



# Millennium Challenge Account – Liberia



## Compact Completion Report



*March 2021*

This report was prepared by Dr. Charles M. Balina for Millennium Challenge Account – Liberia.

# **Millennium Challenge Account - Liberia**

## **COMPACT COMPLETION REPORT**

### **Final**

March 2021



Cover: Aerial view of Mt. Coffee Hydro Power Plant rehabilitation with reservoir and main spillway works in the foreground. Emergency spillway earthworks on-going in the upper right-hand side.

**Consultant:**

**Dr. Charles Balina**

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## ACRONYMS

ACRONYMS	DESCRIPTION
<b>AE</b>	Accountable Entity
<b>CCD</b>	Compact Closure Date
<b>CCP</b>	Compact Closure Period
<b>CCR</b>	Compact Completion Report
<b>CED</b>	Compact End Date
<b>CEO</b>	Chief Executive Officer
<b>CESMP</b>	Contractor Environmental and Social Management Plan
<b>CP</b>	Conditions Precedent
<b>CPS</b>	Common Payment System
<b>CSC</b>	Customer Service Center
<b>DAB</b>	Dispute Adjudication Board
<b>DNP</b>	Defect Notification Period
<b>DoE</b>	Department of Energy
<b>EIB</b>	European Investment Bank
<b>EPA</b>	Environmental Protection Agency
<b>ESIA</b>	Environmental and Social Impact Assessment
<b>ESMP</b>	Environmental and Social Management Plan
<b>ESRA</b>	Energy Sector Reform Activity
<b>EU</b>	European Union
<b>FA</b>	Fiscal Agent
<b>FAP</b>	Fiscal Accountability Plan
<b>FIDIC</b>	Fédération Internationale des Ingénieurs-Conseils (International Federation of Consulting Engineers)
<b>GoL</b>	Government of Liberia
<b>GoN</b>	Government of Norway
<b>GSI</b>	Gender and Social Inclusion
<b>HDM-4</b>	Highway Development and Management Software
<b>HSMP</b>	Health and Safety Management Plan
<b>IE</b>	Implementing Entity
<b>IEA</b>	Implementing Entity Agreement
<b>ITT</b>	Indicator Tracking Table
<b>KfW</b>	German Development Bank (Kreditanstalt für Wiederaufbau)
<b>LEC</b>	Liberia Electricity Corporation
<b>LERC</b>	Liberia Electricity Regulatory Commission
<b>LWSC</b>	Liberia Water & Sewer Corporation
<b>M&amp;E</b>	Monitoring and Evaluation

<b>ACRONYMS</b>	<b>DESCRIPTION</b>
<b>MCA-Liberia</b>	Millennium Challenge Account - Liberia
<b>MCC</b>	Millennium Challenge Corporation
<b>MCHPP</b>	Mt. Coffee Hydropower Plant
<b>MFDP</b>	Ministry of Finance and Development Planning
<b>MGCSP</b>	Ministry of Gender, Children and Social Protection
<b>MME</b>	Ministry of Mines and Energy
<b>MOU</b>	Memorandum of Understanding
<b>MPW</b>	Ministry of Public Works
<b>MRMF</b>	Matching Road Maintenance Fund
<b>MSC</b>	Management Services Contract
<b>MW</b>	Megawatt
<b>NRF</b>	National Road Fund
<b>OMT</b>	Operation, Maintenance and Training
<b>PA</b>	Procurement Agent
<b>PAP</b>	Project Affected Persons
<b>PCG</b>	Program Closure Guidelines
<b>PCP</b>	Program Closure Plan
<b>PIA</b>	Program Implementation Agreement
<b>PIP</b>	Procurement Implementation Plan
<b>PIU</b>	Project Implementation Unit
<b>PPG</b>	Program Procurement Guidelines
<b>PPR</b>	Procurement Performance Report
<b>QDR</b>	Quarterly Disbursement Request
<b>QPR</b>	Quarterly Progress Report
<b>RAP</b>	Resettlement Action Plan
<b>RAMS</b>	Road Asset Management System
<b>RIMS</b>	Regulatory Information Management System
<b>RMC</b>	Regional Maintenance Center
<b>RWP</b>	Raw Water Pipeline
<b>SAIDI</b>	System Average Interruption Duration Index
<b>SAIFI</b>	System Average Interruption Frequency Index
<b>USAID</b>	United States Agency for International Development
<b>USG</b>	United States Government
<b>USDOT</b>	U.S. Department of Transportation
<b>Volpe</b>	John A. Volpe National Transportation Systems Center
<b>WASH</b>	Water, Sanitation and Hygiene
<b>WTP</b>	Water Treatment Plant



# EXECUTIVE SUMMARY

## BACKGROUND

In October 2015, the US and Liberian governments signed an agreement to establish Millennium Challenge Account in Liberia (MCA-Liberia) as the legal, independent and autonomous agency of the Government of Liberia responsible for the implementation and oversight of the Millennium Challenge Corporation's Liberia Compact. The five-year Compact was in the amount of US \$ 256,726,000. Its goal was to reduce poverty through economic growth, and it was designed to address two binding constraints to economic growth currently existing in Liberia:

- a) A lack of access to reliable and affordable electricity, and,
- b) An inadequate road infrastructure.

The Compact entered into force on January 20, 2016 and expired on January 20, 2021. Its activities covered two projects - an Energy Project and a Roads Project. The objectives of the two projects were to provide access to more reliable and affordable electricity; and to improve the planning and execution of routine, periodic and emergency road maintenance.

The Energy Project, had a budget of approximately \$201 million and was implemented through four interconnected activities, each with sub-activities:

- a) Mt. Coffee Rehabilitation Activity
- b) Mt. Coffee Support Activity
- c) Liberia Electricity Corporation (LEC) Training Center Activity
- d) Energy Sector Reform Activity

The Roads Project had a budget of approximately \$21 million and was designed to strengthen the planning and execution of road network maintenance through two activities:

- a) A National Road Maintenance Activity
- b) A Roads Sector Reform Activity

The two projects were supported through the following additional Compact-wide activities:

- Monitoring and Evaluation (M&E)
- Gender and Social Inclusion (GSI)
- Environment and Social Performance (ESP).

## THE COMPACT COMPLETION REPORT

This Compact Completion Report (CCR) is a requirement under MCC's project closure guidelines. It provides and documents MCA-Liberia's perspective on the performance of the Compact relative to objectives set in the Compact documents and highlights the factors that affected implementation and achievement of outcomes. It also is a presentation of the Compact's key outputs and results achieved with a focus on documenting best practices and key lessons learned. Finally, the report provides key recommendations to inform future consideration of similar projects.

This report covers all Projects implemented in the Program, including the Energy Project's Mt. Coffee Rehabilitation Activity, for which LEC was the Accountable Entity.

## METHODOLOGY AND STRUCTURE OF THE REPORT

A combination of information sources was used to gather data for the assignment.

- Primary information sources, consisting of the project documents at MCC and MCA-Liberia.
- Secondary information sources, obtained through interviews, questionnaires and surveys of individuals involved in the design or implementation of the activities.
- Field visits and observations at project and office locations.

The first chapter of this report provides the background to the Compact and the methodology for preparing the compact completion report. Chapter two then examines the administrative setup of the

MCA and highlights the partners involved in the Compact's implementation. The third chapter details the implementation of each project's activities and sub-activities, noting achievements and setbacks. It also examines the cross-cutting support in the form of procurement, monitoring and evaluation, environment and social performance, legal counsel, gender and social inclusion, administration and finance, as well as communications and outreach. In closing, chapter four of the report examines the effectiveness of the projects and looks at sustainability of the results achieved. This is followed by lessons learned and recommendations. The Annex contains supplementary data or materials either used in developing the report or necessary to place sections of the report in context, but which were too long or detailed to go into the main body of the report.

## **COMPACT ADMINISTRATION & MANAGEMENT**

Upon signing a Compact agreement with the U S Government, the Government of Liberia created the Millennium Challenge Account-Liberia to implement the program. The program would fund two projects – an Energy Project and a Roads Project. Energy Project funds would go towards rehabilitating the Liberia Electricity Corporation's Mt. Coffee Hydro Power Plant, an on-going project that already had three international donors (the Government of Norway, the German Development Bank (KfW), and the European Investment Bank). The Liberia government and the three donors had set up a Project Implementation Unit (PIU) at LEC to manage the rehabilitation activity. The PIU services were provided through a Management Services Contract (MSC) managed by Manitoba Hydro International (MHI) from 2012 to 2016, and by ESB International from 2018 to 2021. An interim team of local Liberians managed LEC in 2017.

Funds spent on the MCHPP activity followed the international procurement procedures prescribed by KfW. Procurement for goods, works, or services related to the PIU operations however followed the procedures of the Liberia Public Procurement and Concessions Commission (PPCC). The Government of Norway covered the PIU's local and international operating costs. Given the uniqueness of the situation with MCC coming in to fund an on-going project, a new set of procedures was designed to ensure continuity in implementation of the activity while concurrently maintaining MCC's expectations for accountability and oversight. This arrangement resulted in MCC designating two Accountable Entities for the Liberia Compact:

- Millennium Challenge Account – Liberia and
- Liberia Electricity Corporation

MCA-Liberia was the Accountable Entity for the Roads Project and all those components of the Energy Project Activities that did not fall under LEC as described further below. It also oversaw the Monitoring & Evaluation, Gender and Social Inclusion, and the Environmental and Social Performance activities. It achieved this using a Management team that reported to a Board of Directors chaired by the Minister of Finance and Development Planning. Specific activities and sub-activities in the two projects were managed by Implementing Entities designated through Implementing Entity Agreements (IEAs). The implementing entities were Government of Liberia ministries and institutions. The technical assistance component of the Roads Project was implemented by the United States Department of Transportation Volpe Center, through an interagency agreement with MCC.

LEC was the Accountable Entity for the following components of the Energy Project:

- Mt. Coffee Rehabilitation Activity (MCRA) in its entirety,
- The following components of the Mt. Coffee Support Activity:
  - The Energy Reform Sector's Management Support to LEC sub-activity,
  - LEC Customer Service Center
  - Community Infrastructure for Project Affected Persons PAPs) sub-activity.

The MCRA and the Community Infrastructure for was PAPs were implemented through LEC's Project Implementation Unit (PIU), while the rest of the activities were implemented directly by LEC.

As the Compact's Accountable Entity, LEC reported to its Board of Directors, which in turn reported to the Minister of Mines and Energy. All project-related reporting was sent to each of the project's multi-donor group, of which MCC was now a member.

## COMPACT IMPLEMENTATION & ACHIEVEMENTS

A 2013 constraints analysis identified the lack of access to reliable and affordable electricity, and the high cost of and limited access to road infrastructure, as the two binding constraints to private sector investment, poverty reduction and economic growth in Liberia. This led the USG and the Government of Liberia to enter into a Millennium Challenge Compact designed to address those constraints through the two projects with the funds distributed as follows:

ACTIVITY	AMOUNT
Energy	\$208,750,770.30
Roads	\$20,070,000
Monitoring & Evaluation	\$5,250,000
Program & Administration	\$22,655,229.70
<b>TOTAL</b>	<b>\$256,726,000</b>

### Energy Project

In designing the Energy Project, the Compact's logic framework's theory of change indicated that the proposed interventions would lead to increased power generation and result in hydropower contributing a larger share of local electricity. accompanying this intervention with reforming the sector, capacity building and training would lead to an increase in income, thereby contributing to poverty reduction and economic growth.

Based on those assumptions, the Energy Project was designed with four Activities:

1. Mt. Coffee Rehabilitation Activity (Implemented by LEC/PIU)
2. Mt. Coffee Support Activity
3. LEC Training Center Activity
4. Energy Sector - Reform Activity

Under the Mt. Coffee Rehabilitation Activity (MCRA), MCC funds covered 42% of the total amount of US\$ 357 million used to rehabilitate the hydro power plant. Those funds covered the additional cost of a fourth turbine-generator and related equipment, resulting in a total installed generation capacity of 88 MW, meeting the unfunded gaps between stakeholder commitments and the total MCHPP rehabilitation cost, and covering the cost of a second 66 kV transmission line from MCHPP to the Paynesville substation. With the activity completed in 2019, costs kWh of generating electricity have reduced by 33% since the start of the Compact – from \$0.55 per kWh to \$0.35 per kWh. In addition to the hydro power station, the project also saw the construction of a sub-station at Mt. Coffee in addition to two 132 kilovolt transmission lines - one between Mt. Coffee and the Bushrod Substation, and the other between Mt. Coffee and the Paynesville Substation.

The Mt. Coffee Support Activity was used to support MCRA to mitigate environmental and social risks that were not addressed under the pre-existing project's structures. This was done to ensure long-term sustainability of the dam and related investments. The MCSA included livelihood restoration (including revegetation/forestation, WASH and health care initiatives and fisheries management activities), Human Resources Support to LEC, and small-scale community infrastructure and related technical assistance. The activity also included constructing a new 4.7 km-long 1.2 m diameter raw water pipeline from MCHPP to the White Plains Water Treatment Plant (WTP). The pipeline will deliver water from the MCHPP dam through gravity flow, eliminating pumping costs and saving LWSC an estimated US\$780,000 a year in electricity costs. The US\$18 million pipeline project also improves the reliability and quality of the water supply to nearly 1 million residents of Greater Monrovia.

The LEC Training Center Activity was designed to improve capacity in the sector by building LEC's technical, operational, financial, and administrative capacity, and forming the core base for training of technicians in the electricity sector. Due to financial constraints in the rehabilitation of Mt. Coffee, LEC failed to comply with its Operation-Maintenance-Training (OMT) contract obligations, which represented a major risk in continuation of MCRA. Funds related to the construction of the LEC Training Center as well as the LEC Customer Service Center prototype were re-allocated to pay for a portion of the OMT contract. MCA-Liberia instead hired a consultant to do training of trainers and develop a training program and supply training materials and tools for the Training Center.

The aim of the Energy Sector Reform Activity was to address the weak policy and regulatory environment by providing support to the key institutions responsible for policy making; investment planning, asset management and operations; and environmental, gender and social oversight of the sector. It had three Sub-Activities:

- Establishment of an Independent Regulator,
- Institutional Strengthening for the Environmental Protection Agency
- Management Support to LEC

A precondition of the Compact was an update to Liberia's electricity sector legislative and regulatory environment. In 2015 a new electricity law was passed, in part, for the creation of an Independent regulator, and the Liberia Electricity Regulatory Commission is now functional. The activity was also able to stand up the regulator by developing a financial model for the electricity sector, designing a regulatory information system and funding a number of studies including a demand, willingness to pay, connection assessment analyses, operator census, and a cost-of service study.

The EPA support activity was descope and the funds reallocated to the rehabilitation of the raw water transmission line from MCHPP to the White Plains Water Treatment Plant.

Under the Management Support to LEC Sub-Activity, a Management Services Contractor, ESB International, was hired. The purpose of the three-year performance-based contract was to stabilize LEC's operations with enhanced management and oversight, so the utility was better able to deliver inexpensive electricity to more customers, reduce aggregate total losses and operating expenditures, and improve electricity quality and reliability. Beyond stabilization, the MSC would prepare the utility for growth and profitability, so the private sector would see LEC as an attractive partner.

Yet when ESB assumed the MSC in 2018, it and MCA-Liberia/MCC found themselves faced with a utility which was in a far worse financial, commercial and organizational state than originally understood. MCC had not conducted an adequate political economic analysis before establishing the MSC, and neither did ESB conduct adequate due diligence. No one knew the extent of LEC's financial and infrastructure problems. ESB found it had insufficient resources for operating and capital expenses, and inadequate support from the LEC Board and GOL. A 2020 interim evaluation report of the Energy Project by Mathematica states: *"The MSC has been unable to turn around LEC as planned. Two years into ESB's leadership, and despite important operational improvements, LEC's financial situation has worsened. LEC has increased generation, losses, debt, and responsibilities. LEC's severely constrained resources undermine progress. Generator and grid maintenance are ongoing but inadequate due to shortages of equipment, materials, vehicles, and parts."*

Despite all the challenges and COVID-related disruptions, ESB made significant progress in diagnosing the Utility's problems, normalizing customer lists, developing human resource policies, creating or recreating financial systems, revising contracts, improving utility data and records, and launching the Senior Resource Pool training. A more detailed breakdown of the MSC's achievements is provided in Section 3.4.1 of this report.

## **Roads Project**

The Roads Project initially consisted of two interconnected activities designed to build a foundation for Liberia's national road maintenance planning and execution, as well as building capacity within the roads sector.

1. The National Road Maintenance Activity
2. The Roads Sector Reform Activity.

The aim of the National Road Maintenance Activity was to pilot and construct at least two regional maintenance centers (RMC) and to match Government contributions to a road fund in an effort to better maintain and sustain Liberia's roads and increase institutional capacity in the sector. There would later be a phased rollout of at least five RMCs in all regions of the country. The RMC sub-activity was cancelled due to implementation constraints, and its budget re-allocated towards the Roads Maintenance Matching Fund Sub-Activity. The Road Maintenance Matching Fund Sub-Activity was to be used to finance periodic road maintenance works through an incentive-matching fund to be established during the first year of the Compact. The Sub-Activity hit a snag when GoL failed to ring-fence and provide matching funds for road maintenance, resulting in MCC withholding their contribution of \$15 million.

The Roads Sector Reform Activity aimed to build capacity and provide technical assistance at the national and regional level. MCC Funding supported Network Analysis/Data Collection by the United States Department of Transportation (USDOT) Volpe Center, and Sector Reform, Institutional Strengthening and Capacity Building. The Activity saw many achievements including conducting data collection campaigns, a road network analysis, and various trainings for staff of the MPW Road Maintenance Management Unit and the newly established National Road Fund.

### **Project Support and Administration**

In order to support their on-going projects MCA-Liberia used dedicated teams in the following areas:

1. Monitoring and evaluation (M&E)
  2. Gender and social inclusion (GSI)
  3. Environment and social performance (ESP), and
  4. Program administration
1. **Monitoring & Evaluation** - MCA-Liberia's M&E team worked with IEs to establish M&E units that could capture data and report back so the Compact could track each activity's performance following procedures established in the M&E Plan. Monitoring and Evaluation suffered setbacks whenever the M&E unit did not have adequate data to identify baselines or targets for overall performance and impact monitoring. The lack of data was especially more acute with the Roads project. One of the biggest challenges to sustainability of the M&E office's achievements remain improving and maintaining the capacities of the GoL's M&E units and their staff.
  2. **Gender and Social Inclusion** – The GSI office was involved in improvements to LEC's customer service, building capacity at the Ministry of Gender, Children and Social Protection (MGCSP), and strengthen its capacity to establish and oversee GSI Units (GSIUs) at LEC, MME, and MPW. MCA funded some computers and furniture for the MGCSP office as part of the institutional strengthening. Through the Management Support to LEC sub-activity, GSI funded customer service improvements, including rehabilitation of the LEC Customer Service Center, technology investments, and customer service training. MCA also funded technical assistance to the MGCSP, which in turn supported technical assistance provision to other IEs for a year. This work was meant to strengthen the GSI units across those IEs. Furthermore, GSI also funded more limited packages for office setup at two GSI units (LEC, MPW).

MCA-Liberia's local GSI staff led on the development of these activities for the first three and a half years, until the GSI Director resigned. Subsequently, the activities were handed over to the Private Sector Directorate, and implemented with support from MCC's GSI office.

3. **Environment and social performance (ESP)** –MCA-Liberia's ability to oversee and monitor ESP was greatly impacted by the inability to hire an environmental specialist for the position of ESP Director. In the end, most outgoing ESP communications had to pass through the Deputy CEO or looked to MCC for additional support. There were ESP and RAP activities at the Mt Coffee Rehabilitation Activity (overseen by PIU) and on the RWP project (overseen by MCA-Liberia). MCRA saw the resettlement of 15 village communities, while RWP barely had any. While the PIU

had a relatively capable ESP consultants working on Mt Coffee, the RWP design-build contractor would go through many iterations before their documents could get approved. The lack of effective ESP staff created plenty of back-and-forth between MCC and its consultants, often causing delays. For Resettlement, some of MCC's interventions with the PIU were to supplement the RAPs that were done for Mt Coffee. This meant that the Unification Town resettlement, WASH, access support and health clinic addressed some of the PIU RAP shortcomings. MCA-Liberia's only resettlement activity occurred on the RWP, and this activity proceeded without much disruption.

4. Program administration had multiple teams supporting the Compact's projects, including administration and finance, procurement, communication, and the general counsel.
  - The Administration and Finance Directorate supported many key aspects of the Compact operations, including fiscal and financial management, tax clearance and program support, personnel and human resources, and information technology support. MCA-Liberia hired the services of Cardno Emerging Markets as the Fiscal Agent (FA) who assisted the Finance and Administration Directorate ensure compliance with MCC guidelines, internal control systems and other policy guidelines.
  - The procurement office handled over 210 procurements, worth about \$60 million. Fifty-three procurements were cancelled for a wide range of reasons with the more recent ones being COVID-19 related. There were three bid challenges during the entire Liberia Compact procurement process, and all were denied after being reviewed in accordance with MCA-Liberia's bid challenge system.
  - The Communications office maintained its role by informing the public about the Compact's investments in the Liberian economy, presenting the good project management practices and ensuring transparency. It also put a focus on the anti-fraud and corruption efforts and promoted success stories of individuals who started or developed their businesses through opportunities provided by the Compact.
  - The office of General Counsel offered legal advice to the Compact and liaised with the Board of Directors, monitored and reported on Compact's Conditions Precedent, Compact closure activities and preventing, detecting and remediating fraud and corruption.
  - There also were other offices such as IT Support, Logistics, etc. to support the day-to-day running of the program administration.

## SUMMARY AND CONCLUSIONS

MCC's constraints analysis organized Liberia's existing constraints into three overarching areas: the existence of weak policy and regulatory environment, insufficient supply and distribution of electricity, and weak capacity across institutions in the electricity sector. Similarly, the root causes of poor road infrastructure were also grouped into three areas: a weak policy and regulatory environment, inadequate planning and budgeting, and inadequate implementation and maintenance.

While it may be too early to assess the assumptions made in developing the logical framework used for designing the Compact, the majority of them have been shown to be either true or partially true (see Section 4.3). The assumptions that have not held also happen to be the ones that pose the most threat to the long-term sustainability of the Compact's investments. This includes the tariff-setting process being insulated from political interference, both LEC and LERC having the ability and necessary resources to function effectively, and LEC being able to make lifecycle maintenance and capital investments. Though the scope of the Roads project changed so much from the original logical framework that the majority of the assumptions are no longer relevant, the cancellation of the Roads Maintenance Matching Funds appears to support the theory that road maintenance funds need to continue to be available with some level of predictability in order for the investments to be effective.

While the Compact was intended to run for five years starting January 20, 2016 through January 20, 2021, the actual time spent implementing the two projects was much less than 5 years, mainly due to three major disruptions:



- a. There was no distinct one-year pre-compact preparatory period after the Compact was signed in 2016. In that first year, Compact's activities were mostly limited to PIU's implementation of the Mt. Coffee Power Plant Rehabilitation. MCA-Liberia spent several months of the first year getting operational through hiring key MCA staff and completing design of key components of the Compact like the monitoring and evaluation plan and key performance indicators.
- b. The following year, 2017-2018, saw political transition as a new government came into power following national elections. The nation's new leadership, which was not privy to the Compact negotiations as they had been in the Opposition, took additional time buying into aspects of the Compact's objectives and plans.
- c. From early 2020, COVID-19 pandemic put a halt or greatly slowed many of the procurements and on-going operations of the Compact. Future plans involving international travel, procurement or shipping were also affected.

