Desk Verification (g) = (e) – (f)	[ ]
Discrepancy HHs (h) = (g) x (d) + (f)	[ ]
<b>Final Verified SHSs (i) = (e) – (h)</b>	<b>[ ]</b>
Customers with Technical Issues (phone and field) (j)	[ ]
<b>Grant Deduction HHs (k) = (h) + (j)</b>	<b>[ ]</b>
Per Unit Grant (l)	\$20
Grant Deduction Amount in USD (m) = (k) x (l)	\$( [ ] )

## Monitoring and Evaluation

2.20. Monitoring and evaluation will be done through a combination of record keeping, report generating, field visits and discussion meetings.

### Fund Manager:

2.21. The Fund Manager will keep record of the following:

- Aggregate number of applications received, approved and declined.
- Number of female headed households as verified by the IVA
- Geographic distribution of sales
- Disbursements of loans and grants to the POs
- Outstanding current principal balance (aggregate amount) by POs
- Principal and interest overdue by POs

- Recoveries (principal and interest) from POs
- Private capital enabled through the Fund
- Relevant applicable reports as per NNNF ESMS

### **Participating Organizations (POs):**

#### 2.22. POs shall:

- i. Maintain a financial management system including records and accounts, and prepare, all in accordance with accounting standards acceptable to the MOEM, consistently applied, adequate to reflect distinctly the operations, resources and expenditures related to grants and sub-loans provided under the Fund.
- ii. Have their records, accounts and financial statements (balance sheets, statements of income and expenses and related statements distinctly identifying) for each fiscal year audited, in accordance with auditing standards acceptable to the MOEM, consistently applied, by independent auditors enlisted by MAB.
- iii. Promptly furnish to the Fund Manager or at the request of the World Bank or MOEM, as soon as available, but in any case not later than six months after the end of each financial year, (A) certified copies of the financial statements referred to in clause (ii) of this Section, for such year as so audited, and (B) an opinion on such statements and report of such audit, by said auditors, of such scope and in such detail as the Fund Manager as well as the MOEM shall have reasonably requested including a management letter indicating auditor's findings on state of governance, internal controls and management practices involved in POs' operations and measures recommended by auditors to overcome weaknesses and observations.
- iv. Furnish to the Fund Manager or at the request of World Bank or MOEM such other information concerning such records, accounts and financial statements, and the audit thereof, and concerning said auditors, as may be from time to time reasonably requested.

#### 2.23. The POs will also keep records of the following:

- Number of applications received for installation of SHS
- Number of applications approved and number declined
- Average days between receipt of application and installation of system

- Total loan disbursed to households
- Total repayments (principal + interest)
- Outstanding principal loan balance
- Number of household loans fully repaid on schedule
- Total overdue amount (principal + interest)
- Principal and interest balance of overdue loans
- Portfolio at Risk (PaR) analysis
- Number of SHS repossessions by POs
- Value of request applications to Fund Manager
- Value of disbursement from Fund Manager
- Technical inspection reports
- Suppliers' service records
- NNNF ESMS reports

## Annex 5: Results Verification

- 4.58. The Carbon Consultant Firm (CCF) and Fund Manager will provide necessary reporting format for monthly monitoring data to be submitted by the POs.
- 4.59. The verification will be conducted by an IVA appointed by the ASCENT Malawi PIU on a continuous basis based on monthly monitoring data submitted by the POs. The verification process will include a desk check of all customers submitted in a claim, for a) completeness and accuracy; b) the establishment of the sample size for phone verification and field verification. The desk verification may be conducted by the dMRV platform when it is fully operational.
- 4.60. Field and phone verification are required to confirm the claim of the POs regarding their CCS installations in Eligible Households. Verification samples for each verification modality are as follows:

**Table 7: Samples for Desk, Phone and Field Verification**

Desk Verification	Phone Verification	Field Verification
100% of the claims submitted	Minimum 5% sample size	Minimum 5% sample size (will not include the customers verified over phone)

IVA is to ensure a statistically significant sample size in case of lower sales figures. In addition, as the dMRV platform becomes fully operational, the MOEM, in phases, may reduce the verification samples for each verification modality.

