REPUBLIC OF MALAWI

MINISTRY OF ENERGY

TERMS OF REFERENCE

Firm Consultant – Consultancy Services for Design, Development and Implementation of Carbon Mitigation and Carbon Financing Activities in the Energy Sector, with a Pilot for Clean Cooking Solutions

Project	Accelerating Sustainable and Clean Energy Transformation in Malawi (ASCENT Malawi) Project.
Financed by	World Bank – IDA Grant US$ 250.8 Million
Implementing Entity	Ministry of Energy (MoE)
Assignment Title	Design Development and Implementation of Carbon Mitigation and Carbon Financing Activities in the Energy Sector
Procurement Reference Number	MW-MOE. -550566-CS-QCBS
Contract Type	Firm Consultancy – Lumpsum
Assignment Duration	Four (4) years from contract signing, with option to extend
Expected Start	15 January 2027
Version / Date	2 / 30th July 2026

1. Introduction

The Government of Malawi (GoM), through the Ministry of Energy (MoE), has received financing from the World Bank for the implementation of the Accelerating Sustainable and Clean Energy Access Transformation in Malawi (ASCENT Malawi) Project for a period of five years ending December 31, 2030. The project development objective (PDO) is to increase clean and sustainable energy access in Malawi, aligning with the broader ASCENT Multi-phase Programmatic Approach (MPA) program development objective of increasing clean and sustainable energy access in Eastern and Southern Africa.

ASCENT Malawi has five components as follows:

i. Component 1: Last Mile Grid Connection, implemented by ESCOM (US$150 million);
ii. Component 2: Off-grid Connection through Solar Home Systems, implemented by MoE (US$60 million);
iii. Component 3: Energy Access for Schools and Health Facilities, implemented by MoE (US$20 million;
iv. Component 4: Clean Cooking Solutions, implemented by MoE (US$10 million); and
v. Component 5: Technical Assistance and Capacity Building, implemented by MoE and ESCOM ((US$10.8 million).

Component 5 of the Project supports activities to strengthen the capacity of the GOM, including analytical tools, and advisory to MOE and ESCOM for the origination and monitoring of carbon finance activities. In addition, the component supports digitalization, and monitoring, reporting and verification (MRV) activities, enhancement of policy and regulatory dialogue and frameworks, and exploration of linkages to regional activities including under the ASCENT MPA.

2. The Assignment

GOM seeks a firm consultant to provide consultancy services to the MOE, for the design, development and implementation of carbon mitigation and carbon financing activities in the energy sector, with a pilot for clean cooking solutions (CCS), in collaboration with relevant stakeholders. The firm consultant will provide analytical, advisory and process support including preparing required documentation to (i) support the GOM quantifiably determine the potential for emission reductions (ERs) in its current and potential energy sector investments, and the potential for generating, certifying and monetizing the ERs, across multiple technologies, scales and types; and (ii) pilot an ERs (sub)activity for clean cooking solutions under ASCENT Malawi completing full carbon financing cycle(s).

The design must ensure that all reduction and/or avoidance of Greenhouse Gas (GHG) emissions, and ERs to be considered for this must be attributable to and managed by the GOM and/through public energy sector agencies. By availing financing for investments in the energy sector, the MOE will obtain during implementation, irrevocable rights to the ERs generated because of the financing, through contractual arrangements with all relevant stakeholders without competing claims exist. The CCF shall not hold, own, or transact carbon credits under these TORs.

The assignment will consider this potential across the entire sector where there is existing or anticipated public financing/investments, including at individual project levels such as ASCENT Malawi where the GOM seeks to raise carbon finance under Components 1, 2, 3 and 4 of the Project.

All activities under this TOR will be conducted under the leadership of the MOE and in consultation with the DNA and the World Bank.

A. Objective of the Assignment

The objective of the assignment is to support the GOM and particularly the MOE in the design, development and implementation of carbon mitigation activities, and carbon financing activities for its energy sector interventions. All activities shall be conducted in full compliance with the Nationally Determined Contributions (NDC) for the GOM, Article 6 of the Paris Agreement, the requirements of the Designated National Authority (DNA) for carbon markets, authorization of projects and management of the National Carbon Registry - the Environmental Affairs Department (EAD), the Malawi Carbon Market Framework, the requirements of select internationally recognised carbon crediting standards and methodologies and for World Bank – financed projects such as ASCENT Malawi, the World Bank's requirements.

The consultant will be directly responsible for undertaking carbon mitigation and carbon financing activities in a timely, accurate and complete manner, including but not limited to the following:

Activity 1: Mapping and recommendation of carbon mitigation and carbon financing modalities comprising methodologies, standardized baselines and methodological tools for adoption

- Identification, assessment and recommendation of carbon financing modalities for energy sector activities including strengths, weaknesses, opportunities, and threats (SWOT) analysis of the standards, protocols, methodologies, tools, and templates across energy technologies, scales and types differentiating approved and proposed mechanism methodologies.
- Establishing the baselines for energy sector activities in Malawi using standard recognized approaches.
- Supporting and recommending suitable carbon financing standards and modalities responsive to the SWOT analysis of the carbon financing options accessible by the Government of Malawi for the energy sector.
- Estimate the potential emissions reductions and removals based on the recommended financing standards and modalities
- Supporting technical committees and workshops on the modalities to validate modalities according to the specific sets of projects (technologies and geographical locations)
- Develop and secure approval of a structure for carbon mitigation and carbon financing in the energy sector
- Institutionalize and operationalize the structure and modalities for carbon mitigation and financing in the energy sector, through policy dialogue and implementation of investment activities
- Recommend and prioritize mitigation activities (MA) which can raise carbon finance through the energy sector in Malawi

Activity 2: Design and develop carbon mitigation activities

- Registration of mitigation activity participant(s) (MAP(s)
- Design and submission of Mitigation Activity Idea Notes (MAINs) with informational completeness and accuracy, and in compliance with all applicable evaluation criteria and requisites.
- Development and securing positive validation of the Mitigation Activity Design Documents (MADDs) with informational completeness and accuracy on emission reductions, technology, and additionality, and in compliance with the applicable standards for accredited validation/verification bodies (VVB).
- Securing of all applicable authorizations, registrations and No Objection decisions for the MAP(s) as required during the carbon mitigation and financing activities.

