

INCEPTION REPORT

Consultancy to Provide Technical Assistance to the Energy Sector in Liberia

Submitted to: Environmental Protection Agency of Liberia
Conservation International – Liberia
Ministry of Mines and Energy

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Capacity Building Initiative for Transparency (CBIT) Project

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ABBREVIATION

<i>CBIT</i>	<i>Capacity Building Initiative for Transparency</i>
<i>CI</i>	<i>Conservation International Liberia</i>
<i>EPA</i>	<i>Environmental Protection Agency of Liberia</i>
<i>GEF</i>	<i>Global Environment Facility</i>
<i>GHGI</i>	<i>Greenhouse Gas Inventory</i>
<i>INC</i>	<i>Initial National Communication</i>
<i>INDC</i>	<i>Intended Nationally Determined Contribution</i>
<i>IPCC</i>	<i>Intergovernmental Panel on Climate Change</i>
<i>MRV</i>	<i>Measurement, Reporting and Verification</i>
<i>NDC</i>	<i>Nationally Determined Contribution</i>
<i>NEP</i>	<i>National Energy Policy</i>
<i>PMU</i>	<i>Project Management Unit</i>
<i>UNFCCC</i>	<i>United Nations Framework Convention on Climate Change</i>

INTRODUCTION

In July 2018, the Liberian Government, through the National Legislature, took the bold step to ratify the Paris Climate Agreement, thereby setting the pace for a low-carbon, climate-resilient future. Like many other developing nations, Liberia is vulnerable to the impacts of climate change, such as rise in sea level, temperatures and rainfall. More than half of the population heavily rely on the agriculture sector but sad to say, these impacts triggered by global warming are posing a serious challenge in terms of accessing food and ensuring livelihoods. No doubt, ratifying the Agreement was a step in the right direction.

Following the coming into force of the Agreement, the Intended Nationally Determined Contribution (INDC) have been transformed to Nationally Determined Contribution (NDC). Article 4 paragraph 2 of the Paris Climate Agreement requires each party to prepare, communicate and maintain successive NDC that it intends to achieve. According to the Agreement, Parties shall pursue domestic mitigation measures, with the goal of achieving the objectives of such contribution.

To support mitigation, Liberia will need to reduce gross Greenhouse Gas (GHG) emissions from the energy sector, which is the highest emissions sector. According to Liberia's Initial National Communication (INC) submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in 2013, the energy sector accounted for 67.5% of the total GHG emissions, with the sectoral contribution standing at 5,414 total Gg CO₂ eq.

Notably, in the 2009 National Energy Policy (NEP), Liberia has set out ambitious targets as follows:

- (a) Reduce GHG emissions by at least 10% by 2030;
- (b) Improve energy efficiency by at least 20% by 2030;
- (c) Raise the share of renewable energy to at least 30% of electricity production and 10% of overall energy consumption by 2030;
- (d) Replace cooking stoves of low thermal efficiency (5–10%) with those of higher efficiency (40%) stoves.

When these targets are achieved in addition to an increased potential for carbon storage in the land sector, it will go a long way in helping Liberia to realize her long-term strategy of carbon neutrality by 2050.

Given this context, there is clearly a need to strengthen Liberia's national capacity to implement the different elements of the Paris Climate Agreement. Against this background, Conservation International (CI) and the Environmental Protection Agency (EPA) of Liberia have received funding from the Global Environment Facility (GEF) in support of the Capacity Building Initiative for Transparency (CBIT) Project entitled, *"building and strengthening Liberia's national capacity to implement the transparency elements of the Paris Climate Agreement (CBIT)"* in Liberia. The project is executed through the Environmental Protection Agency and Conservation International – Liberia.

The main objective of this CBIT project is to support institutions in Liberia to build and strengthen Liberia's national capacity to implement the transparency elements of the Paris Climate Agreement. The three broad components of the project are:

- (1) Strengthen the capacity of national institutions to track NDC implementation and sustain transparency efforts over time;
- (2) Provide direct technical support to harmonize land use, agriculture, energy, transport and waste sectors data collection and reporting through training and assistance;
- (3) Develop integrated Platform for Data Sharing and Policy Making.

OBJECTIVES

General

Generally, this consultancy assignment is geared towards contributing towards the realization of specific outputs and targets as set out in the Energy Sector.

