TERMS OF REFERENCE
Ghana National Green Project Preparation Facility (PPF)
Consultant – Early-Stage Technical, Environmental and Commercial Studies for the Das Biogas Project

ACQUISITION OF CONSULTING SERVICES

1. Introduction

FSD Africa is designing and implementing an ambitious plan to establish a project preparation facility (PPF) in Ghana to support transaction advisory and project development services for climate-aligned projects. Established alongside the FCDO GCIEP programme – and with the support of FCDO Ghana - the PPF has the ultimate aim to attract private finance to high-impact, investible projects that contribute substantially to closing the climate decarbonisation and adaptation financing gap in Ghana. The PPF aligns with FSD Africa's mandate for financial market development, sourcing of public & private 'project pipelines', project-investor matching, design of innovative climate financing vehicles and beneficiary impact. The PPF will provide upstream resources to help early-stage projects progress towards feasibility, financial structuring and, ultimately, private capital mobilisation. It operates through two complementary funding windows: (i) *grant* financing, supporting early diagnostics and feasibility scoping; and (ii) *returnable* (i.e. zero-loan) financing, enabling downstream feasibility and structuring activities for projects that demonstrate credible investment potential.

As part of the PPF's initial project-preparation pathway, FSD Africa seeks to contract a firm or consortium ("the Consultant") to undertake a set of grant-funded preparatory studies for the proposed Das Biogas Project ('the Project'). The Das Biogas Project has been proposed as an integrated anaerobic-digestion facility intended to process organic municipal waste in the Greater Accra area, converting it into biogas, electricity and digestate for potential agricultural use. The initiative sits within Ghana's broader objectives to improve urban waste management, reduce reliance on landfill, cut methane emissions and expand renewable energy generation. However, the project remains at an early conceptual stage. Uncertainties remain around feedstock availability and composition, process design, technology choice, off-take arrangements and the operational model. These issues must be resolved before the project can advance to full feasibility and attract private investment.

However, significant uncertainties remain. International experience with biogas and waste-to-energy plants shows that the success of such projects depends overwhelmingly on the quality, reliability and predictability of feedstock, alongside a well-specified process design, clear E&S compliance pathways, and a fully evidenced commercial and operational model. Where early-stage projects have failed, the reasons have often included: overestimated waste volumes; incorrect assumptions about moisture content and volatile solids; inadequate pre-treatment design; lack of clarity on grid or thermal off-take; unrealistic plant availability assumptions; or poor understanding of digestate management requirements. The current status of the Das Biogas proposal suggests that several of these risks remain insufficiently examined.

FSD Africa is therefore commissioning a structured package of grant-eligible early-stage studies to determine whether the Das Biogas concept is technically feasible, environmentally acceptable and commercially viable. The Consultant will assess the robustness of the feedstock supply chain, confirm whether the proposed process design is appropriate for local waste characteristics, identify key engineering and operational risks, and define the essential next steps required to bring the project to a stage where meaningful feasibility work can commence. This ToR lays out the Scope of Work for a

Consultant capable of delivering robust, accessible and analytically sound pre-feasibility outputs that will enable FSD Africa, FCDO Ghana, GCIEP and relevant Ghanaian stakeholders to:

i. determine whether the Project is suitable for advancement into full feasibility;

ii. identify elements appropriate for support under future grant or returnable grant allocations; and,

iii. establish whether the Project has a credible pathway to private-sector investment, and if so, what structuring pathway and risk-allocation approach would be most appropriate for a project of this kind.

The Consultant will be a critical partner in shaping the PPF's early-stage pipeline and in supporting FSD Africa's mission to expand climate-aligned infrastructure investment in sub-Saharan Africa. This engagement is expected to run over a focused multi-month period aligned with the PPF's project-preparation cycle.

2. Context

2.1. Project Background

The proposed Project - the Das Biogas Project, developed jointly by DasBiogas and the Accra Metropolitan Assembly (AMA), proposes the construction of a 12,500 m^3 anaerobic-digestion facility at Kaneshie, designed initially to process 180 tonnes of source-segregated organic waste per day. Unlike electricity- or heat-generating AD plants, the principal output of this facility will be compressed biomethane (CBG) produced through upgrading raw biogas to >95% methane purity, to be supplied as a clean-fuel substitute for LPG and diesel in hotels, restaurants, industrial facilities and transport users. The plant will also generate two additional commercial by-products—food-grade CO_2 and organic fertiliser (solid and liquid)—creating a multi-product revenue model rather than a power-export model.