Activity 3: Monitor and report implementation of mitigation activities, and support verification and examination

- Developing a monitoring framework and plan, and ensure their validation prior to implementation
- Implementing the monitoring plan
- Preparing and submitting monitoring reports as per the applicable schedule(s)
- Support implementation of the activities of the VVB during the verification of the monitoring reports to the extent required by the VVB towards issuance of positive verification reports (VRs)
- Ensure timely issuance of the VRs by the VVB(s) and secure review of the VVB(s) by the DNA towards issuance of a positive examination

Activity 5: Issuances and transfers of mitigation outcomes

- Requesting issuance of the mitigation outcomes (MOs)
- Requesting transfer of MOs to the acquiring participating party(is)
- Supporting engagement on issuance of MOs generated under the MA

Overarching activities throughout the life cycles of the carbon mitigation and carbon financing activities

- Securing approvals according to the structure and frameworks of the carbon activities applicable to Malawi, and its energy sector with consideration for its bilateral and multilateral dialogues and commitments
- Ensuring alignment between the activities under these terms of reference with the overarching activities in the macroeconomic and policy and regulatory environment in Malawi.
- Ensure all tools are consistent with the requirements of the selected carbon standards, and national and international policy and regulatory frameworks
- Supporting identification, assessment, selection and engagement with MOs acquiring participating party(ies)
- Supporting documentation of the applicable fees, invoices and payment requirements, and provision of advice and support to enable processing of timely payments. These include but are not limited to:
    - Fees under the national policies and frameworks

- Fees under the international policies and frameworks
- Operationalization, administration and transaction costs including advisories
- Monitoring, Reporting, and Verification (MRV) including digitalization and platform costs

- Supporting the Government of Malawi to meet its regular and ad-hoc reporting obligations by providing information required, in appropriate format(s) including those applicable to the national registry
- Supporting engagement with relevant stakeholders including the EAD and (multi)sectoral activities particularly
- Revise approach to further align with emerging developments and trends primarily in the carbon and energy sectors alongside other sectors.
- Support digitalization and archiving of processes, documents and institutional correspondences.
- Convening 5 workshops during the key milestones of the activity. These will comprise training and capacity building for POs and other stakeholders

3. Deliverables

The deliverables of the TORs, and requirements under this assignment which determine the payment amounts and milestones, are as listed below, with each deliverable comprising of a document (including annexture for categories) and a PowerPoint presentation to stakeholders at least.

Where provided, timelines are calculated from the date of contract signature.

Technologies include but are not limited to clean cooking, solar lamps, small scale renewable energy generation (SREG), rural electrification, and large-scale renewable energy generation.

The templates include but are not limited to:
1) Listing document form and guidance
2) Listing notification form and guidance
3) Completeness check form and guidance
4) Monitoring report form and guidance
5) Verification guidance
6) Verification report form

Submission of a quarterly progress report is required throughout the contract duration. It will include technical and financial progress reports covering surveys, validation/verification progress, dMRV data quality, credit issuance, and commercialisation activities. It will also include data quality Key Performance Indicators (KPIs) and performance benchmarks.

Deliverable #	Description	Timeline
Anchor		
1-Inception Report	**1.1 Foundation** Detailed work plan, implementation roadmap, team deployment schedule, stakeholder engagement strategy, Role Delineation Protocol, and preliminary dMRV technical requirements and assessment of select platforms.	Month 1
	1.2 Annexture - Clean cooking pilot work Detailed work plan, implementation roadmap, team deployment schedule, stakeholder engagement strategy, Role Delineation Protocol (CCF/IVA/VVB/PO/other relevant parties), and preliminary dMRV technical assessment.	
2-Modalities	**2.1 Foundation** Mapping, analysis and recommendations on carbon mitigation and carbon financing modalities for the energy sector in Malawi including SWOT differentiated by technology, scale and activity type. The report shall include a detailed and operational framework for the use of carbon revenues and methodology of assigning benefits to project stakeholders to ensure transparent arrangements and reduce the risk of misaligned expectations during implementation.	Months 2-3
	2.2 Annexture - Modalities for clean cooking Mapping, analysis, and recommendations on carbon mitigation and carbon financing modalities applicable to the clean cooking pilot activities under ASCENT Malawi.	
3-Baseline Report	**3.1 Foundation** Sector-level baseline assessment covering relevant technologies, scales and activity types, using internationally recognized approaches and available national and project-level data.	Months 4-5
	3.2 Annexture – Clean Cooking Baseline Assessment Baseline assessment for the clean cooking pilot activities under ASCENT Malawi	
4-Methodologies, tools and templates	**4.1 Foundation** Recommended methodologies, monitoring tools, and templates by technologies, scales, and types. The consultant shall review, update, and expand the tentative list provided below, as appropriate:	Months 5-8

	i. Deliverable 4.1.1-Solar lamps ii. Deliverable 4.1.2-Small scale renewable electricity generation (SREG) iii. Deliverable 4,1.3-Rural electrification iv. Deliverable 4.1.4-Large scale renewable energy generation (LREG) Deliverables may be submitted in agreed technology-specific packages.	
	4.2 Annexture – Clean Cooking Pilot Recommended methodologies, monitoring tools, and templates for clean cooking pilot activities under ASCENT Malawi. **Carbon Crediting Standard and Methodology Options Analysis:** Structured assessment of applicable standards and methodologies (Verra VCS, GS4GG, Article 6 PACM, and other relevant options); recommendation of the preferred standard, methodology, and programme structure; and confirmation of the agreed approach with MoE, the DNA, and the World Bank within 45 days of contract signature.	
5: Clean Cooking Pilot Implementation - *The detailed description of the clean cooking deliverable is provided in Annex 1.*	**5.1: Implementation Frameworks**	
	Article 6 Compliance and Authorisation Support Report: Recommendation on the Article 6 vs. voluntary-credit structure; Corresponding Adjustments assessment; NDC alignment and double-counting risk analysis; Letter of Authorisation roadmap; and support to DNA engagement	Months 3-4
	dMRV Data Integration Protocol Technical protocol mapping dMRV data fields to the monitoring parameters of the selected methodology; data-validation rules; data-flow architecture from PO CRM systems through the dMRV platform to Monitoring Reports; and gap analysis and remediation plan.	Months 3-4
	Aggregation & Structuring Framework	Months 3-4