The above setbacks notwithstanding, by the end of Jan 2021 (i.e., after CED of Jan 21, 2021), approximately 92% of budgeted funds had been committed to specific Compact activities and 86% of budgeted funds had been disbursed. The disbursement rate rose to 97% of committed funds as of that the same date. Furthermore, despite the challenges, it is worth noting that out of a total budget of \$256,726,000, less than \$16 million is expected to be de-obligated. Of that amount, \$15 million was due to the GoL not meeting a condition precedent of the Roads Project, and \$300,000 was due to inability to proceed with the procurement of equipment for LEC due to COVID-19 related delays.

### **Sustainability**

While the Compact has many achievements, there are concerns about the short term and long-term sustainability of the structures, institutions and natural resources associated with the Compact's investments. Key sustainability concerns include the following:

- Liberia Electricity Corporation: LEC continues to be in a bad financial situation with a chronic shortage of funds for operations and capital expenditure. The organization also continues to face a lack of effective corporate governance and stiff technical and commercial losses. Furthermore, at the Mount Coffee Hydropower Plant ongoing operations and maintenance is underfunded, increasing the risk of turbine or plant failure, additional rehabilitation costs, and potential emergency situations. there were reports of government interference in the management's authority..
- The Liberian Electricity Regulatory Commission: LERC needs financing, good governance and reduced political interference in order for the commission to be an independent, transparent, accountable, and sustainable agency.
- Natural resources management: The Community Based Natural Resource Management, WASH and Fish Passage work was not done. All these elements are needed for the long-term sustainability of the water and natural resources associated with MCHPP.
- Roads Project: The descope of the \$15 million in matching funds was a major opportunity missed. With the Compact over, the challenge will be for the GOL to transfer revenue to the NRF as required by the NRFA and to otherwise make data driven decisions about how to utilize the funds at the National Road Fund. This could affect sustainability of MCC's investments in this activity. Also, Road Maintenance funding is contingent on the establishment of a well-functioning Road Fund. While this activity was descope, it closely relates to using the project-funded Road Asset Management System (RAMS). Similarly, lack of trained staff available to use and maintain the RAMS due to challenges related to staff retention and recruitment is a risk to sustainability.
- Liberia Water & Sewer Corporation: LWSC has neither the staff nor resources to monitor the right-of-way chain link fence in perpetuity. Pulling off this crew is likely to result into encroachers moving into this land again. A more sustainable way of avoiding encroachment in the right-of-way is required.

- Monitoring and evaluation: The GoL offices that the Compact supported relied on MCA for their M&E responsibilities. However, even with the resources and the capacity building that these institutions received under the Compact, their offices are not confident that they have adequate training and resources to undertake effective monitoring and evaluation of on-going and future work, most especially those that were funded under the Compact.

## **LESSONS LEARNED**

Managing of the Compact's activities has resulted in a number of key lessons learned.

- The anticipated turn-around of LEC did not occur because was in a far worse financial, commercial and organizational state than originally understood. It turns out the Compact design missed critical financial and operational information on LEC that, had it been known early, would have affected the nature of the decisions that were made in design. The lesson is that a review needs to be made of the breadth, depth and currency of the data that was used.
- Though start-up and other delays cost the compact an estimated couple of years of implementation time, it was still able to complete most of the projects, with only \$15.4 million (of which \$15 million is due to unutilized road sector matching funds) projected to be de-obligated. National staff attributed this to MCC's practice of pairing a project local director with an MCC counterpart.
- Success on the compact may also be partly attributable to the procurement processes. MCC's procurement office confirmed that the average time of a procurement on Liberia compact was comparable and in average to other MCA countries' compact procurements. MCC's traditional requirement of having a Procurement Agent is partly to allow the MCA to focus mostly on implementing the projects while the procurement agent and the fiscal agent help with the paperwork aspects that would take away from the project's focus. This arrangement appears to have worked well. On the contrary, many local staff did not appear to understand how the fiscal and procurement processes work, thereby needing more training.
- A common thread among contracts was that a lot of time went into reviewing and approving Environmental and Social Management Plans for the MCHPP Activity and the RWP Support Activity. This review and approval contributed an inordinate proportion of the document approval delays that impacted the project's timeline. The lesson learnt was that bid evaluation panels should place more emphasis on evaluating ESP experience in bids and proposals than was the case on this Compact.
- Yet in spite of such challenges, both the Energy Project and the Roads Project are making their contribution to poverty reduction, which will eventually lead to economic growth.

## **KEY RECOMMENDATIONS**

Based on the feedback from the document reviews, interviews and field visits, the following key recommendations are applicable to how the Liberia Compact was implemented, and may be applicable to future similar engagements by Government of Liberia:

- 1) Both GoL and its donor partners need to review how critical information on the actual financial and operational conditions of LEC were missed and come up with procedures of how similar reforms and rehabilitation studies can be better designed in the future.
- 2) Political transitions can create uncertainty and delays on multi-year projects, hence GoL should establish and adopt a procedure for identifying potential delays on projects that either start after or continue through political transitions, and come up with a binding framework for mitigating delays arising from such transitions;
- 3) Building capacity of local staff: When entering into donor-funded programs (or compacts), GoL/MCA-Liberia should identify the most critical skills necessary for successful implementation of each agreement or compact. The project should then design a training program or workshop in those skills to all local counterparts at the beginning of the compact. The need for this in the Liberia Compact was borne out in many circumstances, for instance:
  - Both management and staff reported Compact-wide weakness of local staff in writing specifications and preparing Terms of Reference. When hiring Procurement Agents, MCC/MCAs should explore including a requirement for the PA to provide training

workshops to all local staff in writing of specifications and terms of reference. The same training materials should also be available for staff hired after the workshop.

- Senior management reported a number of Directors and Managers having challenges taking and maintaining project records. MCC/MCAs should also consider offering training on keeping and retaining project records.
  - Both the Procurement Agent and the Fiscal Agent reported challenges with getting local staff to file fiscal or procurement paperwork in a timely fashion so as not to delay projects. (MCC and MCAs should consider including a checklist as the first sheet of paper on any form templates).
- 4) Ease of access of donor (MCC) documents and templates: Local staff reported frequent challenges with drafting the wide range of documents required on the Compact. They identified the need for a concerted effort by MCC to either make available more templates of the most commonly used documents or, where these are already available, make it easier for them to be accessed. At the beginning of a new project, GoL and donors need to assess and streamline the ease of access to basic donor-mandated documents and templates for all local project staff.
  - 5) Compact conditions precedent: MCA-Liberia management and staff had no control of GoL's ability to meet Conditions Precedent, and the situation was worse where the CPs were recurring (e.g. GoL's obligation to be current with utility bills). Given the disruption that missing recurring CPs had on MCA-Liberia's management, GoL and donors need to more rigorously assess impact of recurring CPs and explore alternate one-time CPs that may be as effective without specters of multiple future defaults.
  - 6) Procurement – GoL and donors should explore more frequent use of blanket purchase agreements to cut down on time spent on repetitive purchases, such as workshop training venues, hotel accommodation to consultants, etc.

# I. INTRODUCTION

## I.1. COMPACT OVERVIEW

### A. COMPACT BACKGROUND



*Figure 1: Former MCC CEO Dana J. Hyde (L) and Former Liberia Minister of Finance & Development Planning Amara Konneh (R) sign the Liberia Compact in 2015. Back row are Former Ambassadors Jeremiah Sulunteh of Liberia (L) & Linda Thomas Greenfield of the US (C).*

On October 2, 2015, the Government of the United States of America (USA), acting through Millennium Challenge Corporation (MCC) and the Government of the Republic of Liberia, acting through the Ministry of Finance and Development Planning (MFDP) signed a five-year Millennium Challenge Compact (the Compact) in the amount of approximately Two Hundred Fifty-Six Million Seven Hundred Twenty-Six Thousand US Dollars (US \$ 256,726,000). The Compact's program aimed at reducing poverty through economic growth

(Program). The Compact entered into force on January 20, 2016. It has a five-year implementation period and is set to expire on January 20, 2021. The latter date is also referred to as the Compact End Date (CED).

Following from the Compact's signature, MCC and the Government of Liberia (GoL) also signed a Program Implementation Agreement (PIA). The PIA describes various implementation and oversight responsibilities with respect to the Compact.

### B. COMPACT GOALS AND OBJECTIVES

The goal of the Compact was to reduce poverty through economic growth. Specifically, the Compact sought to address two binding constraints to economic growth currently existing in Liberia:

- a) Lack of access to reliable and affordable electricity, and,
- b) Inadequate road infrastructure.

The Program addressed the identified binding constraints through two projects - the Energy Project and Roads Project. These projects had the following objectives:

- a) To provide access to more reliable and affordable electricity; and
- b) To improve the planning and execution of routine, periodic and emergency road maintenance.

### C. COMPACT ACTIVITIES

#### i. Energy Project

The Energy Project, with a budget of approximately \$201 million, was designed to provide additional power generation capacity and to strengthen the management, project planning and project execution functions of both the Liberia Electricity Corporation (LEC) and the Ministry of Mines and Energy (MME). The project also supported the establishment and development of an independent regulator for the energy sector. The objectives of the Energy Project were to be met

through four interconnected activities:

- a) Mt. Coffee Rehabilitation Activity
- b) Mt. Coffee Support Activity
- c) LEC Training Center Activity
- d) Energy Sector Reform Activity

## **ii. Roads Project**

The Roads Project, budgeted at approximately \$21 million, was designed to strengthen the planning and execution of road network maintenance. This would lead to a greater portion of the road network being maintained, thereby decreasing vehicle operating costs. At its design, the project consisted of two interconnected activities designed to build a foundation for national road maintenance planning and execution and build capacity within the sector:

- a) A National Road Maintenance Activity, which was intended to –
  - i. Pilot, construct, and equip at least two regional maintenance centers, and
  - ii. Match GOL's contributions to periodic maintenance through a Matching Road Maintenance Fund.
- b) A Roads Sector Reform Activity focused on building the capacity of the existing and newly created road maintenance institutional systems.

## **iii. Monitoring and Evaluation (M&E)**

Monitoring and evaluation were designed to support all Compact activities through a budget of \$5.3 million spread across five components:

- Monitoring oversight sub-activity
- Capacity building for M&E sub-activity
- Evaluation and Special Studies sub-activity
- MCA process evaluations sub-activity
- An MCC-managed M&E sub-activity

## **iv. Gender and Social Inclusion (GSI)**

In line with MCC guidelines, project activities prioritized increasing economic opportunities for women, unemployed youths, war affected persons, and marginalized groups. This was to be achieved through two sub activities:

- Strengthening LEC Customer Service sub-activity
- Gender Planning and Social Inclusion Technical Assistance sub-activity

Through these sub activities, MCA-Liberia provided assistance to the Ministry of Gender, Children and Social Protection to establish gender units in the Ministry of Mines and Energy and the Ministry of Public Works. MCA-Liberia would also help establish the Gender and Social Inclusion Department (GSID) of the Liberia Electricity Corporation (LEC), providing both technical support and office setup funds for computers and furniture. This support would enable GSID to begin promoting inclusive practices within the utility and in service delivery.

MCA-Liberia would rehabilitate LEC's Waterside customer service center and support key technological investments to enable faster, more effective customer service. The new facility was equipped with a call center, and staff able to draw on new training and new technologies to address customer concerns. It is expected that these improvements will benefit many women – who typically experience the greatest time burden seeking customer service from LEC.

## **v. Environment and Social Performance (ESP)**

Except for the MCHPP which was implemented by LEC's PIU, all projects were to meet MCC Environmental Guidelines and the IFC Performance Standards. In deference to other donors'

judgments all MCRA's PIU works were to be in conformance with KfW procurement guidelines and the World Bank's Operational Policies (OP's) on Environmental and Social Safeguards.

## **I.2. PURPOSE OF THE COMPACT COMPLETION REPORT**

The CCR is one of the requirements under MCC's project closure guidelines.

In the report, MCA-Liberia provides and documents its perspective on the following elements of the Compact's implementation: -

- a) The performance of the Compact relative to its objectives as stated and detailed in the Compact documents,
- b) Highlights of both positive and negative factors that affected implementation and the achievement of outcomes, and
- c) Presentation of the Compact's key outputs and results achieved with a focus on documenting best practices and key lessons learned; and
- d) Provides key recommendations to inform consideration of similar projects in the future.

The CCR does not evaluate either the performance of the various activities or their impact, as that is done through unrelated performance or impact evaluation studies. An evaluation of the energy project is provided in a July 2020 report by Mathematica. Evaluation of the roads project is in an April 2020 report by International Development Group.

This Compact Completion Report covers all Projects implemented in the Program, including those components of the energy project for which MCA was not the Accountable Entity.

## **I.3. METHODOLOGY AND STRUCTURE OF THE REPORT**

### **Methodology**

This report follows a review of project records, collection of field data, and interviews with implementors and beneficiaries. Its preparation was greatly influenced by the ongoing COVID-19 pandemic which forced many workers to operate remotely from their homes in an effort to combat spread of the disease. In-person contact was only used when absolutely necessary. To this effect, working both remotely and on the field in Liberia, the Consultant gathered, reviewed, and analyzed information relevant to the development of the CCR by performing the following tasks:

- a) Interviewed key and senior management staff of MCA-Liberia across all sectors to gain a clear understanding of the project logic and design in terms of the main areas or project activities.
- b) Conducted consultation meetings with MCA-Liberia units, project and sector teams, consultants, contractors, MCC, LEC, Implementing Entities, and other involved parties to understand and document achievements and challenges experienced. These interviews enabled the Consultant to identify all of the key existing documents needed to develop a thorough CCR.
- c) Reviewed and analyzed all relevant Compact documents guidelines, files, data, references, and other relevant documents.
- d) Solicited opinions on the implementation of the project and the expected benefits by conducting field visits to familiarize with the projects and interview their intended beneficiaries.
- e) Conducted desk reviews and collated results from available impact and performance evaluations and other M&E data to inform achievements of Compact objectives.
- f) Conducted desk review of CCRs from compacts that were funded by MCC in other countries.
- g) Wrote and developed the draft and final CCR, in coordination with MCC, MCA-Liberia Management, units, project and sector teams, LEC, Implementing Entities, and other involved parties.



Altogether, 55 individuals in 19 participating organizations (MCC, Accountable Entities, Implementing Entities, Contractors & Consultants) were contacted either in person, via virtual interviews or through an emailed questionnaire. The overall response rates are given under Table I below.

*Table I: Data Collection Interviews and Surveys*

INTERVIEW SESSIONS	TOTAL NO	PER CENT
Virtual Interviews Completed	28	51%
In-Person Interviews Completed	14	25%
Surveys/Questionnaires Completed	7	13%
Surveys/Questionnaires – Pending Responses	6	11%
<b>Total Respondents Contacted</b>	<b>55</b>	<b>100%</b>

The table below lists the actual organizations that were contacted, and the actual number of respondents from each of them.

*Table 2: List of Entities Contacted*

NO.	ORGANIZATION	DESCRIPTION	RESPONDENTS
1	Azorom Limited	Contractor/Consultant	1
2	Cardno Emerging Markets	MCA Fiduciary Agents	2
3	Denys NV	Contractor/Consultant	1
4	ESBI/LEC	Contractor/Consultant	2
5	Hydro (HOI)	Contractor/Consultant	1
6	LEC	Accountable & Implementing Entity	3
7	LERC	Implementing Entity	1
8	LWSC	Implementing Entity	2
9	MCA-Liberia	Accountable Entity	14
10	MCC (US & Liberia Offices)	USG Entity	15
12	MPW	Implementing Entity	1
13	MRAG Ltd	Contractor/Consultant	1
14	NEXTEC Industrial Technologies (Pty) Ltd	Contractor/Consultant	1
15	Nicholas O'Dwyer Ltd	Contractor/Consultant	2
16	SITA Corp	Contractor/Consultant	0
17	Tetra Tech ES Inc	Contractor/Consultant	0
18	The Tata Power Company Limited	Contractor/Consultant	1
19	Volpe National Transportation Systems Ctr	Contractor/Consultant	1
	<b>Total No. of Responses</b>		<b>49</b>

In addition to the interviews, the author also reviewed project documents that included a wide array of reports, contracts and agreements, guidelines, etc.

### **Information Sources**

A combination of information sources was used for the assignment.

- Primary information sources, consisting of the actual project documents.

- Secondary information sources, obtained through interviews, questionnaires and surveys of individuals involved in the design or implementation of the activities.
- Field visits and observations at project locations. The selection and timing of these field visits was coordinated with MCA-Liberia and the implementing entities. For the report, sites visited included MCHPP, Raw Water Pipeline, LEC Customer Service Center, and the operational offices of MCA-Liberia, LERC, LEC, LWSC and MPW.

### **Constraints & Limitations**

This work methodology and schedule were developed to enable a multi-tiered triangulation process, including both primary and secondary data sources, to ensure a final set of findings and corresponding conclusions and recommendations that are reliable and exhibit a relatively high degree of validity. There are, however, constraints and limitations related to data collection, processing, and analysis that the consultant needed to address and whenever possible mitigate.

The constraints and corresponding mitigations for this assignment include:

- a) COVID-19 pandemic travel restrictions and limitations on face-to-face engagements impacted availability or access to some subjects. Under such circumstances, virtual (zoom, skype) or telephone interviews were employed.
- b) The quality of data signals for the virtual interviews was at times spotty, sessions got cut or recordings turned out not to be clear. This was mitigated by either repeating the interview or triangulation with other data sources.
- c) A few results were hampered by the inability or unavailability of some stakeholders or individuals to participate in interviews, discussions or to return questionnaires. Mitigation was by scheduling key sources as early in the process as possible, thereby allowing ample time for a re-scheduling in case of availability conflicts.

### **Team Composition**

The assignment was carried out by Dr. Charles Balina who was responsible for the day-to-day management and conduct of the study. He was responsible for developing the study methodology, data collection instruments, data analysis plans and all the deliverables. Dr. Balina is a civil engineer with over 35 years' experience working on infrastructure projects in Africa, Asia, Europe and the US. He has work experience on MCC-funded projects in Zambia, Liberia, Sierra Leone and Cote d'Ivoire.

MCA-Liberia also established a Program Closure Committee (PCC) to work with and guide the consultant on this assignment. The PCC was headed by the MCA-Liberia General Counsel and included members of the MCA-Liberia staff. The PCC was tasked with managing the contract with the Consultant and reviewing and approving the deliverables submitted by the Consultant. The Consultant worked under the overall guidance of the PCC but reported directly to the General Counsel.

### **Structure of the report**

The report starts by providing the overall background to the Compact. It then looks at the administrative setup of the MCA and highlights the partners involved in implementing the Compact's projects. This is followed with a look at the administrative and financial set up of MCA-Liberia.

The next section examines the implementation of each project's activities and sub-activities, noting achievements and setbacks. It also examines the cross-cutting support to the projects, in the form of procurement, monitoring and evaluation, environment and social performance, legal counsel, gender and social inclusion, administration and finance, and communications and outreach.

In closing, the report examines the effectiveness of the projects and looks at sustainability of the results achieved. This is followed by lessons learned and recommendations.

The Annex contains supplementary data or materials used in developing the report, but which were too long or detailed to go into the main body of the report.

## **2. COMPACT ADMINISTRATION & MANAGEMENT**

### **2.1. MCA-LIBERIA ESTABLISHMENT**

MCA-Liberia was established through an Act of Parliament (the MCA-Liberia Act of 2015) as the Accountable Entity (AE) for MCC's Liberia grant agreement. It was the legal, independent and autonomous agency of the Government of Liberia responsible for the implementation and oversight of MCC's Liberia compact. The MCA-Liberia Act ratified the Compact Agreement, which was signed by the US and Liberian governments in October 2015. As discussed in Section 2.2 below, the nature of the Liberia Compact called for the designation of a second Accountable Entity, the Liberia Electricity Corporation.

A subsequent Program Implementation Agreement, which went into effect on October 23, 2015, clarified the roles and responsibilities of the Government of Liberia and the two Accountable Entities - MCA-Liberia, and the Liberia Electricity Corporation.

### **2.2. COMPACT IMPLEMENTATION FRAMEWORK**

The implementation framework of the Liberia Compact followed a set of guiding documents which were described in the Program Implementation Agreement PIA. Because of the uniqueness of this Compact, the framework covered two sets of Activities – those that were implemented directly by MCA-Liberia, and the Energy Project's Mt. Coffee Activity, which was implemented directly by LEC's Project Implementation Unit.

The following entities were responsible for different aspects of the implementation of the Liberia Compact in order to ensure adequate governance, oversight, management, and fiscal accountability for the use of MCC Funding:

- a) The Government of Liberia, GoL
- b) Millennium Challenge Corporation, MCC.
- c) Accountable Entities
  - Millennium Challenge Account, MCA-Liberia
  - Liberia Electricity Corporation, LEC
- d) Implementing Entities

Each entity's role is described in the sections below.

#### **A. THE GOVERNMENT OF LIBERIA, GOL**

The Government of Liberia had principal responsibility to oversee and manage the implementation of the Compact program. To this effect, it created MCA-Liberia as the primary Accountable Entity authorized to act on its behalf in managing and overseeing the Compact's activities. As already explained, because of the uniqueness of this Compact, the Liberia Electricity Corporation was designated a second Accountable Entity. According to the PIA, LEC was the entity to exercise and perform the Designated Rights and Responsibilities in respect of the Mt. Coffee Rehabilitation Activity and certain aspects of the Mt. Coffee Support Activity.

The Minister of Finance and Economic Planning was Chairman of the Board of Directors and had oversight authority over MCA-Liberia to ensure its compliance with the terms of the Compact.

#### **B. MILLENNIUM CHALLENGE CORPORATION, MCC**

MCC provided technical oversight, support and accountability for the implementation of the Program. To do so, MCC established an office in Liberia, designed to provide feedback and increased communication between MCC and the Government throughout the Compact's implementation. The MCC country office, working in conjunction with MCC's Washington DC office, provided day-to-day support and oversight to MCA, thereby ensuring any issues, challenges and problems were addressed in a timely fashion.

As required in the Project Implementation Agreement (PIA), MCC was required to provide prior approval or no objection of particular activities and documents, in terms of support, MCC provided the necessary technical assistance for MCA-Liberia to be best capacitated to implement the Compact effectively implementation framework. This was achieved by assigning an MCC counterpart to each Director at MCA-Liberia.

### **C. ACCOUNTABLE ENTITIES**

The Accountable Entity is the legal entity designated by the Government to implement the Program on behalf of the Government during the Compact term. It is responsible for the management of MCC's Compact funds and, according to MCC's Guidelines for Accountable Entities and Implementation Structures, it has the authority and responsibility to oversee the MCC funded projects and their various components and activities, allocate resources, oversee and implement a financial plan, approve expenditures and procurements, continue the consultative process, and be accountable for the Program's results. The Accountable Entity serves as the single point of contact on behalf of the Government during implementation of the Program for MCC, other donors, contractors and consultants, as well as the general citizenry. Regardless of the entities selected to implement the Program (private sector, non-governmental organization, Government Affiliate or other organization), the Government through the Accountable Entity remains responsible for its commitments under the Compact.

The Liberia Compact was unique from other MCC interventions in the way the Compact joined in the funding of a rehabilitation project that was already underway through other donors. Rehabilitation of the Mt. Coffee Hydro Power Project was being funded by the Government of Norway (GoN), through the Norwegian Development Agency (NORAD), the German Development Bank (KfW), and the European Investment Bank (EIB). These donors already had LEC's Project Implementation Unit (PIU) as their designated implementor of this rehabilitation. Therefore in-as-much-as GoL and MCC had designated MCA-Liberia as the AE, in order not to disrupt the on-going project's implementation, the parties accepted to work through LEC as the Accountable Entity for the Mt. Coffee Rehabilitation component. This resulted in MCC designating two Accountable Entities for this specific Compact – MCA-Liberia and the Liberia Electricity Corporation.