### *Desk Verification:*

- 4.61. IVA will conduct a desk-based verification of 100% claims submitted by the POs for all disbursements. The verification will be conducted to confirm the following:
- Authenticity of the customer (name, identification, location including latitude and longitude coordinates (if available) and contact details of the customer)
  - Installation's coordinates mismatched from declared village (to be rolled out progressively)
  - Customer down-payment has been collected and clean cooking solutions were sold
  - Compare the various claims of the PO to make sure there are no duplications in batch data and across the batch data in different periods

4.62. IVA will resolve the discrepancies identified through desk verification after direct consultations with the POs and then identify customers for the next phase of phone and field verification.

*Phone Verification:*

4.63. The verifier will call sample customers and will ask them a series of questions, as per the Phone Verification Survey Questionnaire to be developed by the IVA with necessary inputs from CCF, to determine whether they have bought and received a clean cooking solution, whether the systems are functioning, and whether the CCS serial number matches with the sales data or not as well as usage status of the CCS.

4.64. Some customers may not be immediately reachable due to different reasons (incl. e.g. poor network, unavailability, low battery, phone being turned off, etc.). Hence, the verifier should try to reach the customer at least four times to call at different times during the day (morning, lunch time, afternoon, evening) and on different days. If a customer has not been reached after four attempts, s/he will be marked as 'unreached'.

4.65. If the list of unreached customers is less than 10% of the total sample of phone verification, they shall automatically be considered as valid installation. Only if the unreached customers are more than 10% of the total sample of phone verification, the customers unreached will then be first cross-checked by IVA from the PO records/CRM system. IVA will check the date of sale, receipt of down payment (for PAYGO/ credit sale) or full payment (cash sale) through mobile money transaction record or bank record, area of sale and customer details. If a PO can provide satisfactory proof to the IVA that it is an authentic sale, IVA shall mark the sales of those respective unreached customers as authentic sales. After cross-checking the records, if the POs cannot provide satisfactory proof to the IVA of an authentic sale, those customers are to be traced and followed-up during field verification. For avoidance of doubt, the follow-up of unreachable customers will be on top of minimum 5% field verification sample size.

4.66. Once a customer is reached over phone, the verifier will go through the questions in the Phone Verification Survey. All questions need to be asked and answers recorded accurately. Particular attention should be paid to the "date of sale", "household district (urban/rural)", "PAYGO/credit/cash price of the system" and "the condition of the system". It should be noted that customers sometimes don't remember the exact date. Hence, a difference of one month between the date of

sale indicated by the customer and the PO is permissible. Customers might also report a different PAYGO monthly installment than the reported amount by the POs as some customers pay a one-off amount based on availability of excess income. IVA is to cross check with the POs in the CRM system of the PO the reported installment amount or cash sale amount before marking the sale as non-authentic.

4.67. Once all customers have been reached or called a maximum of four times, PO records have been cross checked and unreachable customers have been added to the field verification sample, the IVA will first share the findings with the POs for feedback. Subsequently, after resolving the discrepancies with the POs to the best extent possible, the IVA shall notify MOEM that verification is completed. The outcome of the phone verification for each customer will be determined based on the following criteria:

**Table 8: Phone Verification Criterion, Condition and Next Step**

Criterion	Condition	Next Step
Verified Customers	Customers called are reached and confirmed that they have bought a clean cooking solution which is functioning properly  Customers GPS coordinates are verified as being $\pm 5m$ accurate to the location of the beneficiary (to be rolled out progressively).	All the verified customers will be recorded in the "Verified Customer List".  A list of all the discrepancy customers who have reported not buying a clean cooking solution will be given to the PO to provide an explanation. Unreached customers after checking the company records, will be followed up by the IVA during field visits.  IVA will cross-check and resolve all the discrepancy customers issues with the POs in accordance with the process stipulated in Table 30.
Discrepancy Customers	Customers called are unreachable, or reached and informed that they have not bought a clean cooking solution, and POs failed to provide satisfactory evidence of an authentic sale.	
Customers with Technical Issues	If a customer confirms having bought a clean cooking solution, but claims	The POs will be requested to resolve the issue within 1 month. After 1 month, the IVA will call "Customers with

	<p>that the clean cooking solution is no longer working due to technical issues, the customer will be recorded in “Customers with Technical Issues List”. The list is to be shared with the POs prior to submitting the draft report to MOEM.</p>	<p>Technical Issues” to verify whether repairs have been made and document the result of the call. If the customers can be reached and confirmed that the clean cooking solution has been repaired and is functioning, the customer will be changed to “Verified Customer List”.</p> <p>The customers will be marked as “unreached” if they are not reached in maximum four attempts of phone calls (at different times during the day (morning, lunch time, afternoon, evening) and on different days).</p>
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*Field Verification:*