	Carbon rights aggregation model; project structuring approach (PoA or equivalent); draft carbon- revenue allocation and benefit-sharing framework; and Conflict-of-Interest Management Plan.	
	5.2: Monitoring Framework **Monitoring Approach Options Analysis:** Assessment of metered, survey-based, and hybrid monitoring approaches with cost-benefit analysis; fNRB assessment approach; recommended monitoring framework for MoE/World Bank approval.	Months 4-5
	Sampling Plan & Survey Design: Statistically robust sampling framework compliant with the selected carbon standard and methodology; fuel-stacking and fNRB estimation methodology; gender-disaggregated data collection protocols; longitudinal usage monitoring protocol.	Months 4-5
	5.3: Baseline Survey Report Baseline household energy survey results, including fuel use and stacking, relevant fNRB data, gender-disaggregated indicators; survey methodology, quality-assurance procedures, cleaned datasets, and supporting documentation.	Months 6-8
	5.4: Field Testing Reports Complete documentation of Kitchen Performance Tests, Controlled Cooking Tests, Water Boiling Tests, and any other field tests required under the selected carbon standard and methodology, conducted in accordance with approved protocols.	Months 6-10
	5.5: Laboratory Test Reports Fuel and emissions laboratory analysis reports (calorific value, moisture content, emissions factors including PM2.5 and CO, and other parameters) as required under the selected methodology.	Months 6-10
	5.6: Draft PoA/PDD and Supporting Documentation Complete draft carbon project documentation including additionality assessment, baseline scenario, emission reduction calculations, stakeholder consultation records, ESMS compliance	Month 11

	documentation, and other supporting evidence required by the selected standard.	
	5.7: Final PoA/PDD Submission Revised and finalised documentation incorporating stakeholder review, technical feedback, and internal QA; submitted for validation, and, as applicable, to the selected registry.	Month 13
	5.8: Capacity Building Programme Reports Training curricula, materials (English and Chichewa, as appropriate), delivery and participant records, pre/post training competency assessments, and recommendations for continued institutional capacity development. Training shall be delivered in phases covering project design, monitoring and dMRV, validation and verification, and carbon commercialization.	**Phase 1**: Months 3-6 **Phase 2**: Months 12-18 **Phase 3**: Months 24-36
	5.9: Validation Completion Report Documentation confirming validation completed, including all VVB CARs, CLs, and responses; confirmation of registry acceptance.	Months 14–20
	5.10: Registration Confirmation Official confirmation of programme/project registration under the selected carbon crediting standard and registry.	Months 20–24
	5.11: First Monitoring Report Emission-reduction monitoring report prepared in accordance with the selected carbon standard and methodology, including dMRV-integrated datasets collected during implementation, quality-control results, emission-reduction calculations, and a complete supporting evidence package. Monitoring and data collection shall commence upon deployment and operational use of eligible clean cooking solutions, or at another eligible start date permitted under the selected carbon standard and methodology. The timing of project validation or registration shall not delay the establishment and operation of the monitoring system.	Months 24-30

	5.12: First Verification & Issuance Report Report documenting the first verification process, including VVB findings and responses, the final verification outcome, issuance request, and confirmation of issuance by the applicable registry.	Months 30-36
	5.13: Carbon Commercialisation Advisory Report Carbon-pricing strategy; market-positioning analysis; Article 6 vs. voluntary credit commercial comparison; ERPA advisory note; buyer-engagement strategy; and transaction-readiness assessment.	**Initial report:** Months 18-24 **Updated report**: Months 32-38
	5.14: Second Monitoring Report Second emission-reduction monitoring report prepared in accordance with the selected carbon standard and methodology, including updated dMRV datasets, quality-control results, emission-reduction calculations, and supporting evidence.	Months 36-42
	5.15: Second Verification and Issuance Report Report documenting the second verification process, including submissions to the VVB, responses to findings, the final verification outcome, issuance request, and, where completed within the contract period, confirmation of issuance by the applicable registry.	Months 42-48
Overarching Deliverables		
6: Lessons learned workshop and Final Report	**6.1 Interim Lessons-Learned Workshop** Workshop on lessons learnt from project preparation, validation, registration, and the first monitoring and verification cycle of the clean cooking pilot.	Months 35-36
	6.2 Final Lessons-Learned Workshop and Completion Report: Final workshop and consolidated report capturing lessons from the assignment, including the second monitoring and verification cycle, institutional recommendations, and a roadmap for scaling carbon financing activities across Malawi's energy sector.	Months 47-48
7: Quarterly Progress Reports	Technical and financial progress reports covering surveys, validation and verification progress, dMRV data quality, carbon-credit issuance, commercialization activities, risks and mitigation measures, data-quality KPIs, performance benchmarks, and the work plan for the subsequent quarter.	Every three months, from

		Month 3 to 48

4. Management of the Assignment

a. The CCF will be contracted by MoE. Legal or administrative issues with respect to the contract or payment shall be handled by MoE.
b. Day-to-day supervision and the approval of all outputs shall be the responsibility of the Project Implementation Unit (PIU) through the Project Manager.
c. The CCF will report to the Project Manager and coordinate with the Fund Manager, the IVA, the Legal Advisor, EAD, and other stakeholders as directed by the Project Manager.
d. All reports shall be submitted electronically, with hard copies provided upon request. Key reports shall include an executive summary in English.
e. MoE undertakes to: provide the CCF with access to all relevant project documents including the Project Appraisal Document, Project Implementation Manual, Financing Agreement, ESMS, and DMRV technical documentation; issue supporting letters to facilitate the CCF's work; provide timely feedback on draft deliverables (within 15 working days of submission); and release contractual payments in accordance with the agreed schedule.