The designation required a change in the implementation framework for the Compact. The PIA laid out the frameworks for implementing all program activities through documents it listed. The documents addressed such processes as procurement, funds disbursement, financial management, monitoring and evaluation, and environmental and social performance for all Compact activities. The documentation for the Mt. Coffee Rehabilitation Activity were listed separately in an Annex to the PIA. Other than the Mt. Coffee Rehabilitation Activity, the implementation of all activities followed MCC guidelines. Since the Mt. Coffee activity was pre-existing at the start of the Compact and was already following compliant guidelines agreed upon by the donors, an exception was made for the Activity and its Implementing Entity, LEC. In addition to the indicated guiding documents, LEC's specific responsibilities were further detailed in a Coordination Agreement and an Implementation Entity Agreement (IEA) signed between MCA-Liberia and LEC.

PIA's framework of these documents is provided in Figure 2

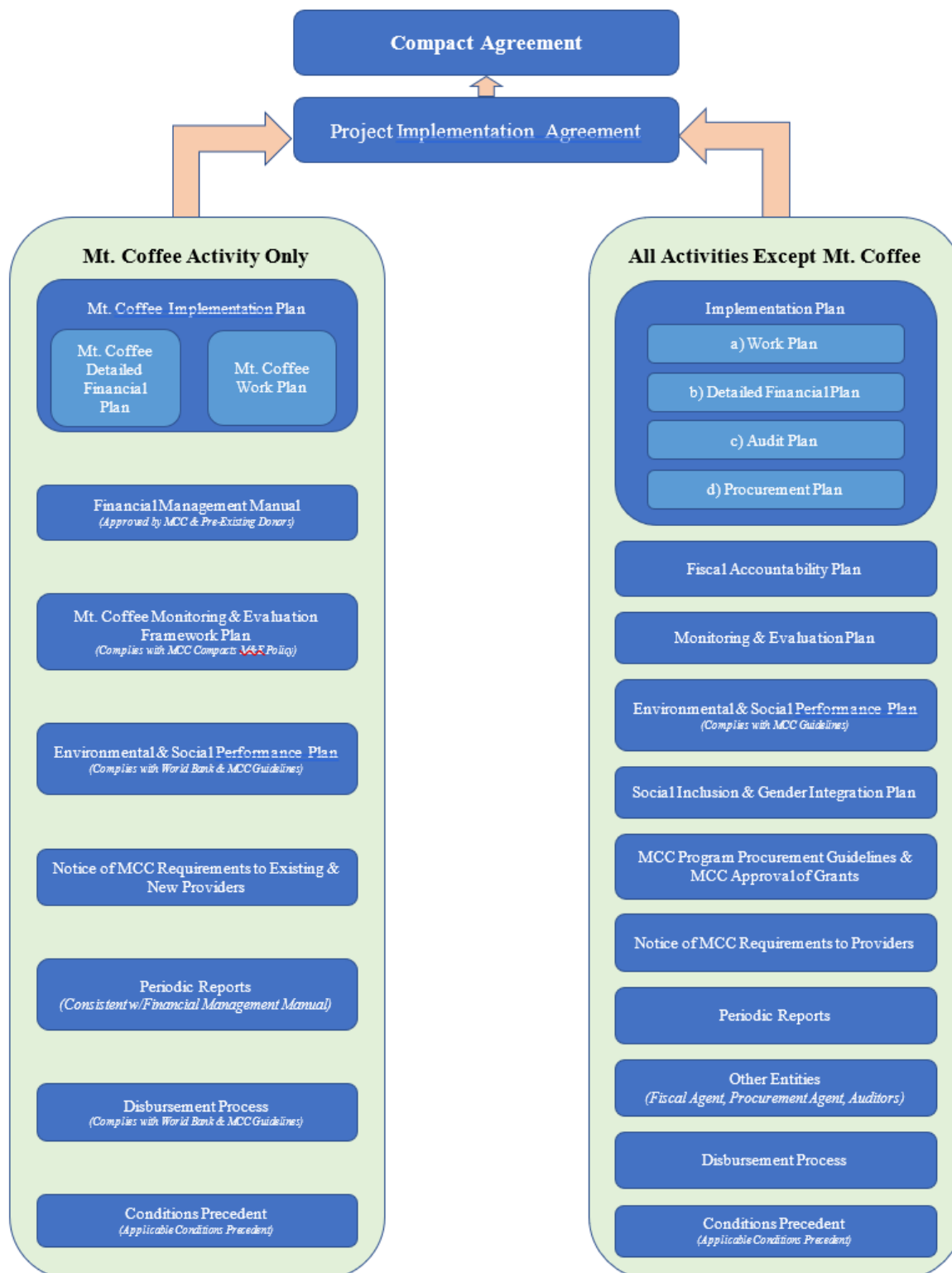


Figure 2: Compact Implementation - Guiding Documents

- **MILLENNIUM CHALLENGE ACCOUNT-LIBERIA (MCA-Liberia)**

With the exception of the Mt. Coffee Rehabilitation Activity and certain components of the Mt. Coffee Support Activity, MCA-Liberia was the Accountable Entity for all Compact's activities. These activities and sub-activities are listed below:

- a) Energy Project



- Mt. Coffee Support Activity i.e., Implementing livelihood improvement, carrying out a watershed management plan, and constructing the raw water transmission pipeline from MCHPP to the White Plains WTP
  - Portions of the Management Support to LEC Sub-Activity: managing the technical evaluation panels and procuring and managing the Contract Management Consultant (CMC)
- LEC Training Center Activity, together with Establishment of an Independent Regulator Sub-Activity and Institutional Strengthening for the Environmental Protection agency Sub-Activity
- b) Roads Project – all activities
- c) Compact Administration and Management
- d) Monitoring & Evaluation (M&E)

Environmental and Social Performance (ESP), and Gender & Social Inclusion (GSI) were embedded into each of the activities.

MCA-Liberia was administered, managed and supported by three bodies –

- a) Board of Directors
- b) Management Team
- c) Stakeholder Committee

The powers, responsibilities and policies guiding each of the three bodies were outlined in the MCA-Liberia bylaws, which were approved by the Board of Directors on May 5, 2016.

- a) **Board of Directors:** The Board was responsible for the oversight, direction, and decisions of MCA- L. It was also responsible for the overall implementation of the Compact. It consists of seven members from GoL (statutory members), one member from civil society and one from the private sector (non-statutory members). All nine were voting members, with the Minister of Finance and Development Planning as the Chairman. The Resident Country Director of MCC was a non-voting member. MCA-Liberia's CEO acts as the Secretary to the Board while MCA's Legal Counsel acts as the Assistant Corporate Secretary.
- b) **Management Team:** The Team had principal responsibility for the day-to-day operations and management of MCA-Liberia. It was led by a Chief Executive Officer (CEO), a Deputy CEO, and the following Directors:
  - Administration and Finance
  - Procurement
  - Monitoring & Evaluation
  - Gender and Social Inclusion (Vacant)
  - Energy project
  - Roads project
  - Communications and Outreach
  - Private Sector Development
  - Legal Counsel
  - Environment & Social Performance

MCA-Liberia engaged a Fiscal Agent to manage and account for its expenditures, and a Procurement Agent to manage the procurement of goods, works and services necessary to implement the activities under this under this Compact.

- c) **Stakeholder Committees:** The Compact agreement called for one or more stakeholder committees to ensure a continuing consultative process throughout the implementation of the Compact. The Committee was to be created in accordance with MCC's Governance Guidelines, as approved by MCC, and MCA-Liberia's bylaws. It would be composed of program beneficiaries, regional and local government representatives, entities with an interest or involvement in the implementation of the Compact, key non-governmental organizations, and civil society and private sector representatives. While the Stakeholders' Committee would not have any decision-making

authority, it would be responsible for reviewing and providing advice on reports, agreements and documents related to the implementation of the Compact.

MCA-Liberia did not establish any stakeholder committees for this Compact. They ended up engaging stakeholders on a project-by-project basis as opposed to having a formal committee. Similarly, any consultations were held with the stakeholders on a project-by-project basis. The lack of a formal stakeholder committee did not affect implementation.

## • **LIBERIA ELECTRICITY CORPORATION, LEC**

LEC is a wholly government-owned utility charged with the generation, transmission, and distribution of power in Liberia. It was created through an act of Parliament in 1973. LEC falls under the Department of Energy in the Ministry of Mines and Energy (MME). The ministry was established by an act of legislature in 1972.

Prior to signature of the Compact agreement, LEC was already implementing the rehabilitation of the MCHPP through grant assistance from EIB, KfW and GoN. This activity was managed through its PIU.

Following signature of the Compact, LEC was designated the Accountable Entity for the following portions of the program's Energy Project:

- a) Mt. Coffee Rehabilitation Activity (the entire activity)
- b) Mt. Coffee Support Activity: Portions of the Mt. Coffee Support Activity, viz -
  - Provision of small-scale community infrastructure and related technical assistance, livelihood restoration, etc.
  - Portions of the Management Support to LEC Sub-Activity: Additional human resources support to LEC.
- c) Energy Sector Reform Activity: Procuring and managing the Management Services Contract (MSC) with the Operators, pursuant to which the Operator will operate the LEC system.

Mt. Coffee Rehabilitation Activity was managed and implemented by LEC's PIU. The PIU was financed wholly by the Government of Norway, though it was agreed that the Environmental and Social Safeguards would be financed separately through the GOL bilateral agreement with MCC.

To provide the required transparency and accountability for funds disbursed to the Mt. Coffee rehabilitation, the PIU was required to develop, implement and maintain a financial management system that was ring-fenced from the day-to-day business of LEC. The PIU was responsible to ensure that the requirements of the Funders were met, including submitting monthly, quarterly, and other ad hoc progress reports as project milestones were achieved.

The PIU had two main mandates for the implementation of the Project:

1. To successfully manage on behalf of the Liberia Electricity Corporation the process of procuring all services, equipment and structures needed to complete the rehabilitation of the Mount Coffee power plant, including overseeing the construction and commissioning of the project, and
2. To ensure that LEC is in possession of the required operation and maintenance capabilities to operate Mt. Coffee from the day of commissioning and to sustain such capabilities and ability to operate Mt. Coffee.

To ensure that LEC would be in possession of the required operation and maintenance (O&M) capabilities to successfully operate Mt. Coffee from the day of commissioning, the PIU was tasked with maximizing the use of local LEC staff in cases where they could make a positive contribution. The PIU was further tasked with developing a proposal and budget for a training program for future LEC operational staff toward the operation and maintenance of Mt. Coffee, which the PIU would carry out in parallel with the on-the-job training of local PIU staff as part of the planning and execution of the Mt. Coffee Support Activity project.

## **2.3. PROGRAM PARTNERS**

In addition to GoL, MCC and the two Accountable Entities (MCA-Liberia and LEC), there were other Compact program partners:

### **IMPLEMENTING ENTITIES**

An Implementing Entity is any Government Affiliate engaged by the Accountable Entity to implement and carry out any project, project activity (or a component thereof) or any other activities to be carried out in furtherance of the Compact. Each component of the Liberia Compact was implemented by an entity designated through an Implementing Entity Agreement (IEA) signed by MCA-Liberia and the specific entity. The following were the Implementing Entities for the specific Compact activities:

#### **a) Liberia Electricity Corporation, LEC**

In addition to being an Accountable Entity, LEC was also designated an implementing entity for the activities cited in Section 2.2, i.e. Mt. Coffee Rehabilitation Activity, Provision of small-scale community infrastructure and related technical assistance, livelihood restoration, etc., additional human resources support to LEC, and procuring and managing the Management Services Contract (MSC) with the Operators, pursuant to which the Operators would manage the LEC system.

#### **b) Liberia Electricity Regulatory Commission, LERC**

The Liberia Electricity Regulatory Commission was the Implementing Entity for the Energy Project's Establishment of an Independent Regulator Sub-Activity, part of the Energy Sector Reform Activity. LERC also implemented part of the GSI and M&E cross-cutting activities.

LERC was created under the new Electricity Law of Liberia passed by the National Legislature in 2015. MCA-Liberia was instrumental in helping to set up LERC and funding its initial operations. The organization has three commissioners appointed by the president and confirmed by the legislature. It is intended to be an independent, transparent, and accountable regulatory agency that would be equipped to develop a favorable policy and regulatory environment for the generation, transmission, distribution, and sale of energy.

#### **c) Ministry of Public Works, MPW**

Starting as the Department of Public Works in 1928, the unit was later reorganized by law to become the Ministry (MPW) in 1972. The MPW is tasked with surveying, drafting/designing, construction and supervision, improving and maintaining, all highways, bridges, roads, streets, airport, seaport, and all other public infrastructure in Liberia through direct work or through contracts. MPW will collaborate with MCA-Liberia as the Implementing Entity for both components of the Roads Project, i.e., the National Road Maintenance Activity and the Road Sector Reform Activity.

The original aim of the National Road Maintenance Activity was to pilot and construct at least two regional maintenance centers (RMC), provide data collection equipment, laboratory equipment and vehicles to the RMCs, and match Government contributions to a road fund in an effort to better maintain and sustain Liberia's paved roads and increase institutional capacity in the sector.

The Roads Sector Reform Activity on the other hand aimed to build capacity and provide technical assistance at the national and regional level.

The two activities were later modified by expanding the National Road Maintenance Activity to include all primary roads (paved and unpaved) and deleting the construction off all RMCs. The \$7 million budget for the RMC construction was re-allocated to the Matching Road Maintenance Funds sub-activity, bringing the latter's budget to \$15million.

#### **d) Liberia Water and Sewer Corporation, LWSC**

LWSC was the implementing entity for the Energy Project's Rehabilitation of the Raw Water Pipeline Sub-Activity. The works included the design-build of a 4.7 km long, 1200 mm diameter raw water pipeline from the LEC MCHPP to the LWSC WTP at White Plains. LWSC's duties also covered work

associated with the operations and maintenance, environmental and social management, and the Resettlement Action Plan. There are also M&E implementation responsibilities.

LWSC and LEC signed two MOUs. The purpose of the first MOU was for the two entities to coordinate the construction of the pipeline. The second MOU is intended to establish their respective roles and responsibilities during the operation and maintenance of the pipeline.

#### **e) Ministry of Gender, Children and Social Protection, MGCSP**

The Ministry of Gender, Children and Social Protection (MGCSP) is the GoL ministry responsible for gender mainstreaming and social inclusion across all government ministries and agencies within the Republic of Liberia. MGCSP is mandated to advise the GoL on all matters affecting vulnerable persons and groups including women and children vis a vis all international human rights instruments to ensure government support for their well-being. MGCSP coordinates among the different gender focal points and has pledged to ensure buy-in and cooperation from other GoL agencies in the implementation of the SGIP developed by GoL.

As part of the collaboration with MCA-Liberia, MGCSP was to foster ministry-level support for the Compact's GSI activities and ensure buy-in and cooperation from other GoL agencies. It would also revise the National Gender Plan (NGP) to include a section on gender, infrastructure and basic services that highlight key issues related to access and affordability of infrastructure services including electricity, roads, water/sanitation, construction and ICT.

Furthermore, MCA-Liberia and MGCSP signed an IEA under which the latter would

- Establish and strengthen GSI Units within LEC, MME and MPW
- Train the Gender Focal Points and staff of the GSI units within LEC, MME and MPW.
- Monitor and evaluation – monitor tasks to determine whether the projects were on track to achieve their intended objectives and evaluate the implementation strategies used.

#### **f) John A. Volpe National Transportation Systems Center (Volpe) of the U.S. Department of Transportation**

As part of the Roads Sector Reform Activity, MCC signed an interagency with the United States Department of Transportation, Volpe National Transportation Systems Center (Volpe) to build capacity and provide technical assistance to MPW at the national and regional levels. Volpe was to lead the development of a national roadway inventory report and database, further institutionalize the involvement of other donors as important stakeholders in road maintenance activities and help in capacity building and training of local staff.

### **C. FIDUCIARY AGENTS**

- a) Fiscal Agent – MCA-Liberia procured the services of Cardno Emerging Markets to offer financial management services and support the MCA-Liberia Director of Finance and Administration.
- b) Procurement Agent – MCA-Liberia procured the services of Cardno Emerging Markets to offer specific procurement services and support the MCA-Liberia Procurement Director.

### **D. CONTRACTORS, CONSULTANTS & SUPPLIERS**

In addition to all the above entities, there were contractors, consultants and suppliers participating in different activities and sub-activities as identified under Section 3.4 on Procurement. One of these was the Contract Management Expert hired to support the Project Director for the Raw Water Pipeline and other on-going engineering contracts. The Consultant brought FIDIC expertise to the project. The designated served nine months during the Design Review Phase in 2019 before he moved to another employer. His replacement came aboard almost one year later, in September 2020. His presence through January 20, 2021 was important to ensure the successful completion of the training of LWSC and LEC operations and maintenance staff, the substantial works, the outstanding works during DNP, and proper documentation of services by the Supervision Engineer and the Contractor.

### 3. COMPACT IMPLEMENTATION

#### 3.1. OVERVIEW OF THE COMPACT

In 2013, the Government of Liberia and MCC undertook a Constraints Analysis to better understand the constraints to economic growth in Liberia. The analysis revealed two binding constraints to private sector investment, poverty reduction and economic growth:

- (i) lack of access to reliable and affordable electricity; and
- (ii) the high cost of and limited access to road infrastructure.

A summary of this constraints analysis appears in Annex 5 – Compact Conditions Precedent.

Following on from the constraints' analysis, on October 2, 2015, the United States of America and the Republic of Liberia entered into the Millennium Challenge Compact. This Compact granted up to Two Hundred Fifty-Six Million Seven Hundred Twenty-Six Thousand United States Dollars (US\$256,726,000.00) to the Government of Liberia to help the facilitation of activities aimed at addressing the two binding constraints.

MCC and the Government followed this up with a Program Implementation Agreement (PIA), which specified how the Program was to be implemented. The Liberia National Legislature ratified the Compact and the PIA, and both agreements were subsequently approved by the President. The Compact entered into force on January 20, 2016 and has a duration of five years, expiring on January 20, 2021.

Pursuant to the Compact, Millennium Challenge Account-Liberia (MCA-Liberia) was created as the Government entity responsible for managing the Compact funds and ensuring effective implementation of the Compact's Program which has two projects - the Energy Project and the Roads Project.

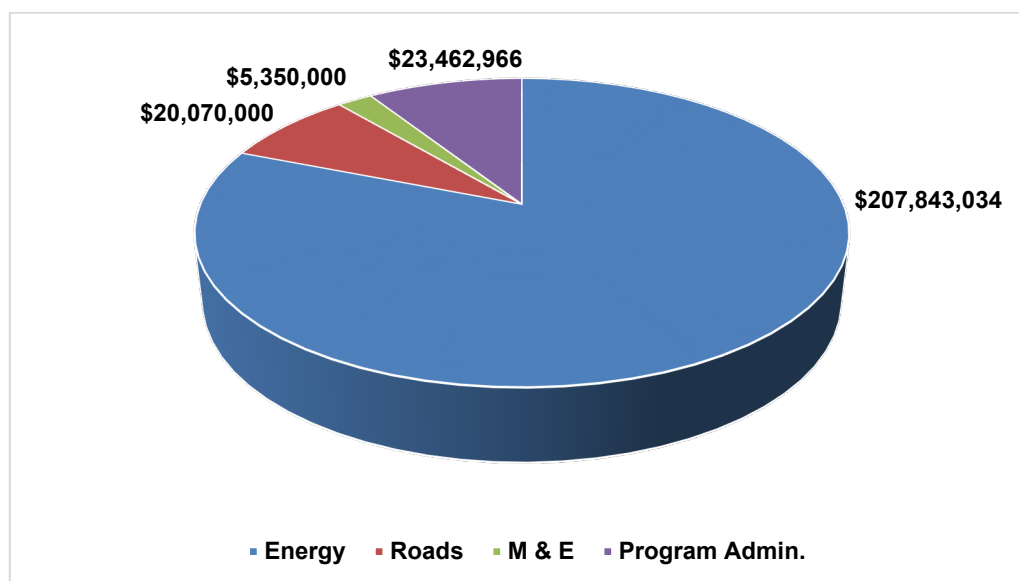


Figure 3: MCA-Liberia Multi Year Financial Plan Budget

#### 3.2. COMPACT THEORY OF CHANGE

The goal of the Liberia Compact was to reduce poverty through economic growth. The objectives of the Projects were to:

- (i) provide access to more reliable and affordable electricity; and
- (ii) improve the planning and execution of routine, periodic and emergency road maintenance.

These goals and objectives were to be realized through MCC's investments, expected to increase power generation and the share of generation from renewable sources, improve overall power sector performance, and decrease user costs. The investments would also provide funding and support to improve the road maintenance system.

The diagram below illustrates and describes the expected causal relationships among the program components. Per the logic framework's theory of change, the constraints to economic growth could be addressed through the two projects – the energy project and the roads project. The two interventions would lead to increased outcome, thereby reducing poverty through economic growth.

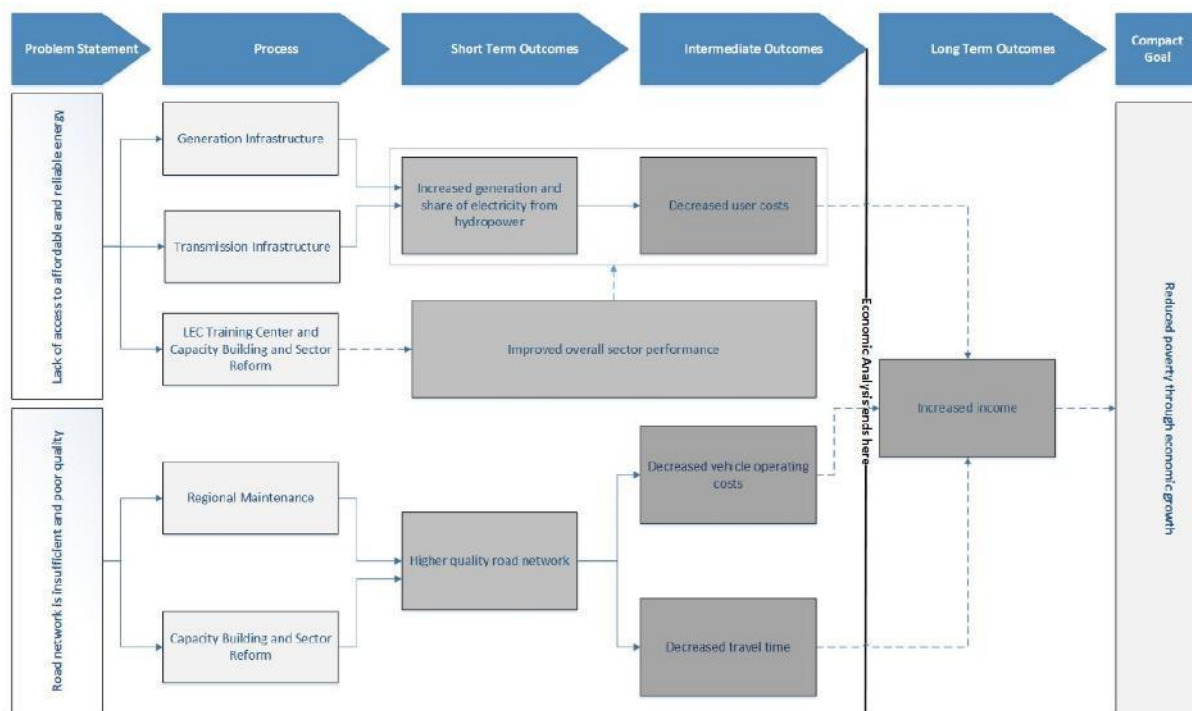


Figure 4: Liberia Compact Logic

## ENERGY PROJECT

As described in the Compact's M&E plan, the energy project's logic was based on the set of assumptions in Table 3 below:

Table 3: Energy Project Logic Assumptions

NO.	ENERGY PROJECT ASSUMPTIONS
A1	Bringing Mt. Coffee online will lower LEC's operating costs.
A2	Planned technical support from other donor(s) will complement MCA-L's intervention. Studies funded under the Compact will inform the implementation of the regulatory framework, including the tariff-setting process, and licensing operators.
A3	Cost savings from lower-cost generation will be passed onto consumers; tariffs will recover the utility's costs, which is critical for running a sustainable utility.
A4	The tariff-setting process will adhere to LERC's regulations as stipulated in Section 13.3 of the 2015 Electricity Law and will be insulated from political interference.
A5	LERC has the ability and resources to ensure compliance.
A6	LEC has the capacity and resources to manage its operations effectively and efficiently, including reducing losses, increasing collections, and performing routine maintenance; LERC standards are effective.