The project builds on the AMA's strategic objective to divert a significant portion of Accra's organic waste away from landfills, where decomposition currently contributes to methane emissions, environmental degradation and high municipal costs. Organic waste makes up over 67% of Accra's municipal waste stream, suggesting that a biogas route could offer environmental and public-health benefits if properly structured.

However, in its current state the project remains pre-feasibility, with major uncertainties regarding feedstock reliability, biochemical suitability of waste streams, the logistics and governance of collection systems, process-design engineering, gas-upgrading specification, and off-take contractualisation for CBG, CO_2 and fertiliser. The core outstanding elements absence of technical feasibility studies, including feedstock analysis and plant-design validation. These gaps are material, as international due-diligence experience shows that AD projects typically fail where feedstock volumes or volatile-solids content were overstated, contamination was underestimated, or gas-upgrading economics were not rigorously modelled.

The PPF therefore seeks to commission a structured suite of early-stage (grant-eligible) studies to test whether the Das Biogas concept can realistically progress towards bankability. These studies will focus on feedstock characterisation, process-design suitability, upgrading and compression requirements, digestate pathways, environmental and social risks, and whether the proposed commercial model for CBG and by-product sales is viable in the Accra context. **The PPF's interest in the project arises from its potential to deliver clear environmental and social impact and resilience** and demonstrate a replicable model for waste collection and treatment in Ghana.

2.2. About FSD Africa

FSD Africa works to reduce poverty by strengthening Africa's financial markets. Based in Nairobi, with anchor funding from the UK's FCDO, FSD Africa is a specialist development agency set up to support breakthrough ideas to build and strengthen financial markets across sub-Saharan Africa. FSD Africa does this by tackling the most intractable financial market challenges in Africa – addressing issues associated with the lack of long-term finance, especially in local currency, and inadequate risk management capacity. FSD Africa's team of financial sector experts work alongside governments, business leaders, regulators and policy makers to design and build ambitious programmes Established in 2012, FSD Africa is incorporated as a non-profit company limited by guarantee. More details are available on FSD Africa website at www.fsdafrica.org.

FSD Africa focuses its work where the need is greatest, and believes the potential for impact is the most significant. FSD Africa has a specific mandate to invest in breakthrough, innovative ideas that can have a transformative impact. This project is closely aligned to FSD Africa's green financing strategy, the FSD Africa end-to-end structural reform approach, and FSD Africa's history of engaging with investors, financial institutions, project developers and regulators. FSD Africa's programming is run through its Adaptation & Resilience, Early-Stage Financing and Financial Markets Pillars, while investments are made through a separate arm – FSD Africa Investments (FSDAi). Supporting functions are provided by Development Impact, Gender and Strategic Communications teams.

2.3. Project Objectives

The overarching objective of this assignment is to undertake a structured package of early-stage, grant-eligible analyses to determine whether the Project can progress to full feasibility and ultimately become a bankable, environmentally sound and commercially viable project under the PPF. The work is intended to establish a clear and evidence-based understanding of the project's viability, remove fundamental uncertainties, and set out the pathway required to reach bankability should the concept prove feasible. At present, the concept lacks the fundamental technical and feedstock analysis needed to justify further development expenditure. The Consultant will therefore carry out a targeted suite of early-stage assessments to test the core assumptions underpinning the project and to define the critical path for its further development.

More specifically, the assignment seeks to:

- ***Establish the reliability and biochemical suitability of the proposed feedstock.***
    - This includes determining actual waste availability, collection dynamics, moisture content, contamination levels, and the key parameters that drive biogas yield such as volatile solids (VS), chemical oxygen demand (COD) and C:N ratios. This is the single most important determinant of project feasibility.
- ***Assess whether the proposed anaerobic digestion and gas-upgrading design is technically appropriate for the Accra waste stream.***
    - The Consultant will review plant sizing, pre-treatment needs, digester technology selection, expected gas yields, upgrading-system requirements, storage and compression arrangements, digestate handling, and overall process integration.
- ***Clarify the technical, operational and commercial requirements of the intended CBG and CO_2 sales model, and assess the implications of digestate generation.***

- The Consultant will review the feasibility of CBG distribution to proposed users, the specifications for food-grade CO_2, and any infrastructure requirements for those markets.

- ***Identify environmental and social risks consistent with IFC Performance Standards at scoping level.***
  - This includes potential impacts on local communities, waste-collection workers, air quality, odour, groundwater contamination, traffic movements and land use.
- ***Assess institutional, land, permitting and regulatory considerations.***
  - The Consultant will outline the approvals required, the role of AMA and other agencies, any constraints arising from land tenure, and the alignment of the project with Ghana's renewable-energy, waste-management and environmental frameworks where relevant.