The consultancy, which now covers a period of 8 months, seeks to provide technical assistance to institutions within the energy sector of Liberia.

Specific

Specifically, the objectives of this assignment are outlined below:

- Support the Government of Liberia to build MRV capacity in the energy sector
- Ensure that Liberia reaches its mitigation targets

This set of objectives is based on methodologies, as contained in the 2006 Inter-governmental Panel on Climate Change (IPCC) Guidelines.

The consultant works directly under the supervision of the CBIT Senior Project Manager and the Technical Director of Conservation International – Liberia and the NDC Energy Sector Supervisor(s).

Key Tasks of the Consultancy

The key tasks to be executed under this consultancy service assignment are spelled out below:

- a. Train technicians from the energy sector on methodologies and application of IPCC guidance for data collection and reporting;
- b. Assist Liberia to prepare and report on the energy targets of the Nationally Determined contribution to the UNFCCC;
- c. Provide guidance and support for collecting and reporting on energy sector GHG data for the National MRV system;
- d. Assess national policies and current mitigation activities related to GHG mitigation in the energy and waste sectors deemed relevant by the Government of Liberia to ensure that the GHG emission reduction in Liberia's NDC is aligned with official national policies and plans;
- e. Choose target sectors, subsectors, and source/sink categories;
- f. Assess mitigation measures that could achieve the stabilization target, including time horizon (contribution time frame) and anticipated mitigation programs;

- g. Determine policies and/or actions to control GHGs emissions that support GHG mitigation scenarios developed through the different analysis;
- h. Identify and prioritize GHG mitigation opportunities and evaluate the GHG mitigation potential associated with priority policies and actions under consideration for inclusion in Liberia's NDC;
- i. Analyze co-benefits for selected mitigation including gender/poverty reduction impacts;
- j. Calculate emissions reductions associated with achieving targets;
- k. Explain assumed accounting approaches that will be used to track progress towards the energy targets of Liberia NDC;
- l. In close coordination with the energy sectors institutions review and produce policy level briefing note for public consultation;
- m. Undertake any other reasonable activity within the scope of the assignment to complete the CBIT project deliverables.

Other activities include the development of the terms of reference for the IPCC consultant, work with the consultancy during training, and provide technical advice/support to the Project Management Unit (PMU) of the CBIT Project on energy, waste and transport data.

UNDERSTANDING AND DELIVERY OF KEY TASKS

The accompanying table summarizes the tasks with clear interpretations of how targets will be achieved.

Table 1: Key Tasks, Activities and Deliverables during the course of the Consultancy

No.	Key Tasks	Activities	Deliverables
1.	Train technicians from the energy sector on methodologies and application of IPCC guidance for data collection and report	Training Workshops Training Manual, including curriculum and exercises	Monthly training report detailing learning experience and recommendations
2.	Assist Liberia to prepare and report on the energy targets of the Nationally Determined contributions to the UNFCCC	Provide assistance to reduce GHG emissions by at least 10% by 2030; improving energy efficiency by at least 20% by 2030; raise the share of renewable energy to at least 30% of electricity production and 10% of overall energy consumption; and replace cooking stoves of low thermal efficiency to higher efficiency	Monthly report detailing the level of assistance in preparing and reporting on the energy targets of the NDC
3.	Provide guidance and support for collecting and reporting on energy sector GHG data for the National MRV system	Prepare reporting template for the collection of GHG data from energy sector stakeholders. Work with technicians and stakeholders to ensure a smooth GHG data reporting process	Monthly report on activities performed, problems encountered and corrective actions as well as recommendations
4.	Assess national policies and current mitigation activities related to GHG mitigation in the energy and waste sectors deemed relevant by the Government of Liberia to ensure that the GHG emission reduction in Liberia's NDC is aligned with the official national policies and plans	Review and advise on energy sector policy documents, such as the National Energy Policy & New Energy Act 2015 and promote diversification of energy sources including renewable energy sources	Monthly report on activities performed, problems encountered and corrective actions as well as recommendations
5.	Choose target sectors, subsectors, and source/sink categories	Consider the source categories from the energy sector and note GHG contributions. For example, GHG emissions from the energy sector emanate from Stationary and Mobile energy activities (fuel combustion and fugitive fuel emissions).	Monthly report on activities performed, problems encountered and corrective actions as well as recommendations
6.	Assess mitigation measures that could achieve the stabilization target, including time horizon (contribution time frame) and anticipated mitigation programs	Conduct desk review of current mitigation measures, and assist in planning new measures to achieve mitigation targets in the energy sector	Monthly report on activities performed, problems encountered and corrective actions as well as recommendations