NO.	ENERGY PROJECT ASSUMPTIONS
A7	There is sufficient staff capacity and continuity in order to accomplish MSC capacity building objectives. Increased capacity is sustained after MSC ends.
A8	LEC increases ability to make customer connections. New customers can afford to pay for electricity; LEC can accommodate increased energy demand during dry season.
A9	Increased generation capacity and the planned T&D investments are capable of increasing the quality and reliability of electricity.
A10	LEC has sufficient manpower, skill, materials, and operational capacity to respond to user requests for connections.
A11	A clear regulatory framework is a critical requirement for private sector investment.
A12	Project outputs will result in appreciable improvement in customer services practices; LEC is willing and able to address customer complaints. Customer willingness to pay increases.
A13	MSC works to attract donor funding. External actors will extend the transmission and distribution networks as planned. These extensions are critical to expanding LEC's consumer base.
A14	LEC will invest in lifecycle maintenance and capital investment.
A15	Electricity is used productively. Cost savings are invested and other constraints such as access to finance, or lack of political stability do not inhibit additional investments.
A16	Customers pay for the electricity they consume.
A17	Training of trainers' system is effective.
A18	The MSC is able to effect long-term change in LEC operations and stakeholders with interest and influence support these changes

Per the logic framework's theory of change, the energy project interventions would lead to increased power generation and result in hydropower contributing a larger share of local electricity. Together with reforming the sector, capacity building and training, this would lead to an increase in income, thereby contributing to poverty reduction and economic growth.

## ROADS PROJECT

Referencing the same M&E plan, the road project's logic was based on the following set of assumptions:

*Table 4: Road Project Logic Assumptions*

NO.	ROADS PROJECT ASSUMPTIONS
A1	The private sector is prepared and capable of performing maintenance.
A2	The GoL will ensure that the pilot Road Maintenance Centers have an appropriate number of staff, who are compensated
A3	The GoL will determine which units will carry out relevant functions as a part of the Compact interventions.
A4	Funds continue to be available with some level of predictability.

The program logic shows that the project activities are expected to improve the policy and regulatory environment and maintenance occurring in the road sector. An improved management of the road sector is expected to result in an improved quality and prolonged life of the road network, which will lead to decrease vehicle operating costs and travel time for road users.

The diagram below illustrates and describes the expected causal relationships and outcomes for the Roads Project.

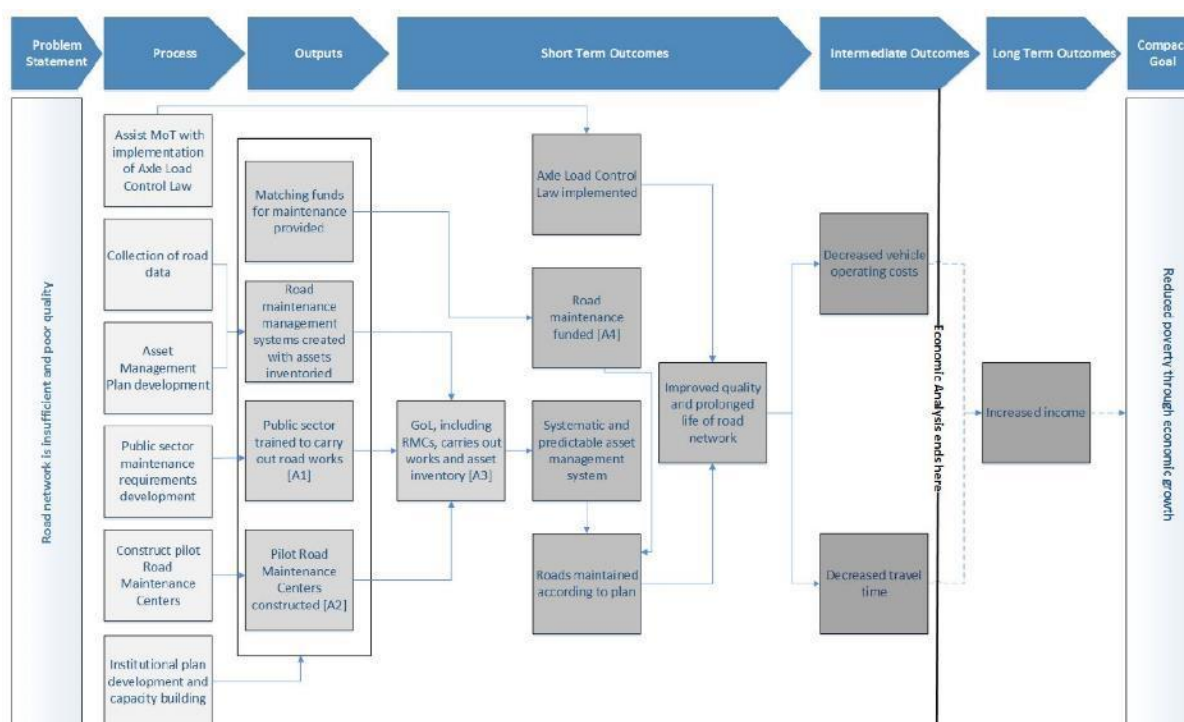


Figure 5: Road Project Logic

The Roads Project's interventions were to result in the implementation of a comprehensive National Road Maintenance program based on a data-driven process for improved quality and prolonged life of the road network. This would decrease vehicle operating costs and reduce travel time, which would contribute to poverty reduction and promote economic growth.

### 3.3. COMPACT FINANCIAL PERFORMANCE

#### A. FISCAL MANAGEMENT

MCA-Liberia financial performance was based on guidelines in the Fiscal Accountability Plan. The Fiscal Accountability Plan (FAP) describes the financial management policies and procedures and procurement management framework for grant funds received by the Government of the Republic of Liberia from the United States of America through the Millennium Challenge Corporation (MCC). These policies are developed in accordance with the Millennium Challenge Compact, the Program Implementation Agreement (PIA), the Fiscal Agent Agreement, as well as other Compact-related documents approved by MCC.

The FAP was the official financial management manual for the Millennium Challenge Account – Liberia (MCA-L) to ensure transparent, appropriate, efficient use of funds and appropriate fiscal accountability. The Finance Office, Fiscal Agent and Procurement Agent all follow and apply the policies and procedures described in the FAP.

The FAP also applied to all grant funds provided by the Compact for implementation of MCA-L's activities by employees, contractors, consultants and each Implementing Entity.

The key entities involved in fiscal accountability are the MCA-Liberia, the Fiscal Agent and the Procurement Agent. Because of the unique nature of the MCA-Liberia compact, there was a special provision for how funds for the Mt Coffee Rehabilitation Activity were managed. This procedure is detailed in Section E below.

The FAP was periodically revised and, if found necessary, expanded by mutual agreement among these three entities, subject to approval by the MCA-Liberia Board and a no-objection from MCC. The Compact is currently operating from the third version of the FAP.

MCA-Liberia used two modes of payment:

- a) Through Permitted Bank Accounts held at the United Bank for Africa (UBA) in Liberia,
- b) Through the Common Payment System (CPS)/ Axway, which is operated by the Internal Business Centre (IBC) in USA. The funds for CPS payments come directly from the United States Treasury.

## B. COMPACT FUNDS BUDGET AND MANAGEMENT

Allocation and utilization of Compact funds followed the following steps:

- Budget approval
- Funds commitment
- Disbursement and Utilization
- De-obligation and closeout.

The AEs monitored the disbursement and utilization and provided their reports through the QDRs.

The original compact grant was allocated towards the two projects (Energy and Roads), and to activities that were necessary for their successful implementation. This included program management and administration, and monitoring and evaluation. Table 5 below shows how the program funds were originally allocated to the two accountable entities, together with the final adjusted budget. It also shows each entity's share of the budget, including the portion that was controlled by MCC. MCA-Liberia took over the payments related to the Mt. Coffee Project once the PIU's contract ended. These funds account for \$3.6 million managed by MCA-Liberia

Table 5: Allocation of Compact Funds by Project and Accountable Entity (Quarter 21)

PROJECT OR ACTIVITY	BUDGET		ACCOUNTABLE ENTITY		
	Original Program MYFP	Final Program MYFP <sup>1</sup>	MCA-L	LEC/PIU	MCC
<b>Energy Sector Project</b>	<b>201,590,000</b>	<b>207,843,034</b>	<b>56,835,902</b>	<b>147,903,971</b>	<b>-</b>
Mt. Coffee Rehabilitation Activity	146,800,000	143,453,790		143,453,790	
Mt. Coffee Support Activity	18,100,000	23,676,219	19,226,039	4,450,180	
LEC Training Center Activity	5,500,000	2,252,760	2,252,760		
Energy Sector Reform Activity	31,190,000	35,357,103	35,357,103		
<b>Roads Project</b>	<b>21,070,000</b>	<b>20,070,000</b>	<b>16,246,514</b>	<b>-</b>	<b>3,823,486</b>
National Roads Maintenance Activity	15,000,000	15,000,000	15,000,000		
Roads Sector Reform Activity	6,070,000	1,246,514	1,246,514		
Technical Assistance (VOLPE)	-	3,823,486			3,823,486
<b>Monitoring and Evaluation</b>	<b>5,500,000</b>	<b>5,350,000</b>	<b>3,350,000</b>	<b>-</b>	<b>2,000,000</b>
Monitoring and Evaluation	5,500,000	5,350,000	3,350,000	-	2,000,000
<b>Program Administration and Control</b>	<b>28,566,000</b>	<b>23,462,966</b>	<b>23,462,966</b>	<b>-</b>	<b>-</b>
MCA-Liberia Administration	17,066,000	14,962,966	14,962,966		
Financial Management & Procurement Controls	9,500,000	7,500,000	7,500,000		
Financial Audits	2,000,000	1,000,000	1,000,000		
<b>COMPACT TOTAL</b>	<b>256,726,000</b>	<b>256,726,000</b>	<b>102,998,544</b>	<b>147,903,971</b>	<b>5,823,486</b>

<sup>1</sup> Final Program MYFP as at 31-May-2020

For its planning, MCA-L's activities followed a Fiscal Year that runs from October 1 to September 30. Table 6 shows the detailed budgeted allocation of funds to The Multi-Year Fiscal Plan (MYFP) over the 5-year Compact implementation period. The first fiscal year of the compact therefore covered the period from January 20, 2016 to September 30, 2016. In that period, the total allocated funds for the period were US\$93,202,200.

Table 6: Multi Year Financial Plan Summary - 2016

Component	Year 1	Year 2	Year 3	Year 4	Year 5	Total
<b>1. Energy Project</b>						
Activity 1: Mt. Coffee Rehabilitation Activity	80,000,000	45,500,000	19,300,000	1,000,000	1,000,000	146,800,000
Activity 2: Mt. Coffee Support Activity	2,534,000	7,533,000	6,033,000	1,000,000	1,000,000	18,100,000
Activity 3: LEC Training Center Activity	500,000	1,000,000	2,600,000	1,200,000	200,000	5,500,000
Activity 4: Energy Sector Reform Activity	800,000	2,600,000	7,200,000	10,300,000	10,290,000	31,190,000
<b>Subtotal 1</b>	<b>83,834,000</b>	<b>56,633,000</b>	<b>35,133,000</b>	<b>13,500,000</b>	<b>12,490,000</b>	<b>201,590,000</b>
<b>2. Roads Project</b>						
Activity 1: National Roads Maintenance Activity	80,000	3,212,560	1,500,000	7,147,440	3,060,000	15,000,000
Activity 2: Roads Sector Reform Activity	1,740,000	1,325,000	1,635,000	1,055,000	315,000	6,070,000
<b>Subtotal 2</b>	<b>1,820,000</b>	<b>4,537,560</b>	<b>3,135,000</b>	<b>8,202,440</b>	<b>3,375,000</b>	<b>21,070,000</b>
<b>3. Program Management and Administration</b>						
(a) MCA-Liberia Administration	3,013,200	3,113,200	3,713,200	3,713,200	3,513,200	17,066,000
(b) Financial Management and Procurement Controls	2,500,000	2,200,000	1,600,000	1,600,000	1,600,000	9,500,000
(c) Financial Audits	200,000	400,000	400,000	400,000	600,000	2,000,000
<b>Subtotal 3</b>	<b>5,713,200</b>	<b>5,713,200</b>	<b>5,713,200</b>	<b>5,713,200</b>	<b>5,713,200</b>	<b>28,566,000</b>
<b>4. Monitoring and Evaluation</b>						
(a) Monitoring and Evaluation	1,835,000	335,000	585,000	685,000	2,060,000	5,500,000
<b>Subtotal 4</b>	<b>1,835,000</b>	<b>335,000</b>	<b>585,000</b>	<b>685,000</b>	<b>2,060,000</b>	<b>5,500,000</b>
<b>GRAND TOTAL OF ESTIMATED MCC FUNDING</b>	<b>93,202,200</b>	<b>67,218,760</b>	<b>44,566,200</b>	<b>28,100,640</b>	<b>23,638,200</b>	<b>256,726,000</b>

### C. BUDGET VS. COMMITTED AMOUNTS

Each Compact Activity's overall share of the original budget is indicated in the Table below.

Table 7: Activity's Share of Original Budget

Component	Amount	% of Total
1. Energy Project	\$ 201,590,000	78.5%
2. Roads Project	\$ 21,070,000	8.2%
3. Program Management & Administration	\$ 28,566,000	11.1%
4. Monitoring & Evaluation	\$ 5,500,000	2.1%
<b>Grand Total of Estimated MCC Funding</b>	<b>\$ 256,726,000</b>	<b>100.00%</b>

Funds from the budget were committed to financing each project's activities on an annual basis. The committed funds were released in quarterly instalments based on a Quarterly Disbursement Request (QDR) made by MCA-Liberia to MCC. The QDR also served as the accounting document for the previous disbursement.

The pace at which the funds were used depended on several factors including how long it would take for funds to be committed, length of the procurement process, contract award and implementation process, and how long it took MCA-Liberia to account for the funds in the QDR. Over half the Energy Project's funds were to be expended in the first two years of the compact, while expenditure on the roads project was to be incremental, peaking at \$8.2 million in the fourth year. Program Management and Administration was to maintain a steady budget through the duration of the compact while the bulk of the M&E budget was to occur in the first and last years. Figure 7 below shows each project's annual budgeted funds utilization over the Compact's duration.

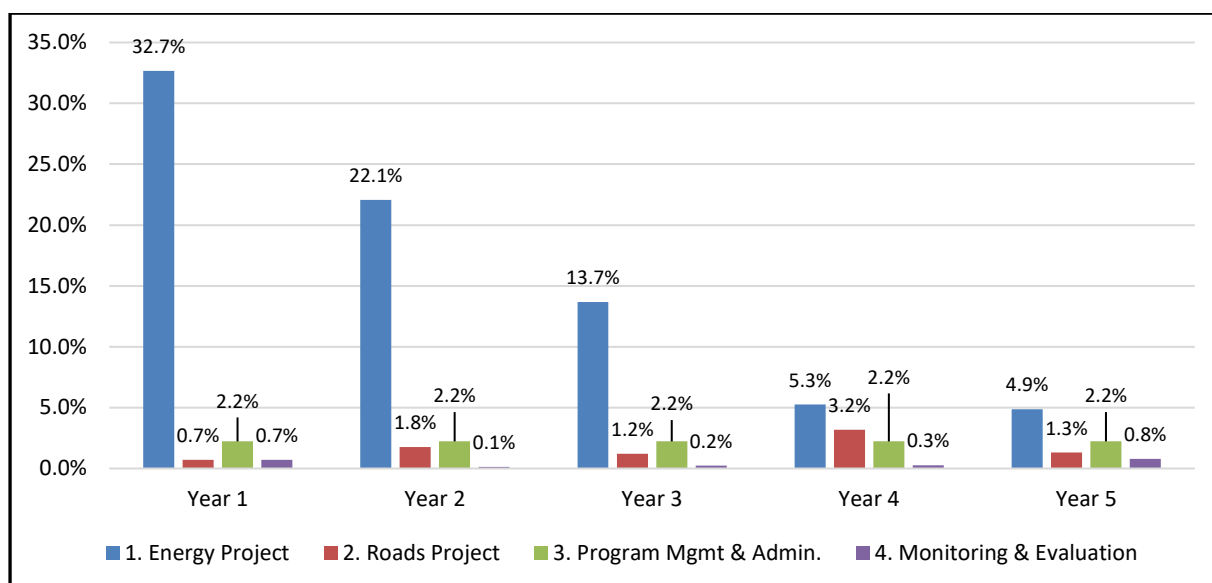


Figure 6: Annual Share of Budget for each Project

As at Mar 29, 2021, 93% of Compact's total budgeted funds had been committed, as indicated in Table 8 below. This includes 100% of all funds to LEC/PIU for the MCRA and the MCSA, together with the MCC-administered components of the Compact – Technical Assistance from Volpe and the Monitoring and Evaluation sub-activities.

As further discussed in the Conditions Precedent section of the report, none of the \$15 million budgeted for the Road Maintenance was committed, and the funds are scheduled to be de-obligated at the end of the Compact. There were also delays in committing funds for monitoring and evaluation, brought about by delays in finalizing the M&E plan and selecting Key Performance Indicators. Approval

of the KPIs for the Road Project is expected before CED, after which the M&E plan will be passed to the MPW for implementation. Another delay was with LERC's failure to integrate the Regulatory Information Management System (RIMS) into its financial and operational management, leading to the system not being utilized for its intended purposes and constraining LERC effective operations. As discussed under progress achieved in Section 3.4.1, only part of the RIMS design was completed in November 2020.

Table 8: Budget vs. Committed Funds by Activity (as at 29-Mar-2021)

ACTIVITY DESCRIPTION	MYFP BUDGET as of May 31st 2020	COMMITTED	CUMULATIVE COMMITMENT %	NOT YET COMMITTED
<b>Energy</b>	<b>\$208,750,770</b>	<b>\$207,117,732</b>	<b>99%</b>	<b>\$1,633,039</b>
Mt. Coffee Rehabilitation (PIU) Activity	\$147,903,971	\$147,903,971	100%	\$0
Mt. Coffee Support Activity	\$19,226,039	\$19,170,105	100%	\$55,934
LEC Training Center Activity	\$2,252,760	\$2,225,399	99%	\$27,361
Energy Sector - Reform Activity	\$35,809,518	\$34,946,142	98%	\$863,375
Mt. Coffee Rehabilitation Activity (MCAL) <sup>2</sup>	\$3,558,483	\$2,872,114	81%	\$686,369
<b>Roads</b>	<b>\$20,070,000</b>	<b>\$4,923,610</b>	<b>25%</b>	<b>\$15,146,390</b>
National Roads Maintenance Activity	\$15,000,000	\$0	0%	\$15,000,000
Roads Sector Reform Activity	\$1,246,514	\$1,100,124	88%	\$146,390
Technical Assistance (VOLPE) (MCC)	\$3,823,486	\$3,823,486	100%	\$0
<b>Monitoring &amp; Evaluation</b>	<b>\$5,250,000</b>	<b>\$4,454,331</b>	<b>85%</b>	<b>\$795,669</b>
Monitoring & Evaluation Activity	\$3,250,000	\$2,454,331	76%	\$795,669
MCC - Managed	\$2,000,000	\$2,000,000	100%	\$0
<b>Program &amp; Administration</b>	<b>\$22,655,230</b>	<b>\$21,650,489</b>	<b>96%</b>	<b>\$1,004,740</b>
Program Administration	\$14,962,966	\$13,962,760	93%	\$1,000,206
Fiscal & Procurement Agents	\$7,348,964	\$7,348,964	100%	\$0
Financial Audits	\$343,000	\$338,765	99%	\$4,535
<b>PROJECT TOTAL</b>	<b>\$256,726,000</b>	<b>\$238,146,162</b>	<b>93%</b>	<b>\$18,579,838</b>

Figure 7 compares final committed funds to the original MYFP budget. More funds ended up going to the Energy Project than was originally budgeted (\$207,117,732 vs. \$201,590,000 i.e., 103% of budget). Meanwhile, only 23% (\$4,923,112) of the original budget of \$21,070,000 for the Roads Project ended up being committed to roads activities. As discussed in the section 3.4.2, this was due to GoL's non-compliance with one of the Compact's conditions precedent, leading to cancellation of the Roads Maintenance matching funds budget of \$15 million.

<sup>2 2</sup> Mt Coffee Rehabilitation Activity - Work managed by MCA-Liberia after PIU contract expired.

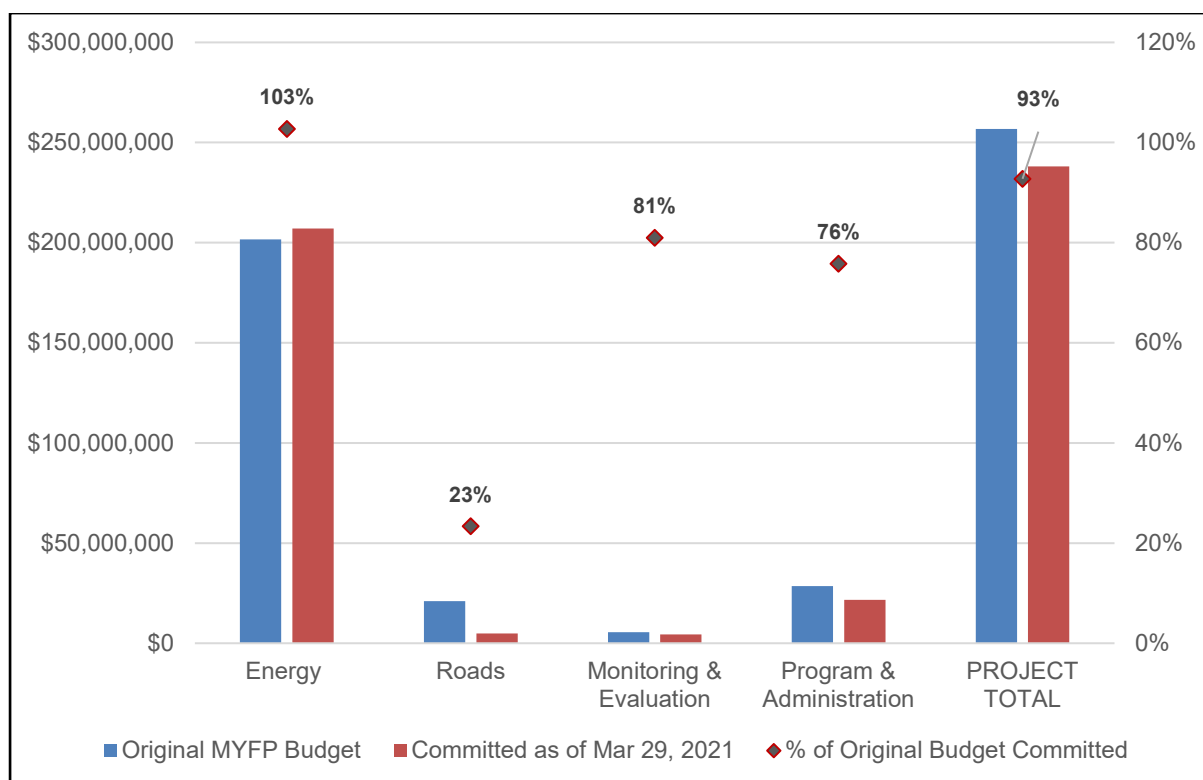


Figure 7: Comparison of Final Commitments to Original MYFP Budget

#### D. COMMITTED VS. DISBURSED AMOUNTS

Under the best conditions, project funds need to be disbursed as soon as possible after they get committed. A low ratio of disbursed funds to committed funds is an indicator of an activity whose implementation was delayed or suffered other implementation challenges. As Figure 8 below shows, the Liberia Compact maintained a relatively good record of disbursing funds once they were committed. Among all activities, as of Mar 29, 2021, M&E had the lowest proportion of committed funds awaiting disbursement. Ninety-three per cent (93%) of that activity's committed funds were disbursed in spite of a delay mainly attributed to the late approval of Version 3 of the M&E Plan.