These outputs will allow the Consultant to work with FSD Africa to reach a clear, evidence-based decision on whether the Project warrants deeper development support and, if so, what form that support should take by –

- ***Providing a structured recommendation on whether the project should progress to full feasibility, and under what conditions.***
  - This should include identification of any critical "go/no-go" issues, a prioritised list of follow-on feasibility studies (either grant or returnable grant-eligible), and a realistic development pathway aligned with the PPF's requirements.

3. Scope of Work

The Consultant will be responsible for delivering a coherent package of early-stage preparatory studies that respond to the technical, environmental, commercial and regulatory gaps identified in earlier GCIEP scoping. The Consultant will deliver a package of early-stage studies designed to clarify the viability of the Project and establish whether it should progress to full feasibility and downstream PPF support. The scope is divided into five interrelated Work Packages (WPs). These may be undertaken in parallel where efficient, but the Consultant shall ensure that sequencing reflects dependencies between tasks (particularly for feedstock arrangements, process design and commercial elements). All work must be undertaken in close collaboration throughout the tasks with FSD Africa, GIIF, DasBiogas and AMA stakeholders and any relevant local authorities.

3.1. Work Package 1: Feedstock Availability and Biochemical Suitability Assessment

1. The Consultant will undertake a comprehensive evaluation of feedstock supply, comprising:
   - Waste-flow mapping;
   - Quantify accessible organic waste volumes from markets, food vendors, institutions and other relevant sources;
   - Assess seasonal variation, collection routes, waste-segregation practices and the degree of contamination likely at source;
   - Field sampling and laboratory analysis.
2. The Consultant shall carry out statistically representative sampling and laboratory tests to determine:
   - Moisture content, volatile solids (VS), total solids (TS), ash content;
   - Biochemical methane potential (BMP) tests;
   - pH, alkalinity, nitrogen content, C:N ratio;
   - Contaminants (plastics, metals, grit, hazardous fractions).
3. The Consultant shall conduct a Supply-chain stability assessment:

- Identify institutional, governance or behavioural risks affecting waste collection and source separation;
- Evaluate the resilience of the proposed feedstock supply under alternative operational conditions (e.g., changes in collection contractors);
- Feedstock risk analysis;
- Assess the risk of overestimation of supply, underestimation of contamination, or incorrect assumptions about digestibility;
- Provide thresholds below which the project becomes technically or economically non-viable.

Output: Feedstock Assessment Report, including BMP results, supply-risk mapping and suitability conclusions (Word or PPT format), with supplementary data assessments attached.

3.2. Work Package 2: Process Design, Technology and Engineering Suitability Review

The Consultant will review the proposed anaerobic digestion concept, gas-upgrading system and auxiliary facilities. This includes the Consultant:

1. Conducting an AD technology assessment, which will include:
    - An evaluation of whether the chosen digester type (wet AD, mesophilic/thermophilic, batch/continuous) is compatible with Accra's organic waste characteristics;
    - An assessment of pre-treatment needs such as de-packaging, shredding, removal of inert material and grit extraction;
    - A mapping of process-flow and mass-balance validation;
    - The development of preliminary mass and energy balances based on verified feedstock parameters;
    - The assessment of gas-yield assumptions, digester sizing, retention time, expected biogas quality, and internal energy requirements;
    - The review of potential upgrades required for gas and compression systems;
    - The review of the suitability of the proposed upgrading technology (e.g., membrane, PSA, water scrubbing);
    - The identification of specification, power demand, anticipated methane slip and expected purity thresholds for CBG;
    - An evaluation of storage, bottling, trucking and safety systems.
2. Conducting an estimation of the volumes of solid and liquid digestate, and the requirements for digestate characterisation and handling, including:
    - An assessment of risks related to contaminants, stability and sanitation;
    - Identifying safe and compliant disposal/use options and associated costs;
    - Identifying site suitability and constructability assessment;
    - Undertaking site reconnaissance to examine access, drainage, land servicing, odour buffers, vehicle circulation, and proximity to receptors;
    - Identifying geotechnical and flood-related constraints requiring further feasibility work.

Output: Technical Appraisal Report, including validated process concepts and required engineering next steps (Word or PPT format), with supplementary data assessments attached.