4.68. Field verification will be conducted on all claims as per the sample percentage for the full project duration. The outcome of the field verification for each customer will be determined based on the following criteria:

**Table 9: Field Verification Criterion, Condition and Next Step**

Criterion	Condition	Next Step
Verified Customers	<p>Customers are reached in field verification, confirming the sale, area of sale is confirmed, CCS specifications along with serial number is confirmed and in accordance with the eligibility criteria and confirming that the clean cooking solution is working properly.</p> <p>Customers GPS coordinates are verified as being ±5m accurate to the location of the beneficiary.</p>	<p>All the verified customers will be recorded in the “Verified Customer List”. IVA will cross check and resolve all the discrepancy customers issues with the POs in accordance with the process stipulated in Table 30.</p>
Discrepancy Customers	<p>Customers denied having the clean cooking solution</p>	

Customers with Technical Issues	Customer confirms having bought a clean cooking solution, but claims that the system is no longer working due to technical issues, the customer will be recorded in “Customers with Technical Issues List”. The list is to be shared with the POs prior to submitting the draft report to MOEM.	<p>The POs will be requested to resolve the issue within 1 month. After 1 month, the IVA will call “Customers with Technical Issues” to verify whether repairs have been made and document the result of the call. If the customers can be reached and confirmed that the clean cooking solution has been repaired and is functioning, the customer will be changed to “Verified Customer List”.</p> <p>The customers will be marked as “unreached” if they are not reached in maximum of four attempts of phone calls (at different times during the day (morning, lunch time, afternoon, evening) and on different days).</p>
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4.69. Tracing of a household during field verification and finding the customer will be the sole responsibility of the IVA. If a customer or a household cannot be traced despite being provided with correct location information by the POs, the sale shall be considered as valid and authentic.

4.70. IVA will submit the Quarterly Verification Report as per the following timelines:

Full Quarterly Verification Report: Within 90 days of receiving the three months verification data report from the MOEM. The report should contain a summary table as mentioned in [Annexure 4.04](#) of the POM for each PO.

4.71. If the percentage of “Discrepancy Customers” goes above 20% in consecutive two verification batches, the Fund Manager will opt for introducing strict measures that can include withholding further disbursement.

4.72. *Resolving of Verification Discrepancies:* Following processes are to be followed by the IVA for the identified discrepancies in phone and field verification. Only after following all the steps, the report can be submitted to MOEM for final approval.

**Table 10: Process for Resolving Verification Discrepancies**

Discrepancy Type	Follow-up Action
Untraceable or Unreachable Customers	IVA to cross check PO records/customer management software for checking evidence of down payment and monthly instalment receipt (for PAYGO) or cash sale receipt to resolve the discrepancy. If the POs fail to provide satisfactory evidence to IVA regarding the proof of sale, the customers are to be recorded as non-authentic.
Products sold in an ineligible household	IVA to take pictures and collect the GPS coordinates of the HH. IVA is to share the pictures and list of the ineligible households with the POs prior to submission of the report to MOEM and agree on the findings with POs at the best extent possible. If the POs fail to provide satisfactory evidence regarding the proof of household eligibility, the customers are to be recorded as non-authentic.
Clean cooking solutions purchased before project date	IVA will collect the mobile money transaction data from CRM system or PO records to substantiate down payment receipt (for Loan or PAYGO) or cash sale receipt within the project period for the identified discrepancy customers. Subsequent follow-up will not be required if the POs can provide proof of receipt of down payment or cash sale within the project period. If the POs fail to provide satisfactory evidence regarding the proof of purchase, the customers are to be recorded as non-authentic.
Technical Issues	POs will be required to resolve the technical issues for the identified customers to ensure defined quality standards for each CCS, which may be confirmed by the IVA verification for the identified households. IVA is to share the list of customers with technical issues with the POs prior to submitting the draft report to MOEM.
Repossession of Systems	Repossessioned clean cooking solutions under PAYGO agreements are not to be identified as a discrepancy as long as repossession clauses are mentioned in the agreements. IVA will verify that companies are not claiming additional installation numbers for resale of repossessioned systems.