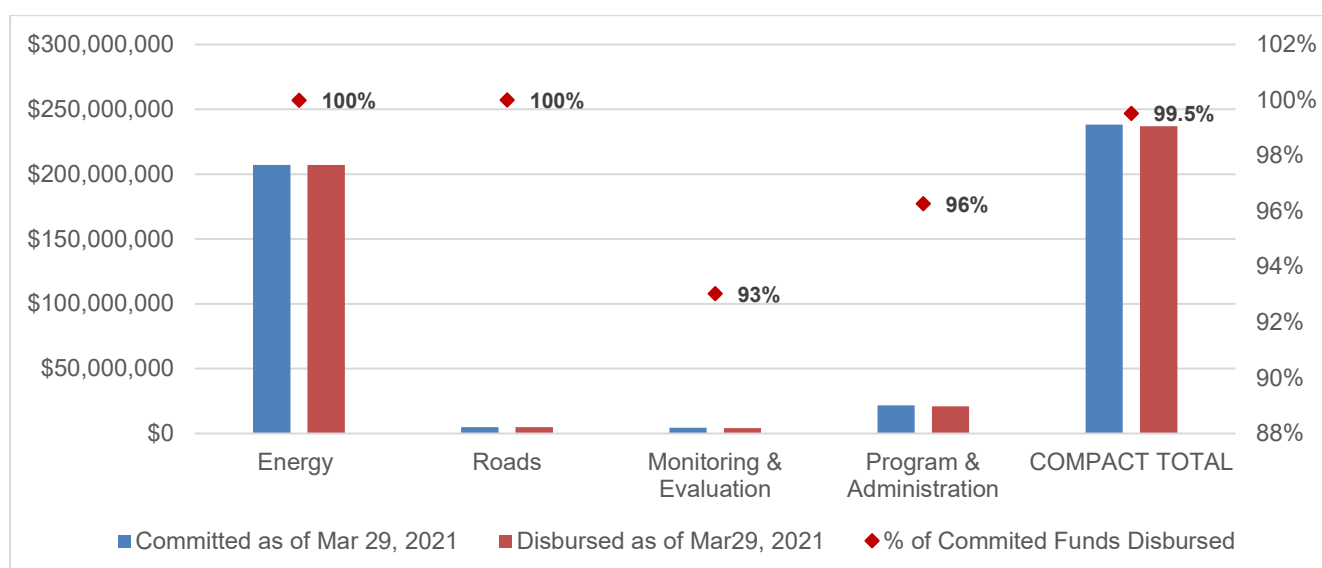


Figure 8: End of Compact Committed Funds vs. Disbursed Amounts



Table 9 below provides a more detailed breakdown of committed vs, disbursed amounts at a Sub-Activity level. This Table uses the March 2021 revised budget as its base for comparison of committed versus disbursed funds. In this case, while only four sub-activities have full disbursements of 100% as of Mar 29, 2021, the only major sub-activities with substantial undisbursed funds are the MCA-implemented M&E Activity at 66%, and financial audits at 69%.

The Roads Project had a low commitment of only 25% of the budgeted funds due to a number of factors:

- Unlike the Energy Project, most of the Road Project's design was not complete till well into the Compact's implementation.
- Because of GoL's inability to meet the Matching Funds' CPs, the project had to be re-examined and key components revised.
- Activity's implementation was hampered by delays in approving a Monitoring and evaluation plan.

Despite this shortfall, as at Mar 29, 2021, 100% of all committed funds for the Roads activity were disbursed. Compact-wide, ninety-nine per cent of all committed funds were disbursed, including 100% of funds for the LEC/PIU activities and the MCC-administered components of the budget.

Table 9: Committed vs. Disbursed Amounts by Activity (as at 29-Mar-2021).

Activity Description	MYFP Budget as of Mar 29, 2020	Committed	Disbursed	Cumulative Disbursement %	% of Committed Funds Disbursed
<b>Energy</b>	<b>\$208,750,770</b>	<b>\$207,117,732</b>	<b>\$207,102,997</b>	<b>99%</b>	<b>100%</b>
Mt. Coffee Rehabilitation (PIU) Activity	\$147,903,971	\$147,903,971	\$147,903,971	100%	100%
Mt. Coffee Support Activity	\$19,226,039	\$19,170,105	\$19,155,370	100%	100%
LEC Training Center Activity	\$2,252,760	\$2,225,399	\$2,225,399	99%	100%
Energy Sector - Reform Activity	\$35,809,518	\$34,946,142	\$34,946,142	98%	100%
Mt. Coffee Rehabilitation Activity (MCAL) <sup>3</sup>	\$3,558,483	\$2,872,114	\$2,872,114	81%	100%
<b>Roads</b>	<b>\$20,070,000</b>	<b>\$4,923,610</b>	<b>\$4,923,610</b>	<b>25%</b>	<b>100%</b>
National Roads Maintenance Activity	\$15,000,000	\$0	\$0	0%	#N/A
Roads Sector Reform Activity	\$1,246,514	\$1,100,124	\$1,100,124	88%	100%
Technical Assistance (VOLPE) (MCC)	\$3,823,486	\$3,823,486	\$3,823,486	100%	100%
<b>Monitoring &amp; Evaluation</b>	<b>\$5,250,000</b>	<b>\$4,454,331</b>	<b>\$4,143,896</b>	<b>79%</b>	<b>93%</b>
Monitoring & Evaluation Activity	\$3,250,000	\$2,454,331	\$2,143,896	66%	87%
MCC - Managed	\$2,000,000	\$2,000,000	\$2,000,000	100%	100%
<b>Program &amp; Administration</b>	<b>\$22,655,230</b>	<b>\$21,650,489</b>	<b>\$20,843,304</b>	<b>92%</b>	<b>96%</b>
Program Administration	\$14,962,966	\$13,962,760	\$13,583,667	91%	97%
Fiscal & Procurement Agents	\$7,348,964	\$7,348,964	\$7,022,923	96%	96%
Financial Audits	\$343,000	\$338,765	\$236,734	69%	70%
<b>PROJECT TOTAL</b>	<b>\$256,726,000</b>	<b>\$238,146,162</b>	<b>\$237,013,806</b>	<b>92%</b>	<b>100%</b>

## FINANCIAL ARRANGEMENTS FOR THE MT. COFFEE REHABILITATION ACTIVITY

The funding of the MCRA came from the multi-donor funding sources below:

<sup>3 3</sup> Mt Coffee Rehabilitation Activity - Work managed by MCA-Liberia after PIU contract expired.

Table 10: Funding Sources for the Mt. Coffee Rehabilitation Activity

Funding Agency	Funds in Original Currency	Funds in USD Equivalent Disbursed	Percent of Total
European Investment Bank, EIB	€ 50,000,000.00	\$61,928,786.30	18%
Government of Norway, GON	492,000,000.00 kr	\$69,041,788.31	20%
German Development Bank, KfW	€ 55,000,000.00	\$64,825,246.08	19%
Government of Liberia, GoL	\$8,840,262.43	\$8,840,262.43	3%
Millennium Challenge Corporation, MCC	\$142,422,899.88	\$145,243,510.04	42%
<b>Total</b>		<b>\$349,879,593.16</b>	<b>100%</b>

In the above Table, it should be noted that (a) the MCC contribution is exclusive of the \$5,481,133 for the Mt. Coffee Support Activity, and (b) there may be discrepancies in total USD equivalent due to variations in exchange rates between each donor's currency over the project period.

Since the MCRA was co-funded by diverse donors, it was in the interest of the PIU that funding agencies harmonize financial procedures and reporting requirements to the extent practical. The Funding Agencies therefore all agreed that the procurement procedures prescribed by KfW would apply to all international project procurements. Procurement for goods, works, or services related to the operations of the PIU were carried out under the procedures of the Public Procurement and Concessions Commission (PPCC) of Liberia, in line with the procedures of the Government of Norway and as stipulated in the Amended and Restated Management Contract of 2013.

At project inception, all funding agencies agreed to the establishment of joint project bank accounts (foreign and local domiciled banks) for receiving disbursements from all then-active project funding agencies and for processing approved withdrawals to effect payments for the project's capital and operating expenditures. The funding agencies also agreed that in line with the common pooled account, disbursements and payments would be made on a pro rata basis; accordingly, disbursement requests and financial reporting were done for all funders together showing individual contributions on a pro rata basis.

Subsequently, following the Government of Liberia's inability to provide the initial total funding commitment for the project (stemming from the financial implications of the Ebola crisis) and MCC's decision to join the team of international project funding agencies, the pro rata framework for aligning disbursements and payments to contractors was determined to be incompatible with MCC's statutory funding requirements and was replaced by a funds/cash management strategy in Section 8 of the Mt. Coffee Rehabilitation Activity's Financial Management Manual.

From July 1, 2015, disbursement schedules and amounts were determined in consultations between the PIU and each individual funding agency.

MCC funds were not remitted to the joint bank account pool. Instead, the funds were held on account by the US Treasury from which the PIU vendors were paid directly upon receipt of certified invoices.

The Government of Norway (GoN) through the Ministry of Foreign Affairs (MFA) covered the local and international operational costs of the PIU.

### 3.4. PROGRESS ACHIEVED DURING COMPACT IMPLEMENTATION

#### 3.4.1. ENERGY PROJECT

##### a) Mt. Coffee Rehabilitation Activity (Implemented by LEC/PIU)

Mt. Coffee is a run-of-river plant consisting of a dam and a 10-bay spillway structure with radial gates located in the original river channel. The original hydropower plant was commissioned in 1967 with financing from the United States Government and an installed capacity of 34 MW from two turbines.

The installation of two additional turbines in 1973 increased the plant's installed capacity to 64 MW. Plans to increase the generation capacity of the Mt. Coffee hydropower plant after construction of a reservoir at the confluence of the St. Paul and Via Rivers by the installation of two new turbines were abandoned due to the Civil War. The plant was abandoned during the war leaving the reservoir to gradually rise until the dam was breached, resulting in complete flooding of the powerhouse. The power station was later looted and all the power generation equipment, the majority of the hydraulic steel works, cables and all the non-embedded equipment were removed.



*Figure 9: Mt. Coffee Hydro Power Plant at the start of the rehabilitation*

A study funded by the United States Trade and Development Agency (USTDA) and performed by Stanley Consultants in 2007 determined that, while much of the electrical and mechanical equipment had either been removed or rendered inoperative, most of the remaining works was reparable and could be reused. In 2010 GOL hired Stanley Consultants as their Owner's Engineer for the reconstruction of the Mt. Coffee and associated Hydropower Plants on the St. Paul River and the construction of an upstream storage reservoir on the Via River. These services concluded in 2012 with the GOL reaching agreement with the West African Power Pool (WAPP) to fund the services for Stanley Consultants to prepare engineering and bidding documents for rehabilitation of Mt. Coffee.

In 2012, the WAPP contract concluded when the GOL entered into an agreement with the Government of Norway, the German Bank for Economic Development (KfW), and the European Investment Bank (EIB) to fund the rehabilitation of Mt. Coffee. The PIU was set up the same year as a semi-autonomous entity within LEC reporting directly to the CEO and overseeing all aspects of the rehabilitation of Mt. Coffee. The PIU's mandate, staff and financing was to be 100% dedicated to the Mount Coffee rehabilitation.

By October 2013, committed financing for the project stood at a USD equivalent of \$218.5 million against a high-level budget of \$224.5 million (excluding the PIU and implementation of the Project Resettlement Action Plan, RAP. The Government of Liberia committed to contributing \$40 million as well as financing any cost overruns. GON would finance approximately 33% of the project; the EIB 31%; the Government of Liberia 20%; and KfW 16%. The rehabilitation budget however continually increased, due to market response of higher costs than expected, optimization of design, and in 2014, the suspensions required by the unforeseen West Africa Ebola crisis. When the Government of Liberia indicated it would no longer be able to meet its financial commitments due to the Ebola crisis, additional financing would be required above and beyond the "cost overruns" the GOL had originally committed to cover. In 2016, the U.S. Government (through MCC) provided grant funds in the amount

of \$125 million for the Mt. Coffee Project as well as additional contingency funds, additional support for environmental/ social activities within the energy sector.

Due to the Ebola crisis, the period for project completion were extended by one year. In 2015 the project stakeholders agreed to add to the base project scope. At the same time, the completion of works for some of the other project contractors became delayed. These factors caused the project completion time to be extended through October 2018.

The total committed and disbursed financing for the project is given in Table 11 below.

Table 11: Committed Financing for PIU Pooled Project funds

Funder	Funds in Original Currency *	Funds in USD Equivalent Disbursed *	Percent of Total
European Investment Bank, EIB	€ 50,000,000.00	\$61,928,786.30	18%
Government of Norway, GON	492,000,000.00 kr	\$69,041,788.31	20%
German Bank for Economic Development, KfW	€ 55,000,000.00	\$64,825,246.08	19%
Government of Liberia, GOL	\$8,840,262.43	\$8,840,262.43	3%
Millennium Challenge Corporation, MCC	\$142,422,899.88	\$145,243,510.04	42%
<b>Total</b>		<b>\$349,879,593.16</b>	<b>100%</b>

*\*Note: Figures are exclusive of MCC Support Activities & RAP funds*

- Overview of the MCHPP:

The main project site infrastructure includes the main dam and spillway, three forebay dams, the powerhouse, intake, switchyard, and construction camp. The distance between the powerhouse and the spillway is approximately 3 km. As a result of the project, the switchyard at Mt. Coffee is connected to two of LEC's main Monrovia substations via two high-voltage (66/132 kV) transmission lines (TLs) that run from Mt. Coffee Hydropower Project to Bushrod Island and Paynesville.

Both lines run parallel, for about 4.7 km, from the site to White Plains, where Liberia's water treatment plant is located. From there they split off in two directions to Monrovia, crossing through rural, peri-urban and urban environments. Together the TLs have a combined length of 49.7 km with the Bushrod TL being 23.5 km and Paynesville TL being 26.2 km long. The project included rehabilitation works at the two Monrovia substations as well.

The following structures were rehabilitated under this activity:

- Powerhouse
- Spillway deck
- Spillway gates
- Dam
- Intake structure
- Two sub stations
- Transmission lines

The rehabilitation also took into account an unfortunate scenario in 1990 that led to overtopping of the dam because the spillway gates could not be operated, and at least one other known incident in 1983 when the spillway gates were not opened sufficiently (for unknown reasons) and were consequently overtopped. In response to these incidents, an emergency spillway structure was proposed to be located south of main dam. It was a free overflow structure with its chute located in a natural ravine which was designed to enable the safe passage of the 1:50 AEP flood over its crest and with flow over the top of the spillway gates in their closed position in a "total spillway gate malfunction" scenario.



Figure 10 shows the location of most of the MCRA structures. Other work included hydrological and geological analyses and seismic analysis.

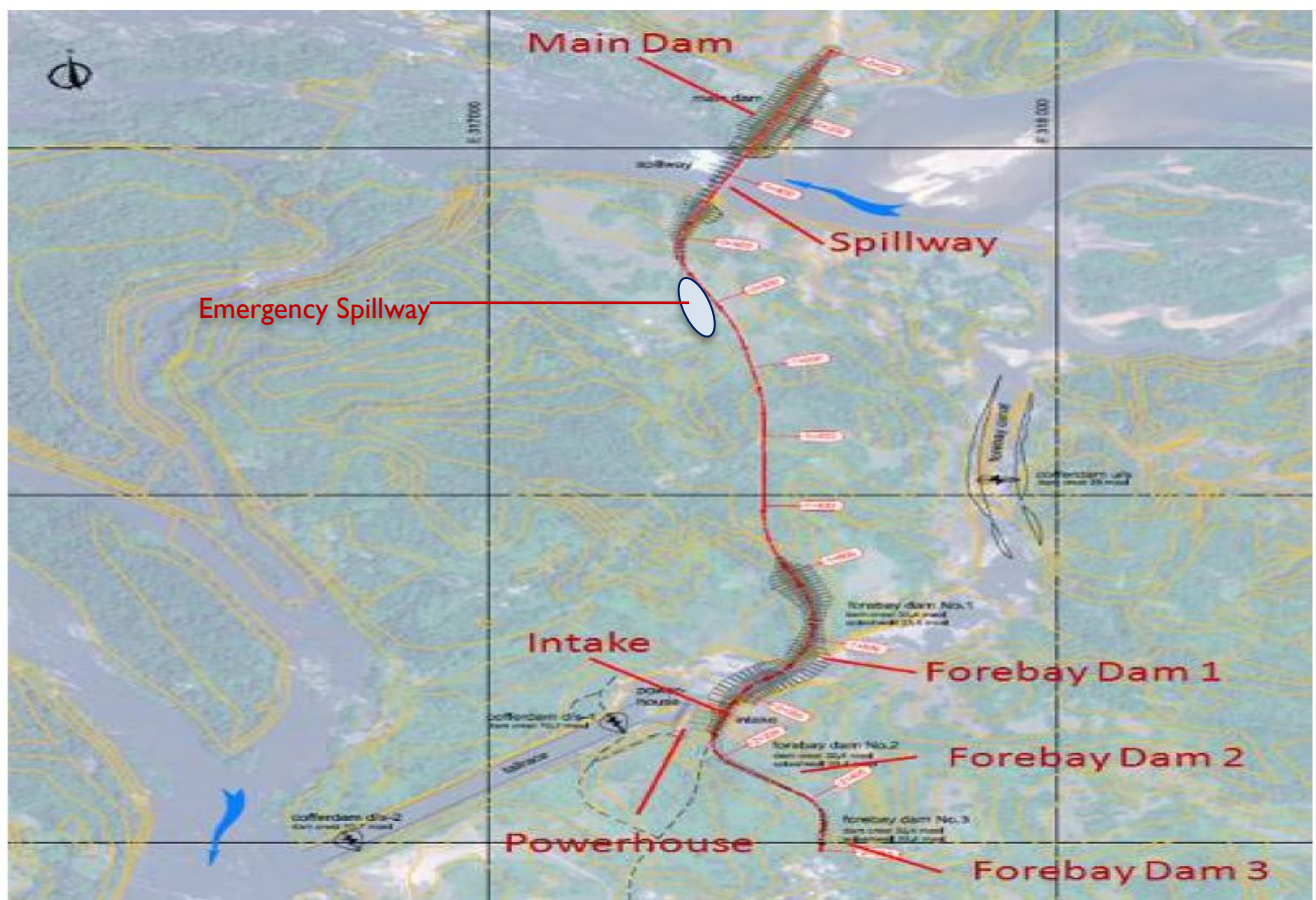


Figure 10: Aerial view of Mt. Coffee Rehabilitation Project structures

MCC funding was also used in the Activity's Environmental and Social Impact Analysis (ESIA) and the Resettlement Action Program (RAP).

MCC was unable to disburse to the pooled project funds but instead disbursed its funds directly to project contractors via the US Treasury according to a strictly monitored payment process coordinated between the PIU and MCA-Liberia and MCC in Washington, DC. The total MCC disbursements were \$143,453,790 for the Mt. Coffee Rehabilitation activity and \$4,450,180 for the PIU component of the Mt. Coffee Support Activity, for a total of \$147,903,971.

In addition to its original commitment of \$125 million to the Mt. Coffee Project, MCC also budgeted Compact contingency funds in the amount of \$18.7 million, most of which were eventually allocated to the Mt. Coffee Project, as well as \$600,000 for the second circuit of the Paynesville transmission line and \$5.1 million for Mt. Coffee support activities.

The PIU managed the MCHPP rehabilitation work through the ten contract packages below:

Table 12: MCHPP Rehabilitation Contract Packages

Contractor	Contract	Accepted Contract Amount (Millions)			Estimated Final Contract Price (Millions)			% average increase
		Euro	USD	NOK	Euro	USD	NOK	
Voith	Generating Equipment	49.2	11.6		57.7	12.5		16%
Dawnus	Civil Works (excl. MCC- financed activities)		62.2			91.6		47%

Contractor	Contract	Accepted Contract Amount (Millions)			Estimated Final Contract Price (Millions)			% average increase
		Euro	USD	NOK	Euro	USD	NOK	
Andritz	Hydraulic Steelworks	25.6			33.0			29%
NCC	Substations		10.6			12.7		20%
Eltel	Transmission Lines		13.0			19.3		48%
PSM	Camp Construction & Services		15.2			30.4		100%
Teichmann	Emergency Spillway		5.1			5.8		14%
Norplan/Fichtner	Owner's Engineer	2.4	2.0	25.0	11.9	5.8	123.7	363%
Norplan/Fichtner	N/F: Check (in \$)		8.5			35.0		312%
PIU	Project Implementation Unit		8.1			15.0		85%

*Note: exchange rate used for currency conversion is based on average rate of project duration*

The Project's budget increased over time due to a number of factors that included:

- A high-risk perception of contractors coupled with inadequate competition at tender stages (as reflected in the originally high tender prices),
- The Ebola crisis,
- Inflation and exchange rate losses,
- Expanded scope of the project, and
- Necessity to take over unforeseen responsibilities and risks from LEC (e.g., substation expansion, training, and camp services).

The budget began at an estimate of USD equivalent \$232 million and ended at a cap of \$350 million (excluding MCC Support Activities and RAP), representing an increase of 50% over a six-year period. Though the funders agreed during the early phase of the project that the schedule was paramount and that the project budget would likely increase as a result of the challenging schedule for achieving first power. However, scope creep and unforeseen events such as the Ebola crisis led to increased contract prices as well.

In addition to the main construction and supervision contracts, a number of smaller contracts were procured and administered throughout the project. Some of these were required under the Environmental and Social Management Plan (ESMP) and its associated Resettlement Action Plan (RAP), which called for monitoring and mitigation activities in key areas. The cost of these activities is shown in the Table below, followed with details of the actual work performed.

*Table 13: MCHPP Employer and MCC-Financed Costs*

Employer's Costs	EUR	USD	NOK
ESMP		504,373	
OMT Contract – Operation, Maintenance and Training	6,007,487	1,501,726	
Stanley Consultants		777,686	
Bank Fees		242,854	
Panel of Experts		712,223	
Project Documentary		174,470	
Early Training for LEC OMT Trainees		341,905	
Project Insurance		395,051	
Accommodations Costs		749,166	
New EWOs (Extra Work Order)		903,167	
Other		13,298	
Dam Experts - Hydrology & Risk Consulting (HARC)		36,618	
LEC Camp Power Supply		397,047	
<b>Total Employer's Costs</b>	<b>6,007,487</b>	<b>6,749,586</b>	
<b>MCC-Financed Activities Costs</b>			

Employer's Costs	EUR	USD	NOK
Supplements to Base Project		1,030,891	
Community Support		3,299,356	
PIU Staffing Support		1,150,887	
<i>Total MCC Activities</i>		<i>5,481,133</i>	

In line with the recommendation of the International Finance Corporation, the GOL initiated a five-year management contract for LEC in July 2010 with the goals of connecting an additional 150,000 people in Monrovia; reducing commercial and technical losses; increasing connection rates; and capacity building, in order to improve operational performance over the long term. Manitoba Hydro International won the contract and took over management of LEC. In 2012 MHI's contract was amended to include responsibility for initiating and operating a semi-autonomous Project Implementation Unit within LEC for the purposes of implementing the Mt. Coffee Hydropower Rehabilitation Project. The MHI management contract concluded as scheduled in December 2016. But due to the Ebola crisis and the resultant suspension of site works (September 2014 – March 2015), as well as later additions to the project scope, the Mt. Coffee project completion date was extended into mid-2019.