7.	Determine policies and/or actions to control GHGs that support GHG mitigation scenarios developed through the different analysis	Consider policies and actions to meet the following mitigation scenarios (1) 30% renewable generation (2) 20% energy efficiency for cooking (3) 5% biofuel use in transport, and (4) waste sector landfill gas and advise accordingly	Monthly report on activities performed, problems encountered and corrective actions as well as recommendations
8.	Identify and prioritize GHG mitigation opportunities and evaluate the GHG mitigation potential associated with priority policies and actions under consideration for inclusion in Liberia's NDC	Conduct desk review and proffer mitigation opportunities	Monthly report on activities performed, problems encountered and corrective actions as well as recommendations
9.	Analyze co-benefits for selected mitigation including gender/poverty reduction impacts	Analyze GHG mitigation in terms of other socioeconomic benefits	Monthly report on activities performed, problems encountered and corrective actions as well as recommendations
10.	Calculate emissions reductions associated with achieving targets	Use appropriate guidelines and methodologies to estimate emission reductions relative to targets	Monthly report on activities performed, problems encountered and corrective actions as well as recommendations
11.	Explain assumed accounting approaches that will be used to track progress towards the energy targets of Liberia NDC	Differentiate targets in the NDCs, e.g. absolute emission reductions, absolute emission limits, reduction relative to a business-as-usual (BAU) scenario, reduction of carbon or GHG intensity, etc. and explain approaches used	Monthly report on activities performed, problems encountered and corrective actions as well as recommendations
12.	In close coordination with the energy sector institutions review and produce policy level briefing note for public consultation	Work closely with the Energy Division of the Ministry of Mines and Energy (MME) to review existing policies and produce briefing for broad-based consultation	Monthly report on activities performed, problems encountered and corrective actions as well as recommendations
13.	Undertake any other reasonable activity within the scope of the assignment to complete the CBIT project deliverables	Work with CBIT Senior Project Manager, EPA, and MME to execute project-related activities	Monthly report on activities performed, problems encountered and corrective actions as well as recommendations
14.	Submit Consultancy Report	Prepare and submit an end of consultancy report that covers all activities executed during the service period	Comprehensive 8-month end of consultancy report