5. Governance, Conflict of Interest, and Fee Structure

Given the CCF's simultaneous roles in carbon MRV design and carbon credit commercialisation advisory, robust conflict of interest safeguards are essential to protect the integrity of the programme and Malawi's interests as credit owner.

a. The CCF's remuneration shall be entirely fee-based. No component of the CCF's remuneration shall be linked either directly or indirectly to the volume, value, or timing of carbon credit issuance or sales. Performance-linked fee structures tied to credit outcomes are explicitly prohibited.
b. The CCF shall disclose, at the time of proposal submission and on a continuing basis throughout the assignment, all existing and prospective relationships with carbon buyers, brokers, aggregators, and intermediaries that may have an interest in purchasing or brokering ASCENT Malawi credits.
c. The CCF shall be prohibited from representing or acting on behalf of any carbon buyer in relation to ASCENT Malawi credits during the contract period and for 24 months after contract completion.
d. A Conflict-of-Interest Management Plan shall be a mandatory component of the Inception Report. This plan shall identify all potential conflicts, proposed mitigation measures, and the escalation procedure for new conflicts that arise during the assignment.
e. The CCF shall perform all Services described in this ToR in a manner acceptable to MoE in form and substance. MoE reserves the right to re-evaluate, amend, or terminate the contract if the CCF fails to provide services in the required form, substance, or quality.

6. Qualifications of the Carbon Consulting Firm

The CCF shall be a firm or consortium of firms with demonstrated experience and a track record in carbon markets and climate finance. Firms shall clearly demonstrate the following qualifications:

a. Experience in, and understanding of, the renewable energy and clean cooking market in sub-Saharan Africa, with preference for experience in East or Southern Africa;

b. At least 7 years of experience in carbon markets, carbon project development, carbon aggregation, and registration under recognised carbon standards (Verra VCS, Gold Standard, CDM, or Article 6 PACM);
c. Demonstrated experience applying household energy or clean cooking carbon methodologies under any of the following: Verra VM0050 or predecessor VMR0006 and VMR0011; Gold Standard TPDDTEC; Gold Standard Improved Cook Stove methodology; CDM AMS-II.G; GCCNMT016; or CLEAR Methodology;
d. Experience preparing PoAs and/or PDDs for clean cooking or energy access projects, of which at least two PoAs were successfully registered;
e. Demonstrated experience in successful registration of carbon projects under recognized standards (e.g., VCS, Gold Standard, CDM, Article 6), preferably including programmatic approaches such as PoAs
f. Proven experience with Article 6 of the Paris Agreement, including knowledge of Corresponding Adjustments, NDC accounting, and Letter of Authorisation processes;
g. Proven experience conducting KPT, CCT, and WBT tests, and designing statistical sampling frameworks for carbon projects at scale;
h. Experience with digital MRV systems and data integration, including familiarity with DMRV or equivalent dMRV platforms;
i. Experience structuring, drafting and reviewing contract documentation, and providing advisory support, on carbon credit commercialisation transactions;
j. Experience managing validation, verification, and issuance cycles with accredited VVBs; and
k. Experience working with governments or development partners on energy access and carbon monetization activities in Africa.

7. Team Composition and Key Expert Qualifications

The consulting firm shall provide a multidisciplinary team with the qualifications and experience required for the key expert positions listed below. The firm must possess all necessary resources, software, tools, and equipment to execute the assignment effectively. Note that legal interpretation responsibilities are covered by the separately appointed Legal Advisor; no legal expert is required within the CCF team. The firm may propose non-key experts who shall act as energy, and gender and social inclusion specialists, among others.

Expert / Position	Required Qualifications and Experience
a) Team Leader (1 position)	• Minimum master's degree in environmental science, Climate Policy, Engineering, Economics, or a related discipline. • At least ten (10) years of experience in carbon markets, with a focus on project development and registration. • Demonstrated experience managing registration of at least three (3) PoAs/PDDs under either Verra VCS, Gold Standard, CDM, or Article 6 PACM. • Experience in clean cooking or household energy carbon projects at scale (>50,000 households).

Expert / Position	Required Qualifications and Experience
	• Proven experience leading full validation and verification cycles with accredited VVBs. • Demonstrated knowledge of Article 6 of the Paris Agreement, including Corresponding Adjustments and Letter of Authorisation processes. • Experience working with African governments, donors, or large-scale energy access programmes. • Familiarity with d MRV platforms is an advantage.
b) Carbon Finance & Commercialisation Expert (1 position)	• Master's degree in finance, Economics, Business, or a related field. • At least 7 years of experience in carbon credit transactions and carbon market advisory. • Experience structuring ERPAs and carbon sales agreements (in coordination with legal advisors). • Familiarity with climate finance instruments, including the differences between Article 6 ITMOs, Article 6 credits, and voluntary market credits without Corresponding Adjustments. • Experience engaging with carbon credit buyers, brokers, and platforms in international markets. • Knowledge of the Malawi Carbon Market Framework or equivalent African carbon governance frameworks is an advantage.
c) Survey & Field-Testing Specialist (1 position)	• At least a bachelor's degree in engineering, Environmental Science, Statistics, or a related discipline. • Minimum 7 years of experience conducting baseline surveys and performance testing for carbon projects. • Demonstrated experience managing KPT, CCT, WBT, and fuel laboratory tests in accordance with ISO or equivalent international protocols. • Experience designing statistically robust sampling frameworks for household energy carbon projects. • Experience managing field data quality assurance and QA/QC protocols. • Field experience in sub-Saharan Africa, with preference for Southern or Eastern Africa.
d) Digital MRV & Data Systems Specialist (1 position)	• Minimum bachelor's degree in computer science, Data Engineering, Information Systems, or a related field. • Minimum 5 years of experience in digital MRV system design, data integration, or IoT-based energy monitoring. • Demonstrated experience with dMRV platforms; knowledge of API integration between CRM and MRV systems.

Expert / Position	Required Qualifications and Experience
	• Experience ensuring data quality, auditability, and tamper-resistance of digital monitoring records for carbon or energy access programmes. • Familiarity with the data requirements of Verra, Gold Standard, or Article 6 PACM registries. • Experience with Stove Use Monitor (SUMs) data processing and integration is an advantage.