Under the Compact, LEC assumes responsibility for the GoL's financial commitment and includes the following specific components:

- The additional cost required to provide a total installed generation capacity of up to 88 MW.
- Funding to cover gaps between existing stakeholder commitments and a total cost to complete the rehabilitation of MCHPP in an amount not to exceed \$357 million.
- The cost of a second 66 kV transmission line from MCHPP to the Paynesville substation; and
- Costs related to the establishment of certain dispute adjudication boards.

In addition, MCA-Liberia is making a small investment in materials to help LEC increase connections to the grid, including wires, meters, transformers, specialized vehicles, as well as electrical poles. MCA-Liberia investments in generation and utility operations are being complemented by other donors who are supporting LEC's transmission and distribution networks.

Collectively, these investments are expected to result in increased connections and consumption, improved reliability, and more affordable electricity.

### • Achievements

Rehabilitation of the Mount Coffee Hydro Power Plant was completed in 2019. After over 25 years spent non-operational, the Mount Coffee Hydro Power Plant is now generating clean, renewable hydropower. The hydro plant reduces the cost of generating electricity. With stable and cheaper electricity, businesses are expected to reduce costs, and may make more profits, hire more workers, and grow more quickly. The total cost of rehabilitating Mount Coffee Hydro Power Plant was US\$ 357million. Of this amount, MCC covered 41% of that amount, and the installed generation capacity of the hydro plant is now 88 MW.

There have also been community benefits to this activity, with improved community roads, electrification, a health clinic, hand pumps, wells, and other facilities.

In addition to the hydro power station, the project also saw the construction of a sub-station at Mt. Coffee in addition to two 132 kilovolts transmission lines -one built between Mt. Coffee and the Bushrod Substation, and the other between Mt. Coffee and the Paynesville Substation.

In addition to the above, there have been many wider benefits of the project:

- There has been improved reliability of electricity supply. For instance, according to a report by Mathematica, in June 2019, average duration of outages was 57% lower than before the hydro power plant came online.
- The electricity tariff has decreased by 33% since the start of the Compact – from \$0.55 per kWh to \$0.35 per kWh.

- Being a hydro power plant, Mt. Coffee represents LEC's only renewable energy source.
- Upon coming on stream, Mt. Coffee tripled Liberia's installed power generation capacity. The current breakdown of generation capacity is 69.8% Mt. Coffee Hydro; 14.3% Liberian government funded thermal plants; 7.9% Japanese government funded thermal plants; 7.9% WB funded thermal plants.
- LEC is part of the West African Power Pool (WAPP), which will interconnect Ivory Coast, Liberia, Sierra Leone, and Guinea and allow for both importation of electricity from Ivory Coast as well as eventually exportation of electricity from Liberia as part of the CLSG (Cote d'Ivoire Liberia Sierra Leone Guinea regional transmission line) Project. The 225 kV transmission line and substations are under construction in Liberia as of 2018.

The remaining activities in the Energy Project were intended to support the results of the Mt. Coffee Rehabilitation Activity and address other root causes of the problems in the sector.

#### **b) Mt. Coffee Support Activity**

The Mt. Coffee Support Activity had four sub-activities: -

- (i). Provision of small-scale community infrastructure
- (ii). Human Resources support to LEC
- (iii). Livelihood restoration
- (iv). Raw water pipeline

The first three sub-activities were implemented by LEC/PIU while the RWP was implemented by LWSC.

The sub-activities that were implemented by the PIU are described in further detail below.

#### **• Environmental & Social Management Plan, ESMP**

As the complexity and time requirements of the assignment increased during 2014 due to the Ebola crisis and poor delivery of the transmission lines RAP by a consultant, two Contract Amendments were additionally signed with the environmental consultant, increasing both the scope and cost of the original assignment. A third amendment was signed in 2016 to address the urgent need for a hazardous waste disposal strategy. All three amendments were financed using RAP funds.

In 2015 MCC also agreed to support additional staffing needs of the PIU for the implementation of LEC's environmental and social safeguards responsibilities under the project, including capacity building of PIU staff in the Environmental, Health and Safety Unit. The Contract amendment also included support for sanitation infrastructure for the resettled communities in Unification Town and for construction of a market pay-for-use latrine in Raymond Camp. Caliqua's support to the project concluded in October 2018.

#### **• Water and Sanitation**

The MCHPP project site is located in a rural area that had very limited infrastructure in the post-war period prior to the project work. At the start of the project, there were 27 rural communities within an approximately 5 km radius of the reservoir. Seventeen of the 27 communities were determined to be directly impacted by the project. During the course of the project two of these communities were blended into larger, neighboring communities referred to as the project-affected communities. The largest of these communities is Raymond Camp, located right outside the main entrance to the Mt. Coffee site. Raymond Camp residents have been primary beneficiaries of the activities carried out under the project, and in late 2016, benefitted from electrification as a result of the Mt. Coffee Project. Raymond Camp has also been the community most impacted by the project, due to its adjacent location. The communities that surrounded Mt. Coffee hydropower plant and reservoir span three townships - Harrisburg, Mt. Coffee, and Arthington.

In Figure 11 below,



- Villages within the immediate surrounding of Mt Coffee HPP**

  - Green houses: settlements directly affected (physical and economic displacement), had to move to Unification Town part of MCHPP social projects
  - Red houses: settlements directly affected (economic displacement, loss of farm land), part of MCHPP social projects
  - Purple house: resettlement villages for physical displaced settlements (green houses)
  - Yellow houses: settlements not directly affected, not part of MCHPP social projects, but benefited from access infrastructure and job possibilities
  - Green tent: deserted settlement

The map shows various towns and villages such as Nivah Town, Bucky Town, Zee-Echo Town, Vanah Town, Cboro, Wankai, Wanchang, Salan Town, Zhenji, Vanyue Town, Wanchang, James Mulish Town, Nyongpo, Virginia Town, Buzzo Quarter, Enck Town, Raymond Camp, Unification Town, Miller Town, and others. A scale bar indicates 3 km.

the defects monitoring period and it was observed that none of the wells had been drilled to the required depth. Attempts were made to force the contractor to rectify the issues, but no resolution was reached. Redrilling the wells and replacement of the pumps was then instructed to Dawnus, one of PIU's international contractors but then their contract was terminated after their expatriate staff abandoned the site in March 2019. The remaining work was then awarded to PSM and completed.

- **Community-Led Total Sanitation**

Raymond Camp located right outside the project gates was greatly affected by a population influx during the construction phase of the project leading to protracted sanitation issues that almost rose to the point of a public health emergency during 2015-6. Among concerns that the village and its immediate surroundings (including Mt. Coffee) could become a node for disease transmission, an intervention was necessary. Furthermore, interaction between the community, PIU and MCC/MCA led to community expectation of external subsidies and support for WASH improvements. As a government development project, Mt. Coffee had to conform to the government water, sanitation, and hygiene (WASH) policy, which promotes a Community-Led Total Sanitation (CLTS) approach. The approach was included in the local contractor's scope as part of the WASH Committee training and was employed under a 2017 WASH program implemented by the PIU. Given the transient nature of the community at Raymond Camp, however, the CLTS approach could not be used to address the community needs or the project's obligation to provide sanitation infrastructure to its resettled community, Unification Town.

One of PIU's consultants was tasked with sub-consulting experts in rural sanitation to address the issues, and in 2016 work began on the design and construction supervision of double-pit VIP latrines in Unification Town, and of a pay-for-use market latrine in Raymond Camp. PIU procured the materials and construction labor was drawn from the two communities.

- **Erosion Protection**

Under the ESMP, the contractors had a responsibility of ensuring that the areas outside of the re-established reservoir that were used temporarily as borrow areas, storage areas, or for project construction, be re-vegetated to prevent erosion. In addition, the Project was responsible for clearing trees and vegetation from the reservoir area prior to impoundment. However, during the clearing of the reservoir, the cutting of trees was extensive and went too high above the new waterline, exposing the land to damaging erosion. None of the construction contracts included the obligation for re-vegetation or erosion protection. In 2017, a scope of work was agreed and Norplan-Fichtner was sub-contracted to undertake the works. Following discussions between the PIU and MCC, the need to carry out further erosion protection at 13 of the reservoir infrastructure crossings was also identified and completed in July 2018.

- **RAP implementation**

This part is covered under ESP/Resettlement Action Plans

- **Survey of Replacement Land for Affected Persons and LEC Deed**

To assist with implementation of the Project RAPs, LEC signed an MOU with the Ministry of Mines and Energy (MME) in January 2014, through which the ministry would carry out three main tasks:

- Surveying and securing replacement land for affected persons,
- re- establishing the deed for LEC at Mt. Coffee, and
- re-establishing the right of way for the transmission lines.

MME completed most of the tasks outlined in the MOU by October 2018, but provision of the final land allocation maps as well as probating of the LEC deed were outstanding at the time of closing of this Activity.

- **Verification of Deeds and Re-establishment of Right of Way for Mt. Coffee Transmission Lines**

To assist with implementation of the RAPs for the Mt. Coffee transmission lines, an MOU was signed between LEC and the Ministry of Public Works (MPW) in June 2015 for assistance with verification of deeds for property owners within the right of ways of the Mt. Coffee transmission lines, and issuance of stop orders where structures encroached on the ROW. No invoice was ever paid against this MOU and the cooperation proved unsatisfactory.

- **Rehabilitation of Raymond Camp Health Clinic**

The PIU and the Ministry of Health prepared an MOU to facilitate the rehabilitation and upgrading of the health clinic in Raymond Camp, Harrisburg. The original Mt. Coffee ESMP budget contained \$100,000 for infrastructure improvements to the clinic, while the MOH was expected to provide staffing, training, and medical equipment and supplies, as well as ongoing funds for operational costs.

- **Fish and Fisheries Baseline Assessment**

The ESIA highlighted the project's impacts on fish habitat and migration as one of its stronger (category 3) impacts. The migration pattern of some fish species was expected to be interrupted by the dam's rehabilitation, and entrainment of fish through the turbines could occur during their downstream migration. LEC signed an MOU with the Bureau of National Fisheries to undertake studies that were intended to map the species in the project section of the St. Paul River, and assess their migration and spawning patterns.

- **Environmental & Social Performance**

Three framework documents guided the Mt. Coffee project's environmental and social performance:

- Environmental and Social Impact Assessment (ESIA),
- Environmental and Social Management and Monitoring Plan (ESMP), and
- Resettlement Action Plan (RAP)

Overall, because the project was a rehabilitation of a previously existing plant, and the transmission lines were re-established in mostly the same rights of way, the negative impacts were found to be few, manageable and were outweighed by the positive impacts of the project. The negative impacts included interruption of the river continuum, which resumed when the pre-war dam was breached in 1990; a change in the river discharge downstream of the rehabilitated dam; change in the habitats of river fish and some land flora and fauna in the area of the reservoir; and loss of some post-1990 agricultural land that was planted in the reservoir, as well as loss of some privately owned properties and crops along the transmission line corridors. Population influx affected settlements located closest to the project site. The addition of the Emergency Spillway in 2016 resulted in additional loss of both agricultural and private land downstream of the main dam, and 210 people had to be relocated.

- Environmental and Social Impact Assessment

The ESIA was hampered by two main issues: a lack of available data, due largely to loss of data during the war; and difficulties identifying the exact areas that would be submerged by the reservoir, due to complex topography and dense vegetation. While anecdotal evidence of residents was used, the ESIA emphasized the importance of carrying out a proper topographic survey and marking the boundaries of the future reservoir in the field. Overall, the ESIA concluded that there were no impacts that would have to be qualified as strongly negative and that mitigation was possible for all identified impacts for which it was required. The most important negative impact was on the local population, but the report concluded that this aspect could be mitigated, by means of adequate compensation. Mitigation measures were proposed for the identified impacts, and an ESMP developed.

– Environmental and Social Management Plan

The ESMP prepared for the project included detailed information on mitigation measures related to air pollution, noise, erosion, waste, water quality, fish and fisheries, vegetation, occupational health, and communicable diseases. The ESMP provided guidelines for the management plans required from the project contractors. The main priorities for the Owner during the pre-project and construction phases were identified as ensuring proper reservoir clearing; carrying out water quality monitoring in at least three locations; fish and fisheries monitoring; and management of social impacts, to include public consultation, archaeological management, public health and safety management, compensation, and establishment of a grievance mechanism. Operational priorities were also defined to guide late and post-project phases.

The ESIA/ESMP report for the Mt. Coffee transmission lines was based on the construction of two 66-kV transmission lines erected in the original right-of-way (ROW) to connect the Mt. Coffee plant with the Bushrod and Paynesville substations, respectively. The right of way was given as 150 feet, located at a distance of 75 feet from the centerline of existing roads. At the time of the assessment, the ruins of pre-war towers along Pipeline Road were used as a basis for a portion of the Paynesville route, and pre-war ROWs were used otherwise. The impacts considered in the ESIA/ESMP included water quality, soil, vegetation, wildlife (in particular birds), waste, air quality, noise, and health and safety. Socioeconomic impacts were considered, including land use and cultural heritage. None of the negative impacts were considered to be of high impact, and mitigation measures were identified.

– Resettlement Action Plans

On the MCRA, the resettlement action plan was applicable to communities affected by rise in water levels due to construction of the project structures, those who would be in the path of water discharged through the spillway, and the construction of the two power transmission lines. The final RAP for the main project was accepted by the project funders and publicly disclosed in late March 2015. The RAP process included extensive public consultation, as well as surveys to collect socioeconomic, fishery, and farmland data. The GoL identified those individuals affected by the project, quantified the impacts on their assets and livelihood, and compensated them for the losses and ensured replacement in kind.

The main focus of the RAP was the impact caused by refilling of the reservoir. Each of nearly 200 farmers who had established farms in the reservoir after the destruction of the pre-war plant was compensated for lost trees and crops and provided with replacement land. The farmers also received training in financial management, and village savings and loans were established to assist with community development. Literacy training was also available for those who chose it. The PIU also provided agricultural training.

Three villages (Buzzi Quarter, Voinjama, and Two Brothers) were relocated by the project to safeguard them from flooding risks due to the Emergency Spillway. Their communities were provided with new houses with latrines and showers, and they received financial literacy training. People within the corridors of both transmission lines were compensated for any impacted crops, trees and structures. Those suffering income losses during this process were compensated for the lost income, while people whose houses and trees would be restricted from extension or future growth were also compensated for the imposed restrictions.

The Table below shows the total compensation for the main project's PAPs.

Table 14: Total Project Affected Persons Compensated in Reservoir RAP

Item	Quantity
PAPs identified to be affected in RAP reservoir	154
PAPs identified in the construction site	37
PAPs to be monitored related to reservoir RAP	11
Miscellaneous (graves, canoe, etc.)	-
<b>Total PAPs affected by loss of farmland (Reservoir RAP)</b>	<b>202</b>
PAPs provided with Replacement land	202
<b>Total Compensation cost</b> (reservoir, construction site, farms, training, irrigation pumps, etc.)	<b>\$ 462,903.67</b>

The total RAP budget also included funds for the access infrastructure (\$100,000), a witness NGO, agriculture training, and other livelihood training for a total of \$893,513. Once payment of all Reservoir RAP affected persons was completed their financial literacy training started. Basic literacy training was also delivered to participants lacking the knowledge to read and write. One hundred and forty-eight (148) people (60% male, 40% female) from the affected communities in Harrisburg, Arthington, and Mt. Coffee townships benefited from the training.

Furthermore, the RAP recognized that the replacement land was likely to be less ideal for the farmers previously growing water-intensive crops in the reservoir land, so as a pilot program, the PIU bought one irrigation pump one for each of the seven communities engaged in vegetable farming as a source of income. Seventy vegetable farmers were trained in pump operation and maintenance and vegetable production as well as crop management. However, the PIU decided not to scale up the program following an assessment visit by MCC, which planned to implement a livelihood development program in the area that would include improved farming methods.

#### Transmission Lines RAP

Originally, the RAP for the Bushrod and Paynesville power transmission lines was to be administered with funding from the World Bank, as part of the regional CLSG transmission line project. However, since the Mt. Coffee project was to be completed significantly sooner than the CLSG project, the transmission lines RAP had to be moved late into the Mt. Coffee Project. The original plan was not acceptable to the Mt. Coffee funders so the PIU requested its own RAP Consultant to assist with upgrading it.

Due to significant changes that occurred during the Ebola outbreak, RAP data collection was completely redone along both transmission line corridors, resulting in a new sum of 430 PAPs for Bushrod and 549 for Paynesville. The total budget was \$185,172 for the Bushrod line RAP and \$226,488 for Paynesville.

Given the more urban nature of the area compared to Mt. Coffee, there were many challenges to resolving issues with the affected communities, which includes court challenges against LEC some of which that are still open. At the close of the project, a total of \$262,527 had been paid to 607 PAPs.

Table 15: Total PAPs and compensation along Mt. Coffee Transmission Lines

Item	Bushrod	Paynesville	Total
<b>Total PAPs</b>	<b>414</b>	<b>450</b>	<b>864</b>

Item	Bushrod	Paynesville	Total
Entitled to Compensation	281	350	631
Paid	275	332	607
Outstanding payments (includes no contact and disputes)	5	18	23
No Contact to the Owner	3	8	11
Not Entitled to compensation	133	101	234
No Comp Agreement / signed	94	49	143
No Comp Agreement / not yet signed	37	9	46
No Comp Agreement /no contact to the owner	1	35	36
Belongs to GOL	2	9	11
<b>Total Amount paid to the PAPs</b>	<b>\$ 131,953.39</b>	<b>\$ 130,573.41</b>	<b>\$ 262,526.80</b>

As previously noted, there were a number of pool-funded PIU activities that were implemented side-by-side with the MCSA sub-activities, at times with the same contractors/consultants. These sub-activities are identified in the descriptions below.

- **Hydropower Foundational Training**

The plan to conduct the hiring and training was called the “Early Recruitment & Training Plan” and consisted of three phases of training. The first phase saw twenty participants training in the basics of hydropower operations, maintenance, and management at the Kafue Gorge Regional Training Centre in Zambia in 2016. The second phase was carried out in 2016-2017 by Voith, and consisted of familiarization with specific Mt. Coffee equipment, coupled with detailed equipment training by Voith and the other contractors at their facilities overseas. The third phase, which was to consist of utility best practices training, either at Manitoba Hydro in Canada or the Tennessee Valley Authority in the US was not budgeted for or carried out.

- **Project Documentary**

In July 2015, the PIU decided to produce a video documentary in an effort to document the project as a record keeping, public relations, and media awareness tool. The documentary was to illustrate the challenges that arose from the fast-track nature of the project and tell the story of the various actors on the project from the area’s history through to project completion. The documentary would come in two versions - a short version, for TV broadcasting, posting on Web site/internet, and presentation by and for donors: and a long version containing more details of the implementation. One aim of the funders was that the documentary would be undertaken by a local Liberian firm, as a capacity building activity. A 13-month contract financed using project funds was signed between LEC and Light Communications Investment in 2016. To assist the PIU with technical oversight of the documentary, a contract was signed between LEC and an international consultant using PIU local operations funds. The documentary was completed in 2018 and the final versions distributed in December 2019.

- **Miscellaneous Consulting**

Stanley Consultants performed a condition assessment of the powerhouse, geotechnical and site investigations, a topographic survey of the reservoir, and documents for the generating equipment procurement.

- **Panel of Experts**

The Panel of Experts was to provide an objective opinion on technical aspects of the project including dam safety, as well as environmental/social safeguards aspects. It consisted of experts in dam safety,



electromechanical equipment, civil works, and environmental/social safeguards. Their scope of work would include reviewing planning and feasibility studies, detailed design and construction documents, and environmental and social impact mitigation plans and measures, and providing opinions on these issues under the direction of the PIU. Panel members were employed on a part-time basis and paid on a time and expenses basis. Panel members produced reports in the following areas:

- a. Hydrology
- b. Geology/Geotechnical
- c. Dam Design/Dam Safety
- d. Hydropower/Mechanical/Electrical Engineering
- e. Environmental/Social Impact Mitigation & Monitoring

- **Emergency Planning and Dam Break Modelling**

In 2017 through 2018, Hydrology and Risk Consulting Pty Ltd (HARC) of Australia carried out dam break inundation mapping and finalization of an Emergency Preparedness Plan. The procurement was done through restricted bidding with the prior approval of all stakeholders.

- **PIU Web Site**

Through a contract financed by the Government of Norway under its support to PIU local operations, Computer Frontiers Inc. of the US performed web site design, development, testing, launch and recurring services thereafter to include the domain name, hosting, and technical assistance.

- **Water Quality Monitoring**

This was a priority requirement of the project ESMP and was undertaken using both continuous monitors for physical parameters, and quarterly testing for bacteriological, chemical, and physical parameters. The testing was accomplished either through a foreign laboratory or using a portable testing kit. Four different sampling locations were utilized throughout the project.

LEC was the implementing entity for all the above MCSA sub-activities.

The next sub-activity was overseen by MCA-Liberia as Accountable Entity, with LWSC as the Implementing Entity.

- **Raw Water Pipeline:**

Under this Sub Activity, MCA-Liberia covered the re-construction of the raw water intake at MCHPP from the powerhouse to the MCHPP site boundary; and the reconstruction of the raw water transmission line from MCHPP to the White Plains WTP.

The Millennium Challenge Account-Liberia (MCA-L) and the Liberia Water & Sewer Corporation (LWSC) agreed to construct a new raw water intake pipeline from the dam of the MCHPP to the White Plains WTP.

The project replaced the original 36-inch (900 mm) diameter pipeline that was destroyed during Liberia's civil war with a new 48-inch (1,200 mm) diameter pipeline. The new



Figure 12: Raw Water Pipeline Intake at MCHPP Under Construction

pipeline is 4.7 km long and generally follows the original alignment of the pipeline route with small deviations. It will improve water quality to the municipal water system as the original location of the intake pipe resulted in poor water quality and salty water during the dry season when the St. Paul River level is low.

The pipeline project delivers water from the dam using gravity flow, saving LWSC an estimated US\$ 780,000 a year in electricity costs to pump water to the water treatment plant. The US\$18 million pipeline will also improve the reliability of the water supply to nearly 1 million residents of Greater Monrovia.

MCA-Liberia contracted Denys, NV (Belgium) to design and construct the pipeline and Nicholas O'Dwyer (Ireland) as the Engineer for design review and construction supervision. The pipeline was originally expected to be completed in June 2020. This was later revised to November 2020 due to variations and claims that increased contract price from \$14.3 million to about \$16 million, an increase of more than 11%. The main reasons for the variations and claims were:

- RAP implementation was awarded to the Contractor. It was included as Optional in the original contract and exercised after successful completion of the RAP and ESIA.
- Construction of wells and supply of associated spare parts
- Improved ecosystem restoration measures were implemented.
- Financial management training for the project affected persons.
- Funding of items were provided to the local communities including COVID-19 relief washing station materials, community townhall standup,
- Pipeline route change due to LEC's concern with the condition of existing cable trenches near the MCHPP powerhouses
- Modifications to design and procurement of materials due to the prohibition of deep excavations near the powerhouse of the MCHPP
- The pipeline design change necessitated change in material from buried ductile iron to above-ground steel. The intake area was also altered to avoid excavations that could destabilize the surrounding rock.
- Inlet valves at the water treatment plant were replaced at request of LWSC.
- Change in government requirements regarding the cargo tracking system and charges.
- Contractor was also to request a no-cost time extension, through end of November 2020 due to MCHPP opening flood gates resulting in their work area flooding and affecting work progress.