3.3. Work Package 3: Offtake Pathways and Marketability Assessment (CBG and CO_2)

The Consultant will assess the commercial viability of the project's output streams by:

1. Conducting a CBG offtake model assessment that will:
    - Identify target customers (hotels, restaurants, industrial users, transport operators);

- Test assumptions on pricing, demand volumes, distance to market and switching behaviour from LPG/diesel.

2. Reviewing regulatory requirements for CBG storage, distribution and safety.
3. Conducting a CO_2 by-product assessment that will:
   - Assess feasibility of producing food-grade or industrial-grade CO_2;
   - Identify potential buyers (breweries, beverage plants, greenhouse operators) and market barriers;
   - Examine quality and handling requirements and the associated capital/operating implications.

Output: Market and Offtake Assessment Report (Word or PPT format)

3.4. Work Package 4: Environmental, Social, Land and Regulatory Scoping

The Consultant will identify early-stage environmental, social and permitting risks consistent with IFC Performance Standards (PS1–PS8) at scoping level. This will include a(n)

1. E&S baseline and site appraisal
   - Identify nearby communities, sensitive receptors, hydrological pathways, potential odour impacts and traffic implications.
2. Regulatory and permitting pathway
   - Map required approvals from AMA, EPA Ghana and other relevant agencies
   - Identify land-tenure issues, zoning constraints and possible conflicts.
3. Stakeholder identification
   - Identify key public, private and community stakeholders whose roles will influence future feasibility and permitting.
4. Risk Screening
   - Highlight any material E&S risks requiring early mitigation or potentially generating a "no-go" outcome.

Output: E&S Scoping Report (Word/PPT format) aligned with IFC Performance Standards Requirements and recommended Future ESIA Requirements (if required).

3.5. Work Package 5: Early Commercial and Development Pathway Assessment

While not a bankability assessment, the Consultant will:

- Review cost assumptions (capex and opex) at a high-level for reasonableness.
- Identify critical-path items preventing progression to full feasibility.
- Recommend returnable grant-eligible next steps, including required studies, sequencing, and estimated cost envelopes.
- Provide a structured "Go / Conditional Go / No-Go" recommendation based on all preceding workstreams.

Output: Early Commercial and Development Pathway Report (Word or PPT format), with backing high-level model (in Excel, or similar) if data allows for supporting analyses.

An ***Inception Report*** shall be submitted within four (4) weeks of contract commencement, detailing the refined methodology, stakeholder engagement plan, data requirements, and a consolidated workplan for all five WPs.

4. **Project Governance**

The assignment will be governed through a joint oversight arrangement led by FSD Africa, with strategic input from FCDO Ghana and sector-level engagement with relevant Ghanaian institutions (including the AMA). Structured engagement with the Accra Metropolitan Assembly (AMA) and other relevant Ghanaian authorities will be required; given the early stage of the Das Biogas concept and the number of institutional uncertainties identified in the GCIEP scoping work, the Consultant is expected to work closely with public-sector stakeholders to ensure that findings are accurate, grounded and usable for decision-making. The Consultant will be expected to work collaboratively with these parties to ensure that findings are credible, context-appropriate and aligned with the PPF's objectives. FSD Africa will act as the Contracting Authority, responsible for overall programme direction, contractual management, and quality assurance of deliverables. FSD Africa will also provide guidance on project activity eligibility, alignment with our project-development framework, and coherence with the broader PPF pipeline.

The Accra Metropolitan Assembly (AMA) is expected to be the primary public-sector counterpart for this work. AMA's involvement is essential in validating assumptions regarding feedstock supply, waste-collection systems, land-use considerations and the broader alignment of the project with municipal waste-management strategies. The Consultant will engage with AMA's Waste Management Department and Planning Directorate, as relevant. The Consultant may also need to engage, at a scoping level, with the Environmental Protection Agency (EPA Ghana) and other regulatory entities to map the permitting pathway and identify any early environmental or social issues requiring attention at subsequent stages.

Engagement with the developer (DasBiogas) will be required to obtain project documentation, clarify technical assumptions and understand the origin of the current project concept. The Consultant is not required to validate the sponsor's business case but may request information necessary to complete the scope of work.

A PPF Steering Committee, comprising FSD Africa, FCDO Ghana and invited Ghanaian sector representatives, including GIIF and other institutions as relevant, will receive periodic updates during the assignment. The Steering Committee will provide strategic oversight, ensure alignment with national energy-sector priorities and validate that the outputs are suitable for onward use in determining returnable grant eligibility. A Working Group will meet weekly. We intend for the Consultant to work with DasBiogas and FSD Africa's Ghana-based Senior Manager to host, coordinate and provide significant content into the Group through these weekly meetings, and to use the forum to deliver against the Workplan. We may request for (e.g.) weekly Consultant-FSD Africa working sessions to focus on delivery, relationship management, and risk mitigation topics.