8. Duration of the Assignment and Estimated Time Inputs

The duration of the assignment shall be four (4) years from the contract commencement date, subject to annual performance review and the availability of project funds. The full carbon project lifecycle from design and registration through to at least one complete crediting period and the first two verification cycles should fit within this timeline.

The contract shall include provisions for annual renewal, with renewal conditional on satisfactory performance and on the continued availability of project funds. The contract may be extended beyond 4 years subject to project requirements, satisfactory performance, and World Bank concurrence. The firm is expected to commence the assignment by 15th January 2027.

In the technical proposal, the consulting firm shall clearly indicate estimated time inputs associated with each task. The table below provides indicative time inputs for key experts over the contract duration. The firm shall ensure that the team includes, within key or non-key experts, adequate expertise in (i) clean cooking technologies and market dynamics; (ii) carbon methodology and MRV design; and (iii) data analytics and quality assurance for digital MRV system. The contract duration is four (4) years, aligned with the project crediting period, subject to annual performance review and availability of project funds.

No.	Key Expert	Estimated Person-Months (over contract duration)	Notes
K-1	Team Leader	14	Spread over Years 1–4; concentrated in Years 1–2 for design and registration
K-2	Carbon Finance & Commercialisation Expert	14	Concentrated in Years 1–4 for commercialisation advisory and transaction support
K-3	Survey & Field-Testing Specialist	10	Concentrated in Years 1–4 for baseline, KPT/CCT/WBT, and monitoring surveys
K-4	Digital MRV & Data Systems Specialist	5	Spread over Years 1–4; concentrated in Year 1 for dMRV integration design

These are indicative figures. Firms are encouraged to propose their own time allocation based on their proposed methodology. The total estimated input across all key experts is approximately 40-45 person-months over 4 years. The indicated person-months for key experts are indicative. Firms are expected to propose adequate additional non-key expert inputs and supporting resources to ensure full delivery of the assignment.

9. Working Language

The working language for all project documentation, reports, and formal communications shall be English. Field testing teams shall include members who can communicate in Chichewa and other locally relevant languages. Key capacity building materials and executive summaries of major reports shall be produced in both English and Chichewa.

10. Selection Method and eligibility

The attention of consultants is drawn to Section III, paragraphs 3.14, 3.16, and 3.17 of the World Bank's Procurement Regulations for IPF Borrowers: Procurement in Investment Projects Financing Goods, Works, Non-Consulting and Consulting Services (February 2025), 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 sub-consultancy to enhance their qualifications and shall indicate clearly whether such association is a joint venture or sub-consultancy. In the case of a joint venture, all partners shall be jointly and severally liable for the entire contract. Each member of a JV shall independently meet the evaluation criteria.

A specific score for the inclusion of local Malawian experts shall be included in the technical evaluation criteria, reflecting the importance of local knowledge and implementation experience for this assignment.

This is a lump sum contract. Firms should note that certain field activities (surveys, KPT/CCT/WBT campaigns) may vary in scope depending on the number of POs selected and stove models approved; Bidders shall include in their Financial Proposals the cost of these field activities calculated using capped unit rates for these activities. These costs shall form part of the evaluated Contract Price for QCBS purposes. A consulting firm will be selected in accordance with the Quality and Cost-Based Selection (QCBS) method following shortlisting, as set out in the above Procurement Regulations.

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 shortlisting.

Annex 1: Detailed description of Deliverable 5: clean cooking pilot under ASCENT Malawi

A. Introduction

Implementation arrangements under ASCENT Malawi include the MOE's Ngwee Ngwee Ngwee Fund (NNNF), an off-grid market development fund established to provide loans and grants to off-grid solar companies, to contribute towards the efforts of the Government of Malawi (GOM) to increase electricity access across the country. The NNNF provides financing to support the deployment of energy solutions and supports provision of clean cooking solutions to rural, peri-urban and poor households in all 27 districts in the country, by providing financial resources and technical support to solar and clean cooking companies to support development of sustainable private sector – driven markets.

NNNF aligns with the GOM's broader ambition to increase access to electricity in underserved areas, in line with the goals outlined in Malawi Vision 2063 and the National Energy Compact. At present, only 25.9% of Malawi's population has access to electricity with 11.3% connected through the grid and 14.6% through off-grid solar solutions. There is a disparity between urban and rural electrification rates, with approximately 90% of rural households lacking access to clean and sustainable energy. Similarly, the National Energy Compact aims to increase household access to clean cooking solutions from 2% currently to 75% by 2030.

The firm consultant will work with the Government of Malawi, through MoE and its NNNF to design, develop and deliver carbon credit issuance associated for the clean cooking interventions implemented under ASCENT Malawi Component 4 (clean cooking solutions, US$10 million). Under this component, the NNNF is supporting Participating Organizations (POs) to deploy clean cooking solutions in at least 150,000 households, benefiting an estimated 645,000 individuals, while supporting a sustainable, private-sector-driven clean cooking market throughout the country.

The NNNF will establish a dedicated window to provide concessional loans for clean cooking companies - small and medium-sized enterprises (SMEs) - offering higher-tier modern energy cooking solutions. Emission reductions (ERs) resulting from the component, and their monetization shall, subject to agreement with POs, be attributed to and managed by the GOM through the MoE or through their delegated institution, as the MAP. Assignment of such rights by POs shall be on a voluntary basis and reflected in the applicable financing agreements. Further, where such rights are assigned, the MAP shall retain exclusive authority to implement the whole carbon finance project life cycle in accordance with the applicable national and international policy and regulatory frameworks.

A detailed and operational framework for the use of the anticipated carbon revenues will be developed and is expected to enhance quality delivery, sustained usage of clean cooking solutions, and effective monitoring and reporting, by subsidizing PO loans, contributing to transaction costs, and consideration of performance-linked options, among others. It is also expected to detail the determined proportion, timing, and conditions of any such allocation in line with program performance and prevailing regulatory and market conditions, and may be adjusted or withheld where performance, data quality, usage, or compliance requirements are not met. Project agreements will be prepared to align with the framework where/as applicable.

The CCF will work in close coordination with a separately appointed Independent Verification Agent (IVA) and a Legal Advisor, as well as integrate with the GOM's digitalization activities and MRV platform.