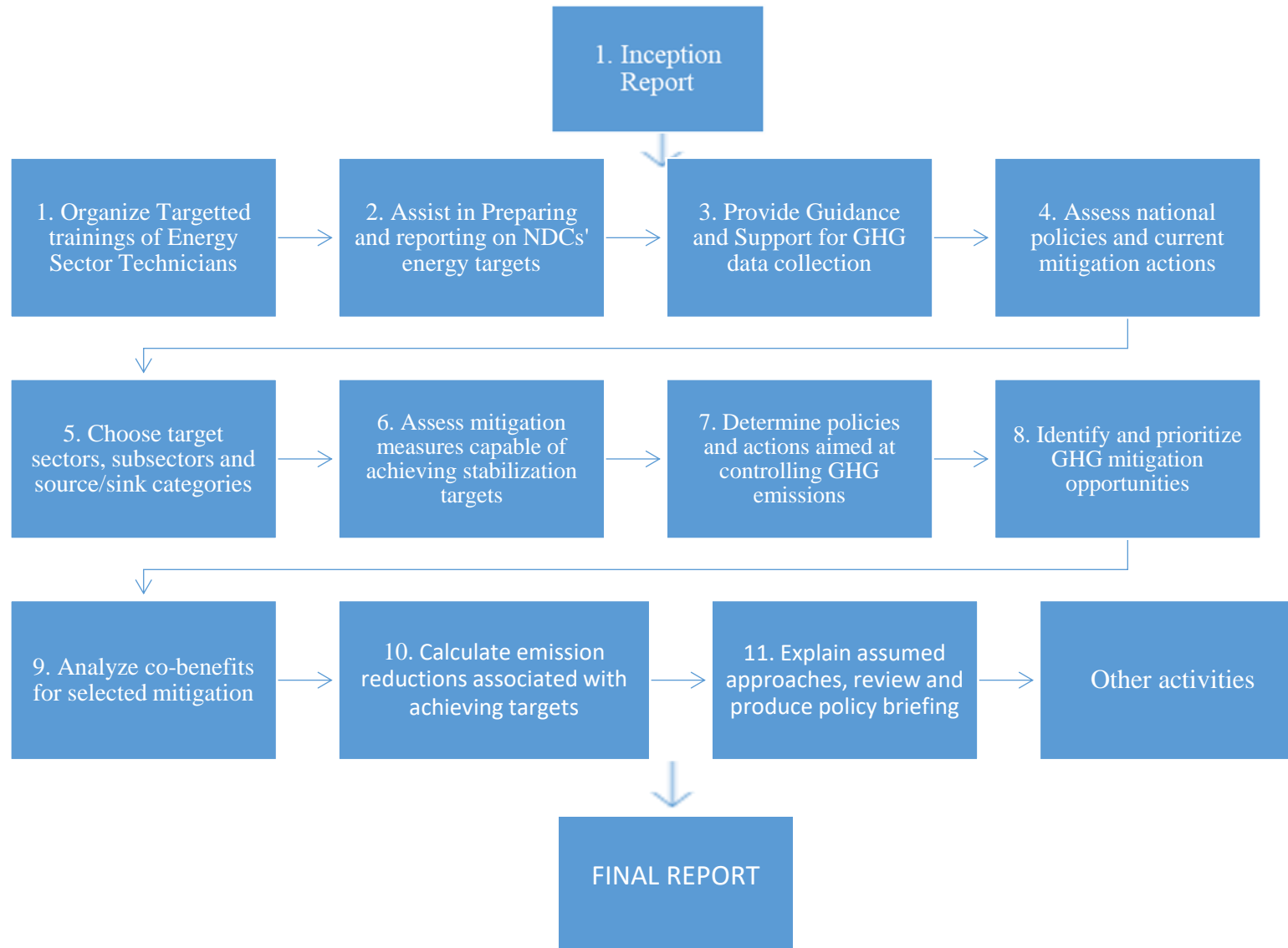
METHODOLOGY

The methodology adopted for these assessments in Table 1 is designed to use both document reviews and a primary component through key informant interviews, focus group discussions, and training workshops. A baseline survey on both training and data management needs assessments will incorporate the use questionnaires with key informant interviewees.

However, the development of questionnaires will be based on initial meetings with inventory stakeholders or energy sector institutions in Liberia. These meeting will be aimed at assessing preliminary capacity and data management gaps and to set up a basis for the development of questionnaires.

The below diagram summarizes the entire process and approach:

Figure 1: *Organogram of Activities to be conducted during the course of the Consultancy*



IMPLEMENTATION PLAN

Work Plan

Table 2: A Description of Activities and Timeframe for Execution

Nº	Activities	Months							
		2020		2021					
		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.
1	Submit Inception report and Draft TOR for IPCC Consultant								
2	Train Technicians from the energy sector on data collection								
3	Assist in preparing and reporting on energy targets of the NDCs								
4	Provide guidance and support for collecting and reporting on energy sector GHG data for national MRV system								
5	Assess national policies and current mitigation activities related to GHG mitigation in the energy and waste sectors								
6	Choose target sectors, subsectors, and source/sink categories								
7	Assess mitigation measures that could achieve the stabilization target, including time horizon (contribution time frame) and anticipated mitigation programs								
8	Determine policies and/or actions aimed at controlling GHGs that support GHG mitigation scenarios developed through the different analysis								
9	Identify and prioritize GHG mitigation opportunities and evaluate GHG mitigation potential								

10	Analyze co-benefits for selected mitigation actions								
11	Calculate emissions reductions associated with achieving targets								
12	Explain assumed accounting approaches used to track progress towards the NDC energy targets								
13	Review and produce policy level briefing note for public consultation								
10	SUBMISSION OF FINAL REPORT								

Training Plan

Monthly training workshops will be conducted for energy sector technicians to enhance national capacities in an effort to provide adequate technical support to Liberia's NDC energy sector.

The curriculum for the training workshops will be based on the methodologies and application of the IPCC guidelines for data collection and reporting. Training will be delivered by means of presentations, hands-on exercises, coaching and mentoring, as well as other tasks.