Final acceptance of deliverables will rest with FSD Africa. Any substantive changes to scope, methodology, team composition or timeline will require FSD Africa's prior approval.

5. **Timelines and Availability**

The assignment is expected to commence in February 2026, following completion of procurement and contract execution. The Consultant shall ensure that a suitably qualified core team is available from the start date and can commit sufficient time to deliver the Work Packages as specified.

The Consultant will be required to:

- participate in a virtual kick-off/mobilisation meeting with FSD Africa within two weeks of contract signature;

- submit an Inception Report (including methodology, data requirements, detailed workplan and stakeholder engagement approach across each of the above Work Packages) within four weeks of the commencement date;
- ensure ongoing availability of senior technical experts at key junctures.

Given the interdependencies between the technical, environmental and commercial Work Packages, timely mobilisation is essential. Given the technical nature of the assignment—particularly WP1 (feedstock sampling and laboratory analysis) and WP2 2 (engineering review) — the Consultant must be available to:

- deploy staff for field sampling, waste characterisation and site reconnaissance in Accra,
- participate in discussions with AMA, the developer, and relevant regulatory bodies,
- respond promptly to requests for clarification from FSD Africa, and
- contribute to periodic virtual progress meetings with the PPF Steering Group.

Senior technical specialists (notably the Feedstock/AD Expert, Process Engineer, E&S Lead and Team Leader) must be available at key decision points during the assignment, including inception, mid-term review, and final validation.

The Consultant is also expected to maintain flexible availability for virtual check-ins, ad hoc clarifications, and document review sessions as requested by FSD Africa, FCDO Ghana, GIIF and Project sponsors during the course of the work. Any changes to team composition or availability must be communicated to FSD Africa in advance and are subject to approval.

6. **Duration and effort**

The assignment is expected to run for a duration of four (4) months, commencing in February 2026 and concluding no later than end-June 2026. All Work Packages must be completed within this period, with interim outputs delivered as required by FSD Africa. The Consultant shall resource the assignment with an appropriately skilled multi-disciplinary team and allocate sufficient expert time to complete all Work Packages to a standard that enables FSD Africa to make a clear "go / conditional go / no-go" decision on whether the Das Biogas concept warrants further development.

The following table provides an indicative Level of Effort (LoE) considered necessary to deliver a high-quality early-stage assessment. Indictive LoE is role specific, and more than one role could be covered by the same individual within the team. Bidders may propose alternative allocations where justified, but proposals must demonstrate that all Work Packages can be completed credibly within the timeline.

Note that feedstock analysis is the anchor of the assignment and requires the highest effort, consistent with global experience where BMP testing and waste-flow stability are the decisive factors in AD project viability. The Process Engineer carries the second highest technical workload due to the need to validate digester design, upgrading pathways and internal energy requirements. To also note -

- E&S scoping is proportionate to an early-stage assignment i.e. not a full ESIA.
- Commercial/market work is constrained by the limited maturity of the CBG and CO_2 markets, but still essential to challenge sponsor assumptions.
- No full financial modelling is required at this stage; only screening-level analysis appropriate.

WPs Covered	Role	Estimated LoE (Days)	Rationale

All (Coordination, QA)	**Team Leader / Senior AD or Infrastructure Specialist**	20–25	Provides methodological oversight; integrates feedstock, process and commercial findings; ensures alignment with PPF objectives.
	Local Stakeholder Engagement Officer	8–12	Coordinates AMA engagement, community interface, access arrangements and data collection.
	Project Coordinator / Research Assistant	10–15	Ensures timely delivery, documentation, stakeholder scheduling and data assembly. Supports documentation and regular reporting.
WP1 - Feedstock Availability and Biochemical Suitability Assessment	**Feedstock & Waste-Characterisation Lead**	25–35	Core role: design sampling campaign, supervise laboratory analysis, interpret BMP results, assess supply stability. Largest single Workstream.
	Laboratory Liaison / Waste-Sampling Technician (Local)	10-15	Supports physical sampling, chain-of-custody, contamination sorting, logistics and coordination with laboratory.
WP2 - Process Design, Technology and Engineering Suitability	**Process / Biogas Engineer (AD & Gas Upgrading)**	20–25	Validates process-flow, mass balances, digester sizing, upgrading technology, compression and safety systems.
WP3 - Offtake Pathways and Marketability Assessment (CBG and CO_2)	**Commercial & Offtake Analyst (CBG & CO_2) (also on WS5)**	12-18	Tests demand assumptions for CBG, evaluates CO_2 viability, assesses distribution/logistics, identifies commercial gaps.
WP4 - Environmental and Social (E&S) and Land/Regulatory Scoping	**Environmental & Social Specialist (IFC-aligned)**	12–18	Conducts E&S scoping, identifies risks, defines ESIA requirements and mitigation pathways.
	Regulatory/Institutional Analyst (also on WS5)	8-12	Maps permitting, land-use, EPA requirements, AMA roles and institutional risks.
WP5 - Early Commercial and Development Pathway	**Commercial or Financial Analyst (High-Level Only)**	15–20	Provides preliminary capex/opex reasonableness checks; no bankable model required.