B. Scope of the carbon financing through clean cooking pilot

The CCF shall propose fit-for-purpose technical approaches, methodologies, and implementation strategies aligned with internationally recognized standards and best practices. While this ToR outlines indicative approaches and expectations, the CCF may propose alternative or optimized approaches, provided these meet the requirements of the selected carbon standard, the Malawi Carbon Market Framework which is designed to govern Malawi's participation in cooperative approaches under Article 6 of the Paris Agreement, and are acceptable to MoE and the World Bank.

The CCF shall carry out the following:

i. Design, develop and structure a clean cooking MA in accordance with an agreed carbon crediting standard and methodology;
ii. Advise MoE and NNNF on the appropriate carbon program structure, which may consider or include a Program of Activities (PoA), programmatic approach, or other mechanisms suitable for clean cooking deployment;
iii. Lead and coordinate all technical activities required for the carbon finance life cycle for clean cooking;
iv. Develop and operationalize a robust MRV framework for clean cooking;
v. Prepare ER monitoring reports and associated documentation required for verification and credit issuance of clean cooking ERs;
vi. Provide advisory support to MoE on carbon credit commercialization strategies for clean cooking, including market engagement, pricing strategies, and transaction structuring.

Specifically, the CCF shall conduct:

Task 1: Structured Options Analysis and Recommendation on the Optimal Carbon Crediting Standard and Methodology

Given the scale and structure of Component 4 as a multi-POs, national clean cooking deployment programme, the most appropriate programme structure is expected to be a Programme of Activities (PoA) or equivalent programmatic approach. The CCF shall conduct a structured options analysis and recommend the optimal carbon crediting standard and methodology to MoE and the World Bank within the Inception Report.

The options analysis shall consider leading international carbon crediting standards and methodologies applicable to clean cooking programs, including but not limited to Verra (VCS), Gold Standard, the Article 6 mechanism, and other emerging or applicable frameworks agreed with MoE and the World Bank.

The options analysis shall evaluate each framework against the following criteria: (a) compatibility with Malawi's Carbon Market Framework and Paris Agreement obligations; (b) commercial value and buyer appetite for credits; (c) timeline to registration and first credit issuance; (d) cost of compliance and documentation burden; (e) suitability for the range of eligible clean cooking technologies under Component 4; and (f) requirements for dMRV and compatibility with a sample of available dMRV platforms.

The selected standard and methodology shall be agreed in writing between the CCF and MoE within 45 days of contract signature, and subject to a No Objection from the World Bank, all subsequent work shall be conducted in accordance with that agreed standard.

Task 2: Dedicated Advisory and Technical Support on Article 6 / Paris Agreement Compliance

The CCF shall:

a. Advise MoE on the appropriate structuring of carbon credits under Component 4, including: (i) Article 6-compliant ITMOs, requiring Corresponding Adjustments (CAs) in Malawi's Nationally Determined Contribution (NDC); or (ii) voluntary carbon market credits without CAs — presenting the associated strategic, commercial, and governance implications of each approach;
b. Assess the implications of Corresponding Adjustments for Malawi's NDC accounting, taking into account the clean cooking sector's current treatment within Malawi's NDC;
c. Support MoE in engaging with the Designated National Authority (DNA) to obtain the required host country approval and, where applicable, Letters of Authorisation (LoAs) for Article 6 transactions;
d. Ensure that all project documentation, monitoring reports, and registry submissions are compatible with the requirements of the Paris Agreement Crediting Mechanism (PACM) if Article 6 is selected as the crediting pathway; and
e. Prepare and deliver an Article 6 Compliance and Authorisation Support Report as a standalone deliverable, setting out the agreed programme structure, Article 6 compliance roadmap, and status of host country authorisations.

The CCF shall coordinate closely with a separately appointed Legal Advisor on all matters requiring legal interpretation of Malawi's carbon governance framework or Article 6 treaty obligations. The CCF will be responsible for the technical carbon content, while the Legal Advisor will be responsible for legal interpretation.

Task 3: Carbon Project Development and Coordination

The CCF shall lead, manage, and coordinate all technical and administrative aspects of carbon project development under the ASCENT Malawi Project. This includes full lifecycle project management from early-stage conceptualisation through to verification of emission reductions and issuance of carbon credits.

Key responsibilities include:

a. Conducting the Carbon Crediting Standard and Methodology Options Analysis and presenting the recommended approach to MoE and the World Bank;
b. Developing detailed project timelines, stakeholder engagement plans, and workstreams required for successful registration and credit issuance;
c. Coordinating with POs, MoE, the Fund Manager, the IVA, technology providers, DNA, and local implementation partners;
d. Preparing and managing submissions to DNA or any Malawi-endorsed regulatory framework, in coordination with the Legal Advisor;
e. Ensuring full compliance with the methodological requirements, dMRV data integration requirements, national MRV frameworks, and registry protocols; and
f. Providing continuous technical support to MoE for post-issuance activities including credit commercialisation, aggregation, pricing, and transaction structuring.

Task 4: Development of Carbon Project Documentation

The CCF shall prepare all required carbon project documentation for registration under the selected standard, including but not limited to:

a. Programme of Activities (PoA) documentation, including the PoA-DD, associated annexes, eligibility criteria, and management systems, or equivalent programmatic project design documentation under the selected standard;
b. Project/Component Programme Activity Design Document (PDD/CPA-DD), detailing: baseline scenario and additionality demonstration; emission reduction calculations and conservative factor selection; stakeholder consultations (minimum 30-day public comment period); environmental and social safeguards consistent with the ASCENT Malawi ESMS; and monitoring plans aligned with dMRV data architecture;
c. A structured additionality assessment demonstrating that the clean cooking solutions financed under Component 4 would not have been deployed without NNNF financing and carbon revenue, consistent with the additionality criteria of the selected standard;
d. Integration of Malawi-specific regulatory requirements, customary land considerations, gender and social inclusion commitments, and sectoral policies into the project design;
e. Supporting MoE in securing host country approvals and, where applicable, Letters of Authorisation for Article 6 transactions, in coordination with the Legal Advisor; and
f. Revising and updating all documentation as required following internal review, stakeholder consultations, VVB validation feedback, and registry requirements, with rigorous internal quality assurance prior to each submission.