The training sessions will be conducted for seven months beginning December 2020 and will focus of the following topics:

Table 3: Planned Training Sessions during the course of the Consultancy

Date	Topic	Participant	Facilitator
December 10-11, 2020	Introduction to the 2006 IPCC Guidelines and Software	20	2
January 14-15, 2021	Compiling Greenhouse Gas Inventories for the Energy Sector	20	2
February 25-26, 2021	Reporting on the Energy Targets of the NDC	20	2
March 18-19, 2021	Mitigations Activities in the Energy Sector and Measures to Achieve the Stabilization Target	20	2
April 22-23, 2021	Policies and/or Actions to control GHGs in support of mitigation scenarios	20	3
May 20-21, 2021	Analyzing co-benefits for selected mitigation actions and calculating target-related emissions reductions	20	3
June 11-12, 2021	Explaining Accounting Approaches to track progress towards the energy targets of Liberia's NDC	20	3

CONCLUSION

This inception report presents indicative outputs that the consultancy service agreement will contribute towards the realization of energy sector targets and mitigation actions in support of Liberia's Nationally Determined Contribution. It is based on Component 2 of Project Document developed by Conservation International – Liberia and the Global Environment Facility, as tabulated below:

Table 4: *Indicative Outputs that the consultancy will contribute towards realization*

COMPONENT	OUTPUT	CONSULTANCY OUTPUT TASK
Component 2: Provide direct technical support to harmonize land use, agriculture, energy, transport, and waste sectors data collection and reporting through training and assistance	Output 2.1.1: Processes and protocols for measuring results related to the land use, agriculture, energy, transport, and waste sectors established	Output 2.1.1 (i): Provide Technical Support to all NDC energy sectors
<i>Source: CI–GEF Project Agency, GEF Project Document, Building and Strengthening Liberia's national capacity to implement the transparency elements of the Paris Climate Agreement, Liberia/West African Region, 3rd August 2018.</i>		

At the end of this consultancy, national energy sector experts will be technically capacitated to meet domestic reporting requirements, while enhancing their international reporting performance. Technical support and training to harmonize GHG data collection and reporting for the energy sector will also be provided through this consultancy. Target beneficiaries for the training sessions will be technicians from NDC sector institutions and other key stakeholders to track and report emissions within their sectors. Ultimately, NDC implementation plans for the energy sector is expected to be a successful endeavor.

APPENDIX

A. Monthly Reporting Template

Monthly report will be submitted to the Environmental Protection Agency (EPA), Conservation International, and the NDC Energy Sector Supervisor(s) that provide detail update on the execution of the approved work plan.

The monthly report will follow the below format.

1. **Introduction**
2. **Activities performed during the period**
3. **Problems Encountered and Corrective Actions:** (Indicate challenges encountered and corrective measures taken or envisaged. Specifically, risks already identified and not completely resolved shall be addressed together with the mitigation strategy)
4. **Recommendations**
5. **Planned activities for the next month**
6. **Updated Milestone Completion Forecast:** (A list of the contractually agreed milestone dates and the forecasted dates)
7. **Action Item Status List:** (A list of the action items from all reviews and progress meetings, including their current status and anticipated closure dates)

B. Monthly Training Reporting Template

The template below will be used to report on the monthly training sessions.

1. Content of Cover page:

- a) Group photo of participants
- b) Name/topic of the training
- c) Venue of the training
- d) Start and end date of the training
- e) Name of the writer/consultant
- f) Date of submission of the report

2. Table of contents

3. Executive summary

4. Introduction and background

5. Rationale for the training

6. Objectives (broad and specific) of the training

7. Training method

- a) Introduction
- b) Curriculum
- c) Training techniques

8. List of materials distributed

- a) Exercises
- b) Additional materials

9. Planning Energy technical advisory activities

10. Participants evaluation and feedback

- a) Evaluation
- b) Feedback

11. Plans of activities at the workplace

12. Barriers encountered

13. Learning and future recommendations

14. Annexes

- a) List of participants/Attendance sheets duly signed by all participants
- b) Timetable
- c) Pre- and post-training test
- d) End of course evaluation questionnaire
- e) List of tables
 - Course curriculum
 - Pre- and post-training test scores
 - Participants' test scores during group exercises
 - Participants' scores in training evaluation
- f) Photos