4.73. As the dMRV platform becomes fully operational, MOEM may progressively adopt a risk-based approach, applying verification efforts according to the risk profiles of the POs.

## **Annex 6: Monitoring, Evaluation and Validation under Component 4**

4.74. Monitoring and evaluation will be done through a combination of surveys, field tests, record keeping, report generating, field visits and discussion meetings.

### **Carbon Consultant Firm (CCF)**

4.75. The CCF provides the foundational technical documents to ensure all field activities are aligned with the compliance requirements for carbon credit generation.

- Customer Agreement Input: Provide technical input during the development of the PO-Customer sales agreement to ensure all carbon credit relevant data requirements are captured, and the customer's obligations regarding product usage are clearly stated.
- Survey Tool Development: Develop the baseline survey questionnaire and the annual usage survey questionnaire that the POs and IVA will utilize in the field.
- Monitoring Parameters: The CCF will define the necessary technical and methodological parameters for monitoring, ensuring data collected by the POs and verified by the IVA can be used to calculate emission reductions.
- Usage Monitoring Systems: The CCF is responsible for the design and implementation of the continuous energy consumption measurement system (e.g., Stove Use Monitors - SUMs) where applicable, ensuring the data collected is used to calculate project emissions and meets required statistical precision.
- Technical Studies Management: Manage and oversee the KPT, CCT, and WBT campaigns and all associated field/laboratory tests following monitoring plan and sample design.
- Monitoring Report Generation: The CCF will prepare the emission reduction monitoring reports for each monitoring period of the registered carbon credit project based on validated monitoring data and submit it to the MOEM for onward submission to the accredited VVB for verification and validation.

### **Fund Manager:**

4.76. The Fund Manager will keep record of the following:

- Aggregate number of loan applications received, approved and declined.
- Number of female headed households as verified by the IVA
- Geographic distribution of clean cooking solution sales and installations
- Disbursements of loans to the POs

- Outstanding current principal balance (aggregate amount) by POs
- Principal and interest amounts overdue by POs
- Recoveries (principal and interest) from POs
- Report on PaR30 by POs
- Carbon revenue received from carbon credit sales

**Participating Organizations (POs):**

4.77. POs shall:

- i. Maintain a financial management system including records and accounts, and prepare, all in accordance with accounting standards acceptable to the MOEM, consistently applied, adequate to reflect distinctly the operations, resources and expenditures related to sub-loans provided under the Fund.
- ii. Have their records, accounts and financial statements (balance sheets, statements of income and expenses and related statements distinctly identifying) for each fiscal year audited, in accordance with auditing standards acceptable to the MOEM, consistently applied, by independent auditors enlisted by MAB.
- iii. Promptly furnish to the Fund Manager or at the request of the World Bank or MOEM, as soon as available, but in any case not later than three months after the end of each financial year, (A) certified copies of the financial statements referred to in clause (ii) of this Section, for such year as so audited, and (B) an opinion on such statements and report of such audit, by said auditors, of such scope and in such detail as the Fund Manager as well as the MOEM shall have reasonably requested including a management letter indicating auditor's findings on state of governance, internal controls and management practices involved in POs' operations and measures recommended by auditors to overcome weaknesses and observations.
- iv. Furnish to the Fund Manager or at the request of World Bank or MOEM such other information concerning such records, accounts and financial statements, and the audit thereof, and concerning said auditors, as may be from time to time reasonably requested.
- v. Be able to maintain digital Monitoring, Reporting, and Verification (dMRV) platform as prescribed by the adopted carbon credit methodology to keep track of stove usage and performance. This platform should be able to provide secure,

auditable data for cookstove distribution and usage for VVBs as and when applicable during maintenance of a carbon registry and carbon transaction.

- vi. Carry out required surveys, record customers and CCS details data as well as collect periodical technical data as and when required following adopted carbon credit methodology. The CCF will define the process and train POs accordingly.