Task 5: Monitoring Approach and MRV Framework Design

The CCF shall present a Monitoring Approach Options Analysis in the Inception Report, assessing the trade-offs between:

- Metered approach — using Stove Use Monitors (SUMs) or equivalent data logging devices for direct measurement of stove usage;

- Survey-based approach — using periodic household surveys to estimate stove usage, fuel consumption, and displacement of traditional cooking methods; and
- Hybrid approach — combining metering for a statistically representative sample of households with survey-based estimation for the broader population.

The Monitoring Approach Options Analysis shall include cost-benefit estimates for each option, assessment of feasibility given dMR data architecture, and a recommended approach for MoE and World Bank approval. Once approved, the CCF shall design and operationalise a full MRV framework that:

a. Is fully integrated with a dMRV platform;
b. Explicitly addresses fuel stacking including through the assessment and application of an appropriate fraction of non-renewable biomass (fNRB) factor for Malawi;
c. Captures long-term usage persistence through a longitudinal monitoring protocol covering the full crediting period, not merely at the point of sale or installation;
d. Incorporates gender-disaggregated data collection aligned with Component 4's targets for female-headed households (30%) and female employment (15%); and
e. Includes a dMRV Data Integration Protocol.

Task 6: Design of Sampling Frameworks

The CCF shall design robust, statistically defensible sampling and monitoring methodologies aligned with the selected carbon methodology. Tasks include:

a. Preparing a full Sampling Plan, including sample size justification, stratification, randomisation, field procedures, and provisions for geographic coverage across all 28 districts;
b. Defining monitoring parameters, data collection frequency, and tools required for stove performance, fuel usage, and other technology-specific metrics under the selected methodology;
c. Aligning sampling methodologies with applicable ISO standards, best practices in household energy MRV, and the dMRV data requirements; and
d. Ensuring sampling plans are feasible, cost-effective, and acceptable to accredited Validation and Verification Bodies (VVBs).

Task 7: Management of Surveys, Testing, and Field Campaigns

The CCF shall bear full responsibility for the technical oversight, methodological integrity, and compliance of all surveys and field-testing activities required for validation and verification. In accordance with the requirements of the selected carbon methodology, the CCF shall manage or commission all baseline and monitoring activities including:

a. Baseline surveys capturing household energy usage, fuel consumption patterns (including fuel stacking behaviour), socio-economic indicators, Fraction of Non-Renewable Biomass (fNRB) data, and device penetration data, with gender-disaggregated data collection as standard;
b. Kitchen Performance Tests (KPT), Controlled Cooking Tests (CCT), and Water Boiling Tests (WBT), as required by the selected methodology, conducted using internationally recognised protocols (ISO 19867-1:2018 or equivalent);
c. Laboratory testing for fuel quality, emissions (including PM2.5 and CO where required), calorific value, and other parameters required by the selected methodology;

d. Oversight of subcontractors or PO teams conducting fieldwork, with documented QA/QC protocols for data collection, cleaning, validation, and storage; and
e. Compilation and integration of all survey and test results into Monitoring Reports and verification submissions, with full auditability.

All field activities shall be conducted in accordance with the ASCENT Malawi Environmental and Social Management System (ESMS). The CCF shall report any environmental or social incidents arising from CCF-managed field activities to MoE within 48 hours.

Task 8: Capacity Building and Training

The CCF shall design and deliver a structured Capacity Building Programme for POs, MoE and other key staff on the carbon finance workstream, alongside relevant stakeholders. The Programme shall include:
a. Training on monitoring and verification procedures aligned with the selected carbon methodology, including correct use of the dMRV platform for data submission and reporting;
b. Hands-on training for field data collection, use of SUMs (where applicable), KPT/CCT/WBT procedures, and laboratory testing protocols;
c. Training on data quality assurance, data integrity management, and avoidance of double-counting of emission reductions;
d. Preparation of POs and MoE staff for validation and verification engagements with VVBs; and
e. Pre- and post-training assessments to measure knowledge transfer and identify gaps requiring follow-up.

Training materials shall be produced in English. Where field-level training is provided to PO sales agents or community members, materials shall be adapted into locally relevant languages (at minimum Chichewa). Executive summaries of the Capacity Building Programme report and key MRV guidance documents shall be provided in both English and Chichewa.

Task 9: Assessment and Oversight of digitalization status and digital MRV Systems

The Government of Malawi will implement a digital MRV (dMRV) platform for the ASCENT Malawi Project including Component 4 clean cooking activities, with the potential for expansion to address the digital MRV needs of the energy sector more broadly, and particularly for carbon financing. The dMRV will serve as the central data repository for stove deployment, usage, and performance data collected under the programme. All carbon monitoring and reporting activities under this assignment shall be designed to integrate with and leverage the dMRV platform. The CCF shall maximize the use of the dMRV platform as the core data platform, while proposing practical and efficient integration approaches aligned with the system's capabilities.

Specific CCF obligations with respect to the dMRV platform include:
a. Conducting an early-stage technical assessment of the dMRV data architecture, API capabilities, and data fields to determine the extent to which dMRV outputs can directly satisfy the monitoring requirements of the selected carbon crediting standard and methodology;

b. Identifying any gaps between dMRV current data collection scope and the monitoring parameter requirements of the selected methodology, and advising MoE on how to close those gaps, whether through dMRV configuration, supplementary field data collection, or stove-level metering (SUMs);
c. Developing a dMRV Data Integration Protocol by specifying which data fields in dMRV correspond to which monitoring parameters in the selected methodology, data validation rules, and the data flow from PO CRM systems through dMRV to Monitoring Reports;
d. Ensuring that dMRV -sourced data used in Monitoring Reports meets the data quality, auditability, and tamper-resistance requirements of the selected VVB and carbon registry;
e. Advising on the compatibility of PO CRM systems with dMRV, in accordance with the API connection requirements specified in the Component 4 Call for Business Plans; and
f. Conducting periodic data quality audits of dMRV records to identify anomalies, gaps, or potential double-counting risks, and implementing data reconciliation protocols.
g. Where limitations in dMRV functionality are identified, the CCF shall propose pragmatic solutions, including supplementary data collection where necessary, without delaying core MRV implementation.