7. **Place of Performance**

The assignment will be delivered through a combination of remote analytical work and targeted in-country field-work activities in Ghana. Most technical analysis, process-design appraisal, laboratory interpretation, commercial assessment and report preparation may be completed remotely. However, substantial in-country engagement in Accra will be required, particularly for Workstreams involving feedstock characterisation, site evaluation, and institutional scoping.

The Consultant will be expected to undertake field activities including:

- Waste-sampling and characterisation campaigns at designated markets, transfer points and waste-collection zones identified in collaboration with AMA.
- Site reconnaissance at the proposed Kaneshie project location to assess physical conditions, access, neighbouring uses, odour buffers and other environmental or operational constraints.
- Stakeholder meetings with the Accra Metropolitan Assembly (Waste Management Department, Planning Directorate), EPA Ghana, and other relevant public bodies.
- Structured discussions with the developer (DasBiogas) to gather necessary project information and clarify technical assumptions.
- Engagement, where useful, with potential CBG or CO_2 users to understand logistical or regulatory constraints relevant for early-stage assessment.

The Consultant shall ensure that sufficient in-country time is allocated for all field-based and institutional tasks under the Work Packages. All in-country work will take place primarily in Accra and its immediate surroundings, unless the Consultant identifies additional locations required for accurate feedstock sampling. Any requirement for additional in-country travel beyond Accra should be identified by the Consultant and included in the financial proposal. Travel and logistics should be included in the financial proposal. FSD Africa will not provide office space or administrative support in Ghana; the Consultant is responsible for its own travel, logistics, laboratory coordination, and safety arrangements to complete this assessment.

Regular virtual engagements with FSD Africa, Project Sponsors and FCDO Ghana are expected; it is expected that the Consultant would be able to operate according to both West & East African timezones. The key FSD Africa personnel supporting this work will be based in Accra, Nairobi, Cairo and London. In-person progress sessions may be arranged in Ghana depending on need and mutual availability, but are not compulsory unless specified in the Consultant's work plan.

8. **Invitation To Submit Proposal**

8.1. Format for Submission

FSD Africa hereby invites qualified firms or consortia ("the Consultant") to submit a proposal to undertake the grant-funded early-stage technical, environmental, grid and commercial assessment for the Project under the PPF. Proposals should demonstrate the Consultant's capacity to deliver the Scope of Work outlined in this ToR, including evidence of:

Interested firms are invited to submit:

- A Technical Proposal, including:
    - A cover letter, including a brief introduction of the firm/consortium, a confirmation of acceptance of the ToR and a statement of eligibility and absence of conflicts of interest.
    - Your understanding of the assignment, including:
        - Demonstrated understanding of the Biogas project context.
        - Description of the key challenges, data gaps and institutional considerations.
        - Identification of assumptions, risks and dependencies.
    - The Proposed Methodology and Workplan
        - Detailed description of the methodology for each WP.
        - Proposed sequencing and rationale for the order of activities.
        - Stakeholder engagement plan (including DasBiogas, AMA and GIIF/Ghanaian authorities).