4.78. The POs will also keep records of the following financial data:

- Number of applications received for installation of clean cooking solution
- Number of applications approved and number declined
- Average days between receipt of application and installation of system
- Total loan disbursed to households
- Total repayments (principal + interest)
- Outstanding principal loan balance
- Number of household loans fully repaid on schedule
- Total overdue amount (principal + interest)
- Principal and interest balance of overdue loans
- Portfolio at Risk (PaR) analysis
- Number of clean cooking solution repossessions by POs
- Value of request applications to Fund Manager
- Value of disbursement from Fund Manager
- Technical inspection reports
- Suppliers' service records

### **Independent Verification Agent (IVA)**

4.79. The Independent Verification Agent (IVA)'s verification activities are central to the project's M&E framework, bridging the data reported by the Participating Organizations (POs) and the technical requirements of the carbon credit methodology. These activities ensure the data is accurate for both loan disbursement decisions and carbon credit issuance. The IVA conducts continuous verification based on monthly data submitted by the POs, following the sampling plan and processes set by the CCF.

4.80. The IVA's initial focus is on verifying the authenticity and completeness of the PO's sales claims and tracking systems.

- i. Desk Verification (100% of Claims): Conducts a desk-based verification of every claim submitted by the POs.

- Confirms the authenticity of the customer (name, identification, location, and contact details).
  - Verifies that the customer down-payment has been collected and the clean cooking solution (CCS) was sold.
  - Compares various claims to ensure no duplications in batch data or across different periods.
- ii. System Integrity Review: Reviews and verifies the integrity of PO's sales and end-user portfolio tracking systems, checking details such as full names, exact geographic location, product specifications, CCS serial numbers, date of installation, pricing, repayments, and the provision of warranty/after-sales services.
- iii. Financial Reconciliation: Reconciles all transactions in the claims with the data/records maintained by each PO. This includes verifying down payment/deposit/part-payment and repayment periods.

4.81. Field and Usage Verification (Carbon Credit Compliance): The IVA confirms the presence and usage of the CCS, which is crucial for determining emission reductions and fulfilling carbon credit methodology requirement.

- i. Phone Verification (Minimum 5% Sample): Calls a sample of customers to determine whether they have bought and received a CCS and whether the systems are functioning or not. Follow-up procedures are conducted for unreached customers.
- ii. Field Verification (Minimum 5% Sample): Conducts field surveys to ascertain the physical presence of CCS in end-user households and confirm the sale and working condition of the stove.
- iii. Technical and Eligibility Compliance:
- Verifies that the products delivered to the beneficiaries meet the approved stove model and Tier Level (Tier 3 or above) with unique serial number.
  - Verifies activities by the POs in accordance with the ASCENT Malawi Environmental and Social Management Framework and the parameters mentioned during carbon credit registration.
  - Confirms the area of sales is in accordance with the eligibility criteria.
  - Verifies data regarding the percentage of female headed household sales.

- iv. Data Accuracy for CCF: The IVA is responsible for tracing a household during field verification. Where applicable, the IVA will flag discrepancies if the margin of error for submitted GPS coordinates exceeds 5 meters.
- 4.82. Reporting and Discrepancy Management: The IVA's final report drives MOEM decisions on loan approval and facilitates the CCF's work.
- i. Discrepancy Resolution: Follows a structured process to resolve verification discrepancies (e.g., untraceable customers, products sold in ineligible households, or technical issues) with the POs prior to final report submission.
  - ii. Technical Issues Follow-up: Records customers reporting technical issues and requires POs to resolve the issue within one month. The IVA then verifies the repair status.
  - iii. Report Submission: Prepares and submits the Quarterly Verification Report to the MOEM within 90 days of receiving the three months of verification data from the MOEM.
  - iv. Monitoring Plan Execution: Conducts required monitoring activities as per the monitoring plan mentioned during carbon credit registration.

### **Validation and Verification Body (VVB)**

- 4.83. The MOEM shall procure the services of a VVB, subject to the accreditation standards of the applicable carbon credit mechanism and the Environmental Affairs Department (EAD) of Malawi. The scope of services shall be governed by the regulations of said mechanism and EAD. As the registration and issuance of carbon credits are strictly conditional upon the findings of the VVB, the engagement of such a body is a mandatory prerequisite.

## **Annex 7: Fraud Reporting, Escalation, and Resolution Mechanism**

The following steps shall be followed to ensure that any suspected fraud, corruption, collusion, coercion, or misrepresentation is promptly identified, confidentially reported, independently investigated, and formally resolved, without interference or retaliation:

### **Step 1: Detection and Initial Assessment**

The Independent Verification Agent (IVA) shall:

- Identify red flags through data checks, site visits, audits, or whistleblower information;
- Conduct limited factual validation to confirm reasonable suspicion; and
- Not investigate or alert suspected parties.