*Table 16: Raw Water Pipeline Contracts*

Contract Description	Contract Type	Company/ Consultant	Contract Amount	Contract Date
Design Review and Construction Supervision of the Raw Water Pipeline Project	Consulting	Nicholas O'Dwyer Limited	\$ 1,785,785.29	10-Oct-18
Design-Build Raw Water Transmission Pipeline, from Mt. Coffee Hydropower Plant to White Plains Water Treatment Plant	Works	Denys NV	\$ 14,213,996.19	31-Jan-19

#### (v). Fishery Studies

The Sub Activity was part of a watershed management plan that initially included climate change and fisheries studies. Anticipating the rehabilitation activity's environmental and social impact on the surrounding communities and environment, the MCA-Liberia, conducted studies on fish populations in the hydro plant watershed. Based on the results of these studies, MCA-Liberia took steps to prevent threats to the river prawn. The prawns migrate between fresh water and saltwater to lay eggs during the rainy season. Mitigating a decline in the prawn population positively impacts surrounding communities by controlling the spread of disease and by protecting a source of livelihoods for



community members who fish the prawns. There was concern that the dam cut off flow from the St Paul and during the dry season could lead to salinity (due to tidal flows) and the previous intake down by the treatment plant.

Following the study, MCA-Liberia was to fund construction of a passage to allow the river prawns to successfully migrate and lay their eggs. The passage would allow the prawns to safely move from one side of the dam to the other, thereby stabilizing their current population.

*Table 17: Fishery Studies Contract*

Contract Description	Contract Type	Company/ Consultant	Contract Amount	Contract Date
Fishery Study	Consultancy	MRAG Ltd	\$ 253,290.00	

Achievements of this study are discussed under the ESP section.

### c) LEC Training Center Activity

The LEC Training Center Activity aimed to improve capacity in the energy sector by building LEC's technical, operational, financial, and administrative capacity, and forming the core base for training of technicians in the electricity sector. This was to be achieved through the following sub-activities:

- Construction, furnishing, and provision of equipment and training materials for the LEC Training Center
- Development of a training curriculum in core areas of generation, transmission, distribution, electrical, mechanical, hydroelectric, other specialized training
- Training for the staff of the LEC

The activity faced financial constraints during the rehabilitation of Mt. Coffee and LEC failed to comply with its contractual obligations in relation with MCHPP operation, maintenance and training (OMT) contract. This fact represented a major risk in continuation of Mt. Coffee Rehabilitation Activity and therefore, it was recommended that Compact funds be reallocated to pay for a portion of the OMT contract. Continuation of the OMT contract was considered as a protection of MCC's investment as it provided for long-term sustainability by building the capacity of the local LEC staff. To make this possible, MCA-Liberia proposed the restructuring of the Energy Project that involved defunding the activities related to the construction of the LEC Training Center as well as the LEC Customer Service Center prototype. Also, MCA-Liberia wished to additionally reallocate funds to permit the Compact to financially support the prawn passage supervision contract and certain activities that were intended to support the standing up of the LERC.

The sub-activities that were implemented under LEC Training Center Activity include the development of a training curriculum, training of trainers, training of staff, and provision of training equipment and tools. The training program envisaged following the reallocation of funds is to support the development and delivery of an "on the job" training and assessment model at LEC in order to enable LEC deliver training to its staff, thereby strengthening its institutional capacity through staff training and development.

*Table 18: LEC Training Center Activity Contracts*

Contract Description	Contract Type	Company/ Consultant	Contract Value	Contract Date
LEC Training Center Program Design Consultant	Consulting	Azorom Limited	\$ 452,760.00	16-Mar-18
Utility Training Consultant for the Establishment of Enterprise-Based Training Center at LEC	Consulting	The Tata Power Company Limited	\$ 972,170.00	18-Dec-19

### d) Energy Sector Reform Activity

The aim of the Energy Sector Reform Activity (ESRA) was to provide support to the key institutions responsible for policymaking, investment planning, asset management, and environmental and social oversight of the energy sector. These institutions were MME, LEC, and the Environmental Protection Agency (EPA).

The Ministry of Mines and Energy (MME) was established by an act of legislature in 1972. It has a mandate over activities relating to mineral, water and energy resource exploration. MME is currently guided by the 2009 Energy Policy. Through its Department of Energy (DOE), MME is responsible for the governance of the energy sector, including the power sector and its subsidiary institutions. It does this through formulation of national energy policy and master development plans. It currently leads the concession granting process for electricity-related private sector investments.

The EPA was the GoL agency responsible for environmental management in the country by implementing the national environmental policy and sustainable management law for the protection of natural resources. In the initial program design, MCA-Liberia was to fund EPA's institutional capacity development as well as collaborate with them to ensure compliance with relevant local and international environmental laws and policies.

MCC funding supported three Sub-Activities:

(i). Establishment of an Independent Regulator

Building upon planned programming from the European Union (EU), which focused on the development of MME's Department of Energy (DoE), this Sub-Activity intended to assist the DoE in establishing and standing up an independent regulatory agency over a three-year period through:

- establishment of an electricity regulation unit, including the unit's start-up staffing costs and other operational costs.
- a situation assessment for the electricity sector.
- development of a financial model for the electricity sector.
- studies, including demand, willingness to pay and connection assessment analyses, and a cost-of service study; and
- design of a regulatory information system.

With an independent regulator now created, for the first time in Liberia, electricity customers do have an independent authority with whom to file complaints against electricity suppliers for any wrongs. LERC will enable public participation in electricity rate setting and other matters such as system safety and reliability. LERC will also support efforts to fight power theft by sanctioning electricity suppliers who fail to manage their systems.

The achievements of the sub-activity so far have been:

- Setting up of licensing and tariff regulations,
- Approval of an interim tariff for LEC, lifeline tariff, and special LWSC tariff, among other things.

Upon the successful set up of LERC, the next step was offering Stand Up support for the Commission. MCA-Liberia supported LERC's start up through covering costs of staff compensation, office space, equipment, furniture, capacity building training and research studies. Upon its establishment, LERC would use the energy studies funded by MCA-Liberia to guide its decision making, strategic and master planning. The regulatory studies yielded information on power producers and operators, customer demand, and willingness to pay. Regulatory Studies conducted included:

- Census of Electricity Operators (situation assessment for the electricity sector);
- Electricity Cost of Service Study.
- Development of a Cost Reflective Electricity Pricing Model for LERC.
- Demand, willingness to pay and connection assessment analyses,
- Design of a Regulatory Information Management System (RIMS). Development of the RIMS is to outlive the compact
- Least Cost Power Expansion Study/Plan.

There were two assignments planned under the RIMS design:

(a.) RIMS Requirements Development, Advisory Services and Technical Oversight:

This item was fully completed, producing two key documents: Functional Requirements Document and Technical Specification Document (Hardware and Software Requirements).

(b.) RIMS Development, Implementation & Deployment.

The procurement process for this assignment was cancelled due to lack of post-Compact LERC funding to implement any portion of the planned assignment that will be assigned to LERC. The BPM (Business Process Management) which is a family of a software development framework that enables the rapid automation of business processes was not done. That is the system to record and use regulated entities' data in real time (external processes). However, the internal business processes of LERC which was part of the RIMS objective, specifically, the Accounting and HR software were procured and implemented under a separate contract.

(ii). *Institutional Strengthening for the Environmental Protection Agency.*

This sub-activity's aim was to enhance the capacity of the EPA to better manage its core functions, including environmental licensing/permitting, review and approval of environmental and social impact assessments (ESIA), environmental and social management plans (ESMP) and resettlement action plans (RAP), and monitoring and oversight of environmental and social impacts and risks in both the electricity and road sectors. MCC funding was intended to support:

- provision of technical assistance and capacity building for key EPA staff; and
- provision of selected materials and operational support in the form of technology, monitoring and laboratory equipment, vehicles and information technology (IT) improvements to facilitate the EPA's work.

However, the sub-activity was later descope and part of the money used for the Raw Water Pipeline.

(iii). *Management Support to LEC Sub-Activity*

LEC served as the Accountable Entity for this Sub-Activity, through which the Compact supported the tendering and implementation of a management services contract (MSC) for LEC.

When rehabilitation of Mt. Coffee began in 2012, Manitoba Hydro International (MHI) was contracted as the project implementation unit (PIU) and tasked with managing MCHPP rehabilitation on behalf of the GoL and donor partners. The PIU had responsibility for ensuring the project was technically sound and completed on time and within budget, for managing all administrative, financial, legal and environmental matters, and for overseeing all contractors and suppliers. MHI generally achieved connection targets but was unable to reduce nontechnical losses. During the Ebola crisis, MHI no longer achieved performance targets. The MHI contract ended in late 2015.

An interim management team of local Liberians managed LEC from January 2017 until December 2017, during which time LEC's financial and operational capabilities deteriorated. LEC's financial position was also badly eroded by the IMT's hiring more staff and providing salary increases of up to 30% thereby driving up the wage bill went up and depriving LEC of badly needed cash for operating and capital expenses. This was one of the fundamental challenges that was not anticipated when the MSC was tendered in Feb 2017.

Hiring of the new Management Services Contractor, ESB International, was facilitated by Tetra Tech through an arrangement with the U S Agency for International Development. Tetra Tech directed the procurement and performed some of the oversight work on the MSC until a Contract Manager was hired. This short-term plan, selected by the GoL and informed by a study of public management and private sector participation options for LEC, was intended to help lead to a financially sustainable utility. ESB International signed management services contract that had a three-year initial period (January 2018 – January 2021) followed by a two-year optional period, which was exercised by the LEC Board of Directors as a temporary so-called Bridge Period until a new management services

contract funded by the World Bank, under its own terms and conditions, could come into effect. The primary aim of the MCC-funded management services contract was to help turn LEC around into a more operationally and financially efficient and effective corporation.

ESBI's work was supervised by a Contract Monitoring Consultant (CMC) for Management Services Contract (MSC), Azorom Ltd.

*Table 19: Management Support to LEC Contracts*

Description	Type	Company	Contract Value	Contract Signed
Contract Monitoring Consultant (CMC) for Management Services Contract (MSC) for Liberia Electricity Corporation (LEC)	Consulting	Azorom Ltd/	\$ 1,675,955.00	6-Jul-17
Management Service Contract (MSC) for Liberia Electricity Corporation (LEC)	Consulting	ESBI Engineering & Facility Management Ltd.	\$ 16,601,233.00	8-Nov-17

When ESBI assumed the MSC in 2018, it and MCA-Liberia/MCC found themselves faced with a utility which was in a far worse financial, commercial and organizational state than originally understood. MCC had not conducted an adequate political economic analysis before establishing the MSC, and neither did ESBI conduct adequate due diligence. No one knew the extent of LEC's financial and infrastructure problems. ESBI found it had insufficient resources for operating and capital expenses, and inadequate support from the LEC Board and GOL. A 2020 interim evaluation report of the Energy Project by Mathematica states: *"The MSC has been unable to turn around LEC as planned. Two years into ESBI's leadership, and despite important operational improvements, LEC's financial situation has worsened. LEC has increased generation, losses, debt, and responsibilities. LEC's severely constrained resources undermine progress. Generator and grid maintenance are ongoing but inadequate due to shortages of equipment, materials, vehicles, and parts."*

Despite all these challenges, and COVID-related disruptions, ESBI made significant progress in diagnosing the Utility's problems, normalizing customer lists, developing human resource policies, creating or recreating financial systems, revising contracts, improving utility data and records, and launching the Senior Resource Pool training. these achievements include:

- Improved operational efficiencies, thereby reducing Operating costs by approximately 14% and fuel costs by 17%
- Network performance has resulted in blackouts reducing by over 50%, dramatically improving both SAIFI and SAIDI.
- Brought back in service various pieces of electrical equipment, including 75% of World Bank-funded generators and over 160 faulty transformers.
- Successfully implementation of the Integrated Management System (IMS), giving greater control and oversight, a significant feat for any utility let alone one coming from such a low base.
- Almost all LEC staff have received some element of training or development relevant to their role during the 3-year period.
- LEC customer base has grown from 25,000 in 2018 to over 65,000 in 2020.
- LEC has instituted a Community Outreach programme engaging with each and every community where transformers are replaced to gain their support in securing the assets.
- Through the limited introduction of LEC funded High Security Metering and customer normalizations, LEC has delivered a 4.5% reduction in Commercial losses from YE 2019 to YE 2020.
- LEC has piloted an on-site metering arrangement which is the customers preferred model, giving them greater ownership and responsibility.

The Energy Sector Reform Activity was restructured due to implementation delays. This process involved defunding of the Institutional Strengthening for the Environmental Protection Agency (EPA) sub-activity. The available funds were then reallocated to the rehabilitation of the raw water transmission pipeline from MCHPP to the White Plains Water Treatment Plant. The sub-activities of the Energy Sector Reform Activity were finalized by the CED as follows:

- Support for the Stand up of LERC.
- Management Services Contract (MSC) for LEC.
- Contract Monitoring Consultant (CMC) for supervising the MSC.
- Regulatory Information Management System for LERC; and
- Cost of Service Study, Willingness to Pay and Demand Analysis for LERC

### **3.4.2. ROADS PROJECT**

The Roads Project initially consisted of two interconnected activities designed to build a foundation for Liberia's national road maintenance planning and execution and build capacity within the sector.

#### **I. NATIONAL ROAD MAINTENANCE ACTIVITY (\$15.0 MILLION)**

The National Road Maintenance Activity was initially designed to pilot, construct, and equip at least two regional maintenance centers ("RMC"), and match Government contributions to periodic maintenance through a matching road fund to better maintain and sustain Liberia's paved roads and increase institutional capacity in the sector. This activity had two sub-activities:

##### **a) Construction of Road Maintenance Centers Sub-Activity.**

At project design, MCA-Liberia was to support the design and construction of two regional pilot RMCs, one located in the western region's Tubmanburg and Bomi Counties, and another in the southeastern region of Liberia (River Gee County). The original project design included an option of potentially constructing three additional RMCs after the successful completion and assessment of viability of the first two RMCs. The GOL was represented through the Ministry of Public Works (MPW) with its staff at national level and county level in the selected counties.

##### **b) Matching Road Maintenance Funds Sub-Activity.**

MCA-Liberia Compact funds were to finance periodic road maintenance works through an incentive matching fund, the National Road Fund. GOL was required to establish the National Road Fund (NRF) and the Road Fund Administration (RFA), a stand-alone autonomous entity, during the first year of the Compact. The RFA would be responsible for managing the National Road Fund. MCC intended to match GOL's contributions to periodic road maintenance made to the National Road Fund on a one-to-one basis up to \$8 million during the Compact. The Compact's contributions to the National Road Fund would be based on measurable indicators of performance on maintenance planning, capacity, and implementation. The GOL was represented through the Office of the National Road Fund, which was to be established during the first year of the Compact.

#### **2. ROADS SECTOR REFORM ACTIVITY (\$6.07 MILLION)**

The Roads Sector Reform Activity was designed to build capacity and provide technical assistance at the national and regional levels. The GOL was to be represented through the MPW as well as the Ministry of Transport (MoT) and Liberia Institute for Statistics and Geo-Information Systems (LISGIS). The Road Sector Reform activity included the following sub-activities:

##### **a) Network Analysis and Data Collection.**

In partnership with the GOL, the United States Department of Transportation (USDOT) intended to develop a national roadway inventory report and database by:

- i. Collecting roadway condition data to support a road network analysis throughout Liberia including primary roads, secondary roads, and feeder roads,
- ii. Collecting traffic volume data separated by mode and vehicle type in the dry and wet seasons on the primary and secondary road network,

- iii. Collecting any other data that feeds into MCC models or would feed into future models used by the GOL, and
- iv. Training future RMC staff to routinely update inventory collection work and successfully apply data for maintenance planning.

**b) Sector Reform/Institutional Strengthening/Capacity Building.**

This task was designed to direct the efforts of the roads sector working group to ensure that roads sector investments were coordinated with those of other major donors. The support provided was intended to further institutionalize the involvement of other donors in road maintenance activities and any other transportation planning and capacity building activities including:

- i. Providing capacity building related to the Axle Load Control Law,
- ii. Strengthening the administrative and operational framework of the National Road Fund,
- iii. Training and support in transportation planning methods,
- iv. Assisting in the development of a five-year road asset management plan for Liberia,
- v. Aiding urban transportation planning in Monrovia, and
- vi. Reviewing existing policies concerning road safety and developing a set of recommendations and framework of implementation.

**IMPLEMENTATION OF ACTIVITIES**

Roads Project activities were not sufficiently designed when the MCC Compact was signed. The periodic road maintenance works, which were to be matched with funding from the Matching Road Maintenance Fund Sub-Activity would be selected based on the Highway Development and Management-4 (HDM-4) analysis. Meanwhile, the Roads Sector Reform Activity had a nation-wide geographical coverage for both sub-activities.

● **National Road Maintenance Activity**

In October 2017, the activity was modified and many of the related conditions precedent (CPs) for the Project were adjusted. The changes included the following:

- The Construction of Road Maintenance Centers Sub-Activity was eliminated due to implementation constraints. The Sub-Activity's budget of \$7 million was reallocated to the Matching Road Maintenance Fund.
- Matching Road Maintenance Fund Sub-Activity: A condition precedent was met when the National Road Fund Act was passed in 2016 and became effective in January 2017. This fund was dedicated to road and bridge maintenance works and committed levied road use charges<sup>4</sup> to raising revenue for the fund. The Act required that more than 60 percent of the funds be for road maintenance, and up to 40 percent be used for rehabilitation works. It also established the office responsible for the management and administration of the National Road Fund. That office became operational in May 2018. However, though a fuel levy of over \$29 million was collected, only \$3.5 million was secured for the Matching Fund Account, contrary to another CP. When the GOL could not deposit the entire fuel levy into the National Road Fund accounts, MCC withheld the \$8 million for the sub-activity. Together with the \$7 million reallocated from the now-defunct Construction of Road Maintenance Centers Sub-Activity, \$15 million in total was not disbursed.

**I) Roads Sector Reform Activity**

- Network Analysis/Data Collection: under the sub-activity, Volpe conducted a road network analysis which built a roadway and bridge and culvert inventory of the primary network. They also collected traffic volume data on primary and secondary roads for dry and wet season and led a condition assessment on primary roads (not bridges).
- MPW staff at the national and county levels, LISGIS staff, and MoT staff were trained in how to collect data and update the database. MPW involved its contractors, LISGIS, and the

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<sup>4</sup> Fuel levy, registration, and licenses fees to vehicles and drivers, entry fees levied on foreign motor vehicles, and charges to vehicles using the road.

University of Liberia in the data collection. The data provided by Volpe was used in the planning and preparation of the Five-Year Road Maintenance Plan (5YRMP) for 2019-2023, which was approved by the Inter-Ministerial Steering Committee (IMSC) in September 2018.

- The first Annual Update of the 5YRMP was completed in March 2019 based on Level 2 Calibration for HDM-4, incorporating the condition data collected under the training by Volpe, and expanded the plan to include maintenance of Secondary and Feeder roads
- MPW is continuing to collect/analyze data and update the 5YRPM annually to inform their collaboration with the NRF Manager to prepare the Annual Road Maintenance Expenditure Programs (ARMEP).

## 2) **Institutional Strengthening/Capacity Building.**

There were several achievements under this sub-activity:

- Volpe and subcontractor Booz Allen Hamilton conducted HDM-4 training for the MPW Road Maintenance Management Unit (RMMU) and the NRF staff. The training has enabled the staff to use HDM-4 as an effective/efficient tool for developing their data collection campaigns, updating the 5YRMP annually, and collaborating with the NRF on road asset management decisions for the ARMEP.
- Routine maintenance prioritization is done with Road Maintenance Planning System (ROMAPS), a software provided by GIZ (via their consultant Roughton International and is incorporated in the 5YRMP.
- The Road Asset Management System (RAMS) that will consolidate various systems within MPW to facilitate more effective maintenance planning and comprehensive management of the entire National Road Network was completed by NEXTEC Industrial Technologies (NEXTEC) on 14-Dec-2020. NEXTEC's contract includes a one (1) year Warranty period to continue providing technical support and training for ongoing improvements to the system.
- Additionally, procurements of equipment and supplies to support the RAMS are in-progress, which will enhance MPW's Annual Data Collection Programs, and ensure sustainability.
- An Act establishing a Road Agency to serve as an implementing arm has been drafted by the GOL with the expectation that the current IIU will become the Road Agency, and the NRF Manager is diligently endeavoring to implement measures toward the evolution of the agency into a Second-Generation Road Fund.
- In addition to MCC, there have been other active donors in Liberia's road maintenance, including the World Bank, AfDB, SIDA, GIZ, USAID and the EU. These donors' capacity building efforts are reported to be well coordinated, creating synergies. Under the Compact, MCA-Liberia held biannual donor coordination meetings for the roads sector. The GOL has an Infrastructure Technical Working Group which has monthly meetings with stakeholders in the roads sector at the technical level. There are also quarterly meetings at the policy level.

## 3) **Technical Assistance (VOLPE)**

The assistance from Volpe has been detailed above. Out of the \$21.07 million allocated to the Roads Project, \$5.0 million was allocated to the Volpe Center through an MCC federal interagency agreement covering a range of countries of which Liberia is one. Volpe's work was supervised by MCC's Transport and Vertical Structures group through this agreement. Volpe's services on Liberia concluded with the re-allocation of the unused funds for the RAMS. The unused \$1.18 Million portion of the original \$5 Million to Volpe was re-allocated for the RAMS Contract (NEXTEC) and Sustainability Support Procurements.

This sub-activity contributed to a shift by GoL toward transparency and beginning the implementation of a data-driven process to prioritize road maintenance projects. The early stages moved quickly to define the road project, and senior government officials were engaged to strengthen the GoL's commitment to the reforms. There were serious concerns of setbacks after the elections, but the new

administration (January 2018) actually made commendable progress, especially with regard to establishing a fully functional Office of the Road Fund. The government of Liberia has now established improved processes and enhanced technical capacity for the data-driven prioritization of road maintenance projects.

Challenges still exist however, in ensuring the government's commitment to adhering to the mandates of the National Road Fund Act, and implementing the maintenance works in accordance with the data driven process. Although the government moved forward to establish an improved process for setting road maintenance priorities, they were not able to meet the commitment to fully fund the Road Fund as required to receive MCC's matching funds. This resulted in the loss of \$15 Million in Compact funds, and may weaken future commitments to a transparent and technical process for maintaining roads. Sustainability will depend on continuing commitments by the government to these processes.

Overall, MCC, MCA, Volpe staff, and participating GoL staff worked collaboratively and contributed to important results on a challenging project of reforms. Except for the MRMF Sub-Activity, the project will achieve the design objective "...to build a foundation for national road maintenance planning...", which will provide useful lessons learned for similar future work.