Building on these obligations, the CCF shall provide ongoing oversight of dMRV and related digital systems throughout the assignment, including:

a. Regular review of PO-level datasets uploaded to dMRV to assess accuracy, completeness, and consistency with the monitoring plan;
b. Assessment of SUMs deployment (where applicable) and review of continuous usage data for methodological compliance and anomaly detection;
c. Auditing of the Fuel Sales Record System (for pellets, bioethanol, briquettes) for integrity and alignment with emission reduction calculations;
d. Conducting periodic digital data audits and implementing data reconciliation protocols to prevent double counting; and
e. Reporting data quality findings to MoE on a quarterly basis as part of the Quarterly Progress Reports.

The CCF is responsible for ensuring that the MA MRV framework is designed to maximise the use of dMRV data and that any supplementary data collection requirements are clearly documented and agreed with MoE. However, the CCF is not responsible for the development, hosting, or maintenance of the dMRV.

Task 10: Preparation and Submission of Monitoring Reports

The CCF shall prepare and submit all monitoring documentation required under the selected carbon standard to support verification and credit issuance, including:

a. Monitoring Reports (MRs) covering each crediting period, with complete emission reduction calculations, dMRV-sourced data sets, and all supporting documentation;
b. Evidence packages including photographs, field logs, testing results, and digital MRV outputs;
c. Technical summaries for MoE, carbon registries, and accredited VVBs;
d. Timely responses to VVB Corrective Action Requests (CARs), Clarification Requests (CLs), and Forward Action Requests (FARs); and
e. Maintenance of a fully auditable trail of all monitoring data, analyses, and VVB correspondence.

Task 11: Validation, Verification, and Issuance Management

The CCF shall manage the entire third-party VVB audit process, including:

a. Coordinating with accredited VVBs for both the validation of the PoA/PDD and subsequent verification of Monitoring Reports;
b. Reviewing all audit requirements and preparing MoE and POs for validation or verification site visits and desk reviews;
c. Providing timely responses to VVB queries, CARs, and observations, targeting a high rate of VVB acceptance rate of Monitoring Reports on first submission, in line with industry good practice.
d. Ensuring efficient progression toward successful verification and registry issuance of carbon credits; and
e. Supporting MoE in carbon credit aggregation strategies and marketplace engagement, in line with Malawi's Carbon Market Framework.

Task 12: Carbon Finance Advisory and Commercialisation Support

The CCF shall provide technical advisory services to MoE on carbon credit commercialisation, including:

a. Advising on strategies for aggregating verified credits to optimise marketability and transaction efficiency, including the commercial implications of Article 6 Corresponding Adjustments versus non-adjusted credits;
b. Supporting MoE in engaging with potential carbon credit buyers, brokers, and platforms, including identification of buyers with a preference for Article 6-compliant or high-integrity voluntary credits;
c. Providing advisory support on pricing strategies, market positioning, and carbon credit portfolio management, including sensitivity analysis on carbon price scenarios;
d. Supporting the preparation and review of Emission Reduction Purchase Agreements (ERPAs) and other carbon transaction agreements, in coordination with the Legal Advisor (who will be responsible for legal review and negotiation);
e. Providing guidance on carbon market trends, risks, and opportunities, with particular attention to the bifurcation between Article 6-compliant and non-adjusted voluntary market credits; and
f. Providing advisory support to MoE on implementation of the approved revenue-sharing framework with POs.

11. Clarification of Roles and Responsibilities of the CCF, IVA and VVB

The CCF is explicitly prohibited from performing any independent validation and verification function. All verification activities shall be performed by the separately appointed parties. The CCF may support and prepare stakeholders for these verification and audit processes but shall not conduct the processes itself.

Within the first month of the contract, the CCF shall prepare a Role Delineation Protocol as part of the Inception Report. This protocol shall provide a detailed mapping of all MRV-related activities, specifying the responsible party (CCF, IVA, VVB, or PO) for each activity, the data-sharing arrangements between parties, and the escalation procedure in cases where CCF and IVA findings are inconsistent.

To ensure clarity, transparency accountability and independence of the various roles particularly including verification, the applicable role boundaries described must be followed:

A. Carbon Consulting Firm (CCF) — Responsibilities under this ToR

- Carbon project design, documentation, and programme structure;
- Design and operationalisation of the MRV framework and the dMRV-integrated monitoring system;
- Management of baseline surveys, field testing (KPT/CCT/WBT), and laboratory testing;
- Preparation of Monitoring Reports and supporting datasets for VVB verification;
- Coordination of Validation and Verification Body (VVB) engagement and management of the registry process;
- Capacity building for POs, MoE/NNNF staff, and other stakeholders on carbon MRV procedures;
- Carbon credit commercialisation advisory; and
- Article 6 compliance advisory (technical carbon content only; legal interpretation by Legal Advisor).

B. Independent Verification Agent (IVA) for clean cooking solutions deployment — Separate Appointment

An Independent Verification Agent (IVA) appointed separately by MoE to verify the integrity of stove sales and installations by Participating Organisations. The CCF and IVA shall perform complementary but distinct functions.

- Independent verification of PO sales and installation data for MOE's NNNF loan disbursement purposes;
- Desk, phone, and field verification of CCS installations reported by POs; and
- Reporting to MoE on PO compliance with loan conditions.

C. Independent Validation and Verification Body (VVB) — Third-Party Auditor

- Independent third-party validation of the PoA/PDD against the selected carbon standard; and
- Independent verification of Monitoring Reports for carbon credit issuance.

D. Legal Advisor - — Separate Appointment

- Drafting instruments for provision of a revolving sub-loan facility to private SMEs;
- Drafting of security documentation and intercreditor agreements;
- Providing advisories on carbon credit assignment and revenue waterfall; and
- Providing advisories on Emission Reductions Payment Agreements (ERPAs), Voluntary Carbon Markets (VCM) and Article 6 transaction instruments.