### **Step 2: Confidential Reporting (Fraud Alert)**

- The IVA shall, within 24 hours, submit a Fraud Alert Report to the Project Manager who shall notify the Secretary responsible for Energy and the World Bank Task Team Leader (TTL) without providing details of the suspected fraud.

### **Step 3: Evidence Preservation and Safeguards**

- The IVA shall secure all documents, data systems and logs, and preserve original evidence and metadata.
- The Project Manager shall suspend affected disbursements and restrict access to sensitive project records.

### **Step 4: Escalation and Independent Investigation**

- The Project Manager shall escalate the suspected fraud to the Ministerial Integrity Committee.
- The Ministerial Integrity Committee shall determine investigation approach which may involve forensic auditors or the Anti-Corruption Bureau.
- The IVA, Fund Manager and POs shall cooperate fully upon request.

### **Step 5: Resolution and Corrective Actions**

- Depending on findings the Project Manager shall:
- Lift suspension of disbursement if allegations are unsubstantiated;
- Recover funds or cancel disbursement;
- Strengthen controls and revise procedures; or
- Refer to the Anti-Corruption Bureau, if required.

### **Step 6: Closure and Learning**

The IVA and Project Manager shall:

- Document case closure;
- Update risk controls and verification procedures; and
- Integrate lessons learned into future operations.

## Annex 8: Independent Verification Agent (IVA) – Key Performance Indicators (KPIs)

Focus area	KPI	Definition	Target					
1. Timeliness	Verification Report Turnaround	Time from data submission to final verified quarterly report	≤ 90 working days					
	Fraud Alert Reporting Time	Time from suspicion to report submission	≤ 48 hours					
	Clarification Response Time	Response to queries	≤ 5 working days					
2. Quality & Accuracy KPIs	Verification Accuracy Rate	% of reports accepted by PO without material revision	≥ <b>98%</b>					
	Evidence Completeness	Reports with full documentary evidence	<b>100%</b>					
3. Independence & Integrity	Conflict of Interest Disclosure	Conflict of Interest declarations submitted	<b>100%</b>					
	Compliance with fraud escalation procedures	Adherence to fraud escalation procedures	<b>100%</b>					
4. Coverage & Completeness	Verification Coverage	% of eligible outputs/KPIs verified	<b>100%</b>					
	Household Coverage Rate	% of sampled households verified through desk, phone and field	<table border="1"> <thead> <tr> <th>Desk Verification</th> <th>Phone Verification</th> <th>Field Verification</th> </tr> </thead> <tbody> <tr> <td>100% of the claims submitted</td> <td>Minimum 5% sample size</td> <td>Minimum 5% sample size (will not include</td> </tr> </tbody> </table>	Desk Verification	Phone Verification	Field Verification	100% of the claims submitted	Minimum 5% sample size
Desk Verification	Phone Verification	Field Verification						
100% of the claims submitted	Minimum 5% sample size	Minimum 5% sample size (will not include						

					the customer s verified over phone)
	Sampling Compliance	Adherence to approved sampling plan	<b>100%</b>		
5.Data Management & Security	Data Security Incidents	Breaches or data loss events	<b>0</b>		
	Secure Storage Compliance	Encrypted & access-controlled systems	<b>100%</b>		
	Digital Evidence Indexing	Proper tagging and referencing	<b>100%</b>		
	Backup & Recovery Compliance	Verified backups maintained	<b>100%</b>		

A weighted scoring model may be applied:

KPI Category	Weight
Timeliness	20%
Quality & Accuracy	25%
Independence & Integrity	20%
Coverage & Compliance	20%
Data Management & Security	15%
<b>Total</b>	<b>100%</b>
<b>Payment Trigger</b>	<ul style="list-style-type: none"> <li>• <math>\geq 90\%</math> score <math>\rightarrow</math> 100% fee payable</li> <li>• 80–89% <math>\rightarrow</math> 90% of the fee payable</li> <li>• <math>&lt; 80\%</math> <math>\rightarrow</math> Corrective action</li> </ul> <p>Failure on any of the following triggers immediate review or termination:</p> <ul style="list-style-type: none"> <li>• Failure to report suspected fraud; and</li> <li>• Evidence tampering.</li> </ul>