        - Data requirements and expected sources of information.
        - Risk-management approach.
    - Your Team Composition and Level of Effort
        - Organogram showing team structure.
        - Summary table showing Level of Effort per expert per WP.
        - CVs (maximum 3 pages each) for key experts, focusing on relevant experience.
        - Identification of any locally based personnel or partners.
    - Your Relevant Experience of the Firm / Consortium, including -
        - Up to three (3) examples/references of comparable assignments in the last five years.
        - Evidence of experience with similar technologies, sectors and markets.
        - References with contact details of 3 similar assignments.
    - The Proposed Project Management and Quality Assurance Process
        - Description of internal QA processes.
        - Proposed reporting, review and communication arrangements.
        - Any subcontracting arrangements.
    - Any Required Declarations
        - Conflict of interest statement and required compliance documentation, including company registration documents and confirmation of eligibility and conflict-of-interest declarations;
        - Confirmation of proposal validity (minimum 90 days).
        - Confirmation that key personnel are available during the assignment period.
- A Financial Proposal, presented separately in a clear and transparent format, covering:
    - total cost (in GBP);
    - breakdown by Work Package;
    - breakdown by personnel and days (i.e. day rates and LoE of each expert);
    - travel and in-country costs as a separate line item;
    - any additional costs with justifications (e.g. laboratory costs);
    - any applicable taxes (see section below);
    - Proposed payments tied to deliverables (optional; FSD Africa may prescribe this separately).

Proposals should be valid for a minimum of 90 days from the submission deadline. FSD Africa reserves the right to request clarifications, conduct interviews with shortlisted bidders, or seek additional information where necessary to complete the evaluation. Proposals must be submitted electronically to FSD Africa by the date specified in the procurement notice. Late submissions will not be considered.

FSD Africa looks forward to receiving well-considered proposals from firms capable of contributing meaningfully to the PPF's mission of advancing climate-aligned, investment-ready infrastructure in Ghana. Your technical proposal (which should not exceed twenty pages - excluding annexures, CVs etc.) and financial proposal should be sent by email to FSD Africa at bids@fsdafrica.org by **1800 hours East Africa Time on 05 January, 2026,** under the subject line 'Call for Proposals -

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Proposals are accepted in either Word/PPT (with attached PDF) formats.

8.2. Criteria for Selection

Proposals will be evaluated in accordance with FSD Africa's procurement policies. The assessment will follow a two-stage process, evaluating (i) the Technical Proposal, and (ii) the Financial Proposal. Only bidders that meet the minimum technical threshold will proceed to financial evaluation.

8.2.1. Technical Evaluation (70%)

The Technical Proposal will be assessed against the criteria and sub-criteria laid out below. Please note that a ***minimum technical threshold will be applied at a score of 50/70 (71%).*** Bidders scoring below this threshold **will not proceed to the financial evaluation**.

A. Understanding of the Assignment and Proposed Approach (25%)

- Demonstrated understanding of biogas projects, including reliance on source-segregated organic waste, the sensitivity of AD performance to biochemical feedstock characteristics, and the commercial implications of a CBG-focused model.
- Clarity and robustness of the proposed methodology for feedstock sampling, laboratory analysis (BMP/VS/TS, contamination, C:N), process-engineering review, upgrading system appraisal, digestate assessment, and E&S scoping.
- Demonstrated understanding of the Accra or similar city waste-management ecosystems, including collection practices, institutional actors, and variability in organic-waste streams.
- Realistic sequencing and integration of WPs, especially the dependency of all technical and commercial appraisal on feedstock results.
- Realistic and coherent workplan aligned to the PPF's objectives and early-stage decision-making needs.

B. Relevant Technical Experience of the Firm / Consortium (20%)

- Demonstrated experience delivering early-stage technical assessments for AD, biogas, biomethane or organic-waste projects, particularly in Sub-Saharan Africa or other emerging markets.
- Proven capability in designing and managing waste-characterisation studies, including field sampling, laboratory liaison, and interpretation of BMP and physicochemical test results.
- Prior experience evaluating biogas-upgrading technologies (e.g., membrane systems, PSA, water scrubbers) and integration into CBG distribution models.
- Experience conducting IFC Performance Standards-aligned E&S scoping for waste-management or industrial facilities.
- Quality and relevance of up to three (3) references for previous assignments within the past five years.

C. Qualifications and Competence of Key Experts (20%)

Assessment will focus on the combined strength of the core team rather than individual CVs alone:

The following roles are essential (they can be combined if an individual has requisite experience):

1. Team Leader / Senior AD Specialist
    - Minimum 10 years' experience in AD project development or technical due diligence.

- Demonstrated track record in evaluating wet-AD plants processing municipal organic waste.

2. Feedstock & Waste-Characterisation Lead
    - Expertise in designing sampling campaigns and interpreting BMP, VS/TS and contamination results.
    - Experience working with organic municipal waste streams in developing-country contexts.
3. Process / Biogas Engineer
    - Demonstrable experience in AD process design, digester sizing, mass-balance modelling, and biogas-upgrading technologies.
    - Ability to assess integration, safety, utility requirements and operational considerations.
4. Environmental & Social Specialist (IFC-aligned)
    - Strong experience conducting PS1–PS8 scoping for waste-management or industrial facilities.
5. Commercial & Offtake Analyst (CBG and CO_2)
    - Understanding of LPG/diesel substitution markets, small-scale gas distribution, and industrial CO_2 markets.
6. Regulatory / Institutional Analyst
    - Experience engaging with municipal governments, waste authorities and environmental regulators.
7. Financial Analyst (screening-level)
    - Experience in early-stage cost appraisal for energy/waste projects (no full PF modelling required).

CVs must clearly state each expert's role(s), relevant experience, and allocated Level of Effort consistent with the proposed methodology and Work Packages.

D. Project Management, Governance and QA Arrangements (5%)

- Clear project governance structure;
- Quality assurance processes appropriate for analytical and modelling work;
- Suitability of proposed coordination mechanisms with FSD Africa, DasBiogas, AMA, and relevant Ghanaian authorities.
- Realistic scheduling, risk management and communications plan.

8.2.2. Financial Evaluation (30%)

The Financial Evaluation – acting as a value-for-money (VfM) proposal - will account for 30% of the overall score and will be assessed on relative cost to other bidders. This is assessed according to the formula below.

8.2.3. Final Ranking

The final ranking of bidders will be based on the summation of the technical & financial proposals: **Total Score = Technical (70%) + Financial (30%).** FSD Africa reserves the right to:

- request clarifications or hold interviews with shortlisted bidders;
- negotiate final workplans and staffing before contract award;
- reject any proposal that does not demonstrate adequate understanding, technical competency or value for money

Basis of assessment:	Weighting
The Consultant's **Technical Understanding of the Assignment and Proposed Approach**	25%
The Consultant's **Relevant Technical Experience**	20%
The Consultant's **Qualifications and Competence**	20%
The Consultant's **Project Management, Governance and QA Arrangements**	5%
The Consultant's **financial evaluation/ value-for-money proposal** for this assignment, based upon fees and total costs for this assignment. This will be calculated according to the below calculation. The lowest bid quoted will be allocated the maximum score of 30%. Fee quoted must be inclusive of applicable withholding tax. FS = 30% x LB/BP where: *FS = is the financial score* *LB = is the lowest bid quoted* *BP = is the bid of the proposal under consideration.*	30%
Total	**100%**

9. **Questions and contacts**

Questions or comments in respect of these terms of reference should be directed by email to bids@fsdafrica.org, by **12:00pm (EAT) on 17 December 2025**. If relevant, responses to these questions will be published as an addendum on our website by **1700pm (EAT) on 19 December 2025.**

10. **Applicable Taxes**

The Consultant shall be solely responsible for complying with all tax obligations arising from the performance of this assignment, whether in Ghana or in the Consultant's home jurisdiction.
Responsibility for All Other Taxes: The Consultant shall bear all other taxes, charges or levies arising from the assignment, including corporate income tax, payroll taxes for staff deployed in Ghana, and any taxes applicable in its own jurisdiction.

Financial Proposal Requirements: All prices shall be quoted inclusive of all taxes

FSD Africa will evaluate proposals on the tax-inclusive amounts.

- Any taxes payable will be handled in accordance with Ghanaian law and FSD Africa's contractual arrangements.
- By submitting a proposal, the Consultant acknowledges and accepts responsibility for compliance with all applicable tax obligations.

As per Kenya's tax law, FSD Africa will pay the Consultant after withholding the appropriate taxes at the applicable rate between Kenya and the Consultant's country of tax residence, considering any tax treaties in force. It is the responsibility of the Consultant to keep themselves apprised of these applicable taxes. The table below provides guidance on the applicable rates as per tax regimes.

Country	WHT Rate
Kenya	5%
United Kingdom	12.5%
Canada	15%
Germany	15%
India	10%
Non-resident rate for citizens of EAC member countries (member countries attached)	15%
All other countries	20%

Annex 1: Proposed Fee Schedule

Costs should be shown separately in the format set out below. Fees proposed by tenderers should be inclusive of all taxes

Consultancy fees*	***Days***	***Fee USD/GBP***	***Total USD/GBP***
xx			
xx			
Total remuneration			***0.00***
Reimbursement costs*	***Unit***	***Cost USD/GBP***	***Total USD/GBP***
xx			
xx			
Total reimbursement cost			***0.00***
Total proposed costs			***0.00***
**Fees incl of all taxes*			
***Expenses to be reimbursed on actual costs as per FSD Africa's travel policy*			