*Table 20: Roads Project Contracts*

Contract Description	Contract Type	Company/ Consultant	Contract Value	Contract Date
Technical Assistance & Capacity Building to develop a National Road Inventory Database and support Sector Reform / Institutional Strengthening	Interagency Agreement with MCC	US DOT Volpe Center	Up to \$5 Million	2-Aug-2016
Supply, Delivery and Installation of Office Equipment for the New GSI Unit/MPW	Goods	Beaver Communications Inc.	\$ 19,744.60	9-Mar-20
Supply and Delivery of Office Furniture for the New GSI Unit/MPW	Goods	United Office Supplies & Equipment Company	\$ 1,900.00	9-Mar-20
Customization and Implementation of a Road Asset Management System (RAMS) for Liberia	Services	NEXTEC Industrial Technologies (Pty) Ltd	\$ 835,315.70	2-Jun-20
Equipment & Supplies for Sustainability Support to the RAMS	Goods	Procurements pending from Various Suppliers	~ \$130K	Pending

### 3.4.3. MONITORING & EVALUATION

#### • Objectives:

MCA-Liberia developed a Monitoring and Evaluation Plan, which was part of the action plan set out in the Millennium Challenge Compact. The M&E Plan, which was considered a binding document, supported provisions described in the Compact and followed principles stipulated in MCC's Policy for Monitoring and Evaluation of Compacts and Threshold Programs.

The objective of M&E was to provide high quality, accurate and timely data analysis of the designated indicators in the M&E Plan and on the Indicator Tracking Tables (ITTs). This would enable regular monitoring as well as interim and final evaluations of the Compact activities, and thereby ensure regular transparent and high-quality reporting on the Compact's progress to all the stakeholders.

To achieve these objectives, the M&E Plan:

- Described the program logic and expected results,
- Set out data and reporting requirements and quality control procedures.
- Established a monitoring framework and a process to alert implementers, MCA-Liberia.
- Described the evaluation plan.
- Specified roles and responsibilities.

The M&E Plan was to be based on four types of indicators:



- a) Goal indicators - measuring the economic growth and poverty reduction that occur during or, most likely, after implementation of the program.
- b) Outcome indicators - measuring intermediate effects of an Activity or set of Activities and are directly related through the program logic to the output indicators.
- c) Output indicators – describing and quantifying goods or services produced directly by the implementation of an Activity.
- d) Process indicators - measuring progress toward the completion of Project Activities.

The level of indicators to be measured is indicated in the Table below:

*Table 21: M&E Plan Indicator Types*

Indicator Type	Energy Project	Roads Project	Total
Goal indicators	0	0	0
Outcome indicators	20	10	30
Output indicators	3	5	8
Process indicators	6	7	13

The first M&E plan was not fully developed early on because some of the projects were not fully designed. The third and final version was approved in January 2021.

Each version of the M&E Plan had to be approved by the responsible AE's Boards prior to being sent to MCC for approval.

### • Implementation

The M&E Unit was staffed by one Director, an M&E Manager and two interns hired in the latter part of 2020. Upon entry into force (2016) the Unit was still in the process of developing and finalizing selected Compact's indicators and baseline.

MCA-Liberia managed the following sub-activities under its M&E Activity -

#### a) Monitoring Oversight

As part of the M&E process, monitoring oversight was designed as a key functionality of the MCA-Liberia for all projects within the Liberia Compact. However, the LEC's Project Implementation Unit (PIU) due to the fact that LEC served as an Accountable and Implementable Entity provided monitoring oversight of the Mt. Coffee Rehabilitation Activity. Monitoring oversight was provided by the M&E Unit for all Compact projects.

A first step in monitoring was the development or identification of key performance indicators that would be used to measure performance. MCA-Liberia did this working with MCC and technical teams from the IEs. There were issues with developing baselines due to scarcity of data from many of the IEs and technical assistance had to be sought from Tetra Tech for electricity data from LEC and MCC (Volpe) for roads data from MPW. Up to the time of writing, MCA-Liberia does not have all baseline data. The Roads indicators are still lacking partly because of inadequate engagement of all the parties to update those indicators and targets or availability of requisite data.

The first and second versions of the plan were approved by the MCA-Liberia and LEC boards.

Because of challenges with acquiring data, MCA-Liberia's M&E budget of \$5.5 million was revised so MCC could use \$2 million to directly guide data collection efforts through procured Evaluators for both Energy and Roads Projects, leaving MCA-Liberia to manage \$3.5 million.

Once both common and specific indicators were available, IEs were to collect monthly data which was reported on a quarterly and annual basis against the relevant indicators to MCA-Liberia. These indicators were part of the ITT that formed part of MCA-Liberia's Quarterly Disbursement Requests to MCC. The oversight sub-activity was hampered by many of the IEs lacking M&E capacity.

#### b) Capacity Building for M&E

MCA-Liberia worked with all IEs to strengthen capacities and capabilities of M&E units and staff responsible for data collection and reporting at LEC, LWSC, MPW, EPA, MME, MoGCSP and MPW. An individual consultant has been hired to help establish an M&E unit at LEC before CCD in May 2021. The PIU did not have an M&E unit

Changes made to the Roads project necessitated revisiting both the project logic and M&E activities for MPW. Over that waiting period, MPW started working with M&E protocols developed by other donors that were active in the ministry.

The M&E Unit however conducted training for six IEs: LEC, MPW, MoGCSP, LWSC, MME and EPA. The training was done using Ver2 of the M&E plan, which did not address the Roads Project. Version 3 was completed in January 2021 and covered LEC, RWP and the Key Performance Indicators for the Roads Project as well. IEs helped in developing the KPIs – both common and specific indicators - and providing the baselines. Initially, it was difficult getting baselines on all projects due to a lack of local data sources. The KPI targets were on-the-other-hand developed following economic analysis.

MCA-Liberia started with the KPIs from Qtr. 1 (Jan – Mar 2016) through Qtr. 16 as it continued collecting the actual data. Indicators for the LERC, RWP and the LEC Training Center have just been developed and the responsible IEs are working with the M&E Unit to provide the requisite data. MCA-Liberia reviewed the M&E plan prior to being forwarded to the BoD for approval.

#### c) Evaluation and Special Studies

- **Data Quality Review:**

The IEs were required to conduct and ensure regular internal reviews of the quality of data submitted to MCA-Liberia and MCC, support independent data quality reviews, and implement improvements based on the findings of both internal and independent data quality reviews (DQRs). The biggest challenge was by far the lack of adequate data to support the indicators. MCC hired Millennium Partners to perform a DQR for both projects in 2015 and 2016. Their report concluded there were no good sources for the electricity data, and they recommended undertaking the assets and customer mapping study, ACMS. There is another DQR underway as of February 2021.

- **Assets and Customers Mapping Study – ACMS**

The ACMS sought to address problems associated with locating customers on the grid, the location of grid assets, meter & network connectivity and processing of new connections. This study would help to identify illegal customers for disconnection or conversion to legal connection, improve LEC's ability to generate revenue, improve operational efficiency, reduce losses, build staff capacity, validate and reconcile customers on the ground with those in the billing system, and facilitate a coordinated effort to increase connections.

It also assisted LEC to:

- Obtain accurate and validated network asset and customers data to accurately report on MCA-L/MCC indicators and assist LEC achieve its KPIs.
- Reduce time taken to resolve customers' complaints of power outage and requests for new connections.
- Improve the enforcement of transparency in LEC business operations and internal accountability.
- Improve the planning, upgrading and implementation of T&D expansion projects on the national grid, and
- Define standards for the GIS data, and how other GIS projects will interface with the LEC Integrated Management System infrastructure in the future.

The study was implemented by LEC after the budget to outsource it was found inadequate.

Achievements:

In spite of the many challenges faced, M&E support had a number of achievements.

- One major achievement was the provision of monitoring tools to the IEs. The tools include the completed ITT and the identified baselines and targets. They also rolled out MCC's results-based framework to the IEs
- MCA-Liberia also invested in capacity building of the IEs – MPW, MGSCP, MME, LEC and LWSC.
- As of December, 2020, the ACMS had recorded 62.5% of the overall data collection of both assets and customers. From July 2020 and up to December 2020, 71% of the overall assets were collected, while the customer meter increased from 14% in October to 27% by December 2020. The ACMS is expected to achieve 95% of its objectives by end of March 2021.

Table 22: Summary of Network Asset & Customer Meter Updates (Dec 3, 2020)

Key Performance Indicator (KPI)	Planned target	Actual data processed	% achieved to date	Outstanding Variance
High Voltage (HV) Towers	900	806	86.6%	94
Medium Voltage (MV) Poles	10,500	8,523	81.2%	1,977
Medium Voltage (MV) Transformers	2,500	2,421	96.8%	79
Low Voltage (LV) Poles	40,000	8,483	21.0%	31,517
Customer Meters	115,000	30,901	27.0%	84,099

## Sustainability

One of the biggest challenges to sustainability of the office's achievements still remains the improvement of both institutional and individual capacities of the M&E units and their staff. The offices still do not have adequate resources and remain plagued by inadequate internet access, lack of computers, insufficient number of adequately trained staff, etc.

### 3.4.4. ENVIRONMENT & SOCIAL PERFORMANCE

#### MCA Administration of ESP Activities

MCA-Liberia was Accountable Entity for ESP activities that were different from those implemented by the PIU on the MCHPP Rehabilitation.

MCA-Liberia's Environmental and Social Management System Framework was approved in September 2017 as the guiding document for the Compact's environmental and social performance activities. These activities were either carried out or overseen by the ESP office, led by its Director.

Despite the important role required of the ESP office in the successful implementation of Compact activities however, the office was beset with challenges starting from the beginning of the program. The unit was greatly impacted by the inability to hire an environmental specialist for the position of ESP Director. The successful candidate was a public health specialist, so MCA had to hire a local individual consultant for additional support. MCC ended up providing significantly more support with the help of their independent engineers. The ESP director eventually left late in the Compact. No replacement was hired, and the team that was left behind was unable to cope with the office's demands. In the end, most outgoing ESP communications had to pass through the Deputy CEO, which created an inefficiency that prolonged the process.

The ESP office's staffing problems also impacted how the sector's contracts were managed. The lack of local staff caused the Compact's ESP deliverables to be largely reviewed by MCC and its consultants, often times having to re-write some of the work (e.g., White Plains RWP ESIA/ESMP and RAP).

Though the ESP office had trouble initiating or implementing environmental activities, it performed much better monitoring on-going activities. MCA-Liberia liaised with GoL's EPA for the granting of environmental permits and certification of compliance with environmental regulations. MCA-Liberia's ESP/GSI consultant, hired to mitigate the office's staff shortage, helped ensure environmental and resettlement aspects of each project were full integrated into bid documents. The consultant also participated in monthly meetings to review compliance with environmental and resettlement issues associated with the raw water pipeline project.

### **ESP Activities on the Energy Project**

The Compact's Energy Project activities requiring ESP oversight included the following:

- Completion of a fisheries study to determine the seasonal migration patterns of migratory species in the St. Paul River. The study would also evaluate alternatives for restoring migrations through the project area following rehabilitation of the dam. This was to result in the development of fish passage study to recommend infrastructure to allow for fish passage that would mitigate identified environmental/social impacts. As reported elsewhere in this report, this work was cancelled.
- Development of a Community-Based Natural Resource Management (CBNRM) plan (also known as the Watershed Management Plan). This comprised of the following sub activities:
  - Recommendations for a national watershed strategy in collaboration with key stakeholders from NGOs and GoL for the protection of the St. Paul River catchment.
  - Small scale agriculture training for communities to educate on how to utilize their land to maximize yield and generate economic activities.
  - Water, Sanitation, and Hygiene (WASH) – MCA-Liberia would lead efforts to build on the successes of the PIU in continuing technical support to communities around the reservoir. This support would lead to achieving and/or maintaining Open Defecation Free (ODF) status through WASH focused sub-activities within the CBNRM activity.
- Replacement of the raw water pipeline from MCHPP to White Plains Water Treatment Plant (WTP).

Unfortunately, many of ESP office's environmental projects did not achieve their objectives. Neither the community-based natural resource management project that was supposed to protect the watershed as well as address community needs, nor the WASH project meant to protect water quality and meet community needs, were done due to an inadequate budget. The prawn passage to protect migratory species at MCHPP was not procured either for mainly the following reasons:

- MCC and MCA-Liberia were not in agreement on key aspects of the activity's suitability, design and implementation methodology. This resulted in delays in the study itself and in the preparation of procurement documentation for construction of the pilot.
- The onset of the COVID-19 pandemic resulted in national and international lockdowns, impacting the staffing on the activity.
- COVID-19 related delays together with an approaching CED of Jan 2021 also meant that there was insufficient time to complete the activity.

The item's budget was also shifted to White Plains.

The procurement of hand-wells, and that of the WASH and CBNRM activities failed, and these contracts were never awarded. The funds that had been committed to these projects were moved elsewhere within the Compact.

On the Raw Water Pipeline sub-activity, there were pre-contract delays in preparing ESIA & RAP documents. Despite multiple iterations, the local environmental firm hired by the design-build contractor were unable to prepare acceptable documents. The contractor was eventually advised to hire an ex-PIU environmental consultant, who produced environmental documents that were eventually approved. Even with the hiring of the ex-PIU staff person, since she was hired late, MCC and its consultants had to provide considerable support to get the reports in final shape.

Upon start of construction of the Raw Water Pipeline, MCA-Liberia requested LWSC to assign one environmental staff to work with the contractors. The hope was that this local staff would take on environmental aspects of the work upon the project's handover. Unfortunately, the assigned staff was not paid & left several months after joining. His departure laid bare the lack of a fully-fledged environmental unit at LWSC. Though LWSC apparently re-hired this staff, it was not under a formal contract and his employment remained uncertain as at mid-Feb 2021.

As part of the monitoring, the RWP Contactor is required to provide quarterly reports to the EPA, EPA is also supposed to carry out field inspections to ensure regulatory compliance. Due to disruptions arising from the COVID-19 shutdowns, MCA-Liberia lacks information about the levels of environmental supervision and compliance. Reports were submitted to EPA and confirmation were received from EPA, but there have been no comments or visits by EPA as far as MCA-Liberia knows.

### **RWP Resettlement Action Plan**

During the project's design, LWSC had insisted on maintaining a large right of way along the pipeline path, in violation of the IFC Performance Standard 5 (PS5) which advises companies to avoid involuntary resettlement wherever possible, and to minimize its impact on those displaced through mitigation measures. The resettlement sub-activity was over the 4.7 km pipeline with very few structures affected, mostly for fencing off fields & agricultural farmland to create the pipeline's ROW. The Design-Build contractor, DENY's, initially hired a local firm to complete the RAP work. When they could not complete it, MCA-Liberia recommended hiring another consultant, who had done the resettlement work for the PIU. She completed the RAP with considerable support from MCA-Liberia, MCC and its consultants. While the ROW was excessively largely and contrary to MCC's technical guidance, the Compact went ahead with this large ROW. Moreover, LWSC insisted on building a fence along the ROW. While this made sense from LWSC's perspective to maintain the right of way, it created more problems by cutting off the community access to the river as well as species' ability to also reach watering points. LWSC and MCA ultimately accepted adding some access points for the community. Additional points were later added as some farmers were cut off from fields by the fence.

Overall, the resettlement had few grievances and only minor delays. Ironically, a well construction programs was done under the RAP due to miscommunication on the part of the initial firm hired to do the RAP. This initial firm had promised local communities' access to the water pipeline. As a remedial effort, wells were installed in several communities. However, the design recommended solar pumps be installed on these wells as well as handpumps due to the depth and questions about sustainability. Due to concerns about importing equipment during COVID-19 and subsequent completion risks, MCA-Liberia decided to install only the handpumps, the main driver being to make sure the contract for the pipeline did not get delayed even more.

### **ESP Activities on the Roads Project**

On the Roads project, MCA-Liberia had planned on supporting the development of an environmental and social management system for the road fund. That work was not done when the decision was made not to expend the matching funds.

#### **3.4.5. GENDER & SOCIAL INCLUSION**

- **Objectives**

The goal of the Gender and Social Inclusion (GSI) aspect of the Compact was to create opportunities for vulnerable and marginalized populations to participate in and benefit from the Compact. The fragility of these groups – unemployed youth, persons with disabilities, poor women and ethnic

minorities - was to be reduced by enhancing their economic opportunities through electricity and road maintenance services in Liberia.

The operational tool used to systematize and ensure this social inclusion and gender integration across Compact projects and activities was the Social and Gender Integration Plan (SGIP). The plan's objective was to serve as an activity guide, monitoring tool and central location for consolidation and synthesis of all social and gender analyses, activity design, and project planning and implementation for all activities that address social inclusion and gender inequalities in Liberia.

### ● **Interventions**

There were three main interventions planned to achieve the GSI objective:

- a) Strengthening gender and socially responsive planning and implementation capacities of the Ministry of Mines and Energy, LEC and MPW for targeted electricity and road services to enhance economic opportunities and jobs for the target groups. This capacity building was carried out mostly as planned.
- b) Connecting Micro, Small and Medium Enterprises (MSMEs) to the LEC grid and providing supportive interventions including training and business development services. Early in the compact, MCC and the GoL agreed via an implementation letter not to proceed with the original items. The activity was operationalized instead as customer service support, given the additional due diligence on the role of poor customer service in MSME productive uses of electricity. The original goal was reconceptualized as a new set of customer service interventions viz:
  - Rehabilitation of the Waterside Customer Service Center (CSC): MCA-L funded rehabilitation of the CSC and establishment of a call center.
  - Purchase of two modules of an Information Management System (IMS) for LEC. LEC lacked any functional IMS and staff capacity to collect, manage, analyze, and utilize data. MCC-funded an amendment to the MSC which paid for the IMS modules,
  - Improved phone system: MCA-L funded a phone system for the CSC,
  - Customer service training: MCC-funded customer service training through the MSC amendment. This training was delivered alongside other Training Center activities by ESBI's designated instructors.

These new tasks were all accomplished by CED.

- c) Enhancing community and stakeholder participation in targeted road maintenance areas. This intervention was not achieved as the road maintenance sub-activity was dropped from the scope.

### ● **Achievements**

MCA-Liberia sought to establish a collaborative relationship with the MGSCP so as to ensure the ministry's support for the establishment, coordination and capacitation of GSI units in LEC, MME and MPW. This was in line with the National Gender Policy (NGP) and the SGIP. MGSCP The GoL's NGP in particular required each ministry to appoint Gender Focal Points and develop annual plans and budgets to translate into sector-specific strategies and activities.

Govt partnership: MCA-Liberia provided funding assistance to the Ministry of Gender, Children and Social Protection for its capacity building and to help establish gender units in LEC, the Ministry of Mines and Energy, and the Ministry of Public Works. A consultant was assigned to work with MGSCP in its planning and capacity building.

MCA-Liberia also helped establish the Gender and Social Inclusion Department (GSID) of the Liberia Electricity Corporation (LEC), providing both technical support and office setup funds for computers and furniture. This support has enabled GSID to begin promoting inclusive practices within the utility and in service delivery.

Capacity Building: MCA-Liberia rehabilitated LEC's Waterside Customer Service Center and supported key technological investments to enable faster, more effective customer service. The new completed facility is equipped with a call center which was completed well before CED and has been widely lauded as successful in reducing customer wait times and service quality; and staff are able to draw on new training and new technologies to address customer concerns. It is expected that these



*Figure 13: Female Staff at the LEC Customer Service Center*

improvements will be most heartily felt by women – who typically experience the greatest time burden seeking customer service from LEC.

MCA-Liberia also worked with MGSCP to set up & furnish the gender units at, MPW, MME & LEC. A GSI consultant based at MGSCP prepared a 5-yr sustainability plan for these units.

A major challenge faced by MCA-L's GSI unit came after the first GSI Director left after three and a half years and no replacement could be hired. Without a substantive Director, on-going GSI activities were distributed

among different MCA-Liberia staff, with the Private Sector Director (assisted by the Project Controls Engineer) assuming oversight of the LEC CSC while an MCA-Liberia consultant supervised the work at MGSCP.

MCC oversaw work under ESBI's amended MSC Contract for the customer service training and for the acquisition of the two IMS modules.

#### **3.4.6. COMMUNICATIONS & OUTREACH**

MCA-Liberia's Directorate of Communications consisted of a Director and one communication specialist. The office's communications covered a wide range and nature of events, including stakeholder engagement meetings, groundbreaking events, training sessions, public campaigns, surveys, focus group discussions—all as part of the strategy to raise public awareness about the results of Compact projects.

In furtherance of its goals, MCA-Liberia developed a Communications Plan whose strategy was to engage stakeholders and the Liberian people in order for them to:

- a) Appreciate how Compact results promote economic growth and poverty reduction.
- b) Understand the status of Project activities; and
- c) Have opportunities to provide feedback and develop ownership in Project activities and results.

MCA wanted to make sure stakeholders, including GoL officials and Liberian citizens, understand and provide feedback regarding the relationship between MCC scorecard indicators and development funding.

The Communications office sought to inform the public about MCA's investments in the Liberian economy, present the good project management practices, ensure transparency, put focus on the anti-fraud and corruption efforts and promotion of success stories of individuals who started or developed their businesses through opportunities provided by the Compact.

The directorate communicated and engaged the public through mediums that were easily accessible and convenient to the targeted group. The directorate was also responsible for ensuring that all infrastructure and project sites were branded in accordance with MCC guidelines for Infrastructure Signage. One of the most important tools MCA used to communicate with the public was the web site. The Communication office worked with IT to make sure a lot of information and public interest stories and articles were uploaded to the web site.

in addition to posting on the web site, for outreach, several other tools were used to send out information about the implementation and benefits of the Compact. A number of press releases were issued, as well as sharing out pictures and videos of MCALs' official activities with the local and international press., posting project-related information on the MCA-Liberia website, social media, brochures, billboards, Videos-television, radio, informational booklets, roll-ups, T-Shirts, hats, flags, banners, newflashes. MCA-Liberia branded promotional items were also employed.

Communications activities enabled local media to lead an informed national conversation on compact project results. A baseline survey conducted in Monrovia, Kakata, Bomi and Robertsfield Highway corridors in August 2018, one year after MCA's communications program began, found that 76% of the community surveyed indicated being knowledgeable about the MCC support to Liberia. Of those who indicated being knowledgeable of the MCC support to Liberia, more than half were aware of MCC's support to the Mt. Coffee Hydro Power Plant.

The biggest challenge was the corona virus pandemic which restricted stakeholder physical gatherings and most opportunities for face-to face discussions. There was also a low appetite for development news among most journalists, forcing the office to double up in media engagement in order to get their attention.

### **3.4.7. PROCUREMENT**

#### **• Procurement Process**

Semi-annually, each MCA-Liberia Project Director prepared and submitted their Project Procurement Plan, a document consisting of all their anticipated procurements for the upcoming twelve-month period. These PPPs were then compiled into the MCA-Liberia Program Procurement Plan by the Procurement Director with support from the Procurement Agent. One of their main focuses here was to ensure each proposed procurement's compliance with MCC's procurement guidelines. Upon the Procurement Plan's review and approval by MCA-Liberia's executive management, the Board of Directors and MCC, the listed procurements would be launched publicly both locally and internationally.

As new procurements came up, the Project Directors would update their plans with any changes deemed necessary. Minor updates were used internally for management of the activity. If the changes were significant enough, the MCA-Liberia Procurement Director would revise the main PP, which would trigger further review and approval by MCA-Liberia management and Board approval as well as the MCC's no objection based on the Program Procurement Guidelines (PPG) approval matrix.

#### **• Executed Procurements**

The Procurement Office prepared a total of 177 procurements, with most of these being for supply of goods as indicated in Table 23 below.

*Table 23: Summary of MCA-Liberia Procurements*

<b>Procurement Type</b>	<b>Quantity</b>	<b>Per Cent</b>	<b>Contract Amounts</b>	<b>Per Cent</b>
Consulting	56	32%	\$ 23,824,381.68	47.3%
Goods	71	40%	\$ 3,506,213.95	7.0%
Services	37	21%	\$ 8,431,990.14	16.8%
Goods & Services	4	2%	\$ 134,256.65	0.3%
Works	2	1%	\$ 14,424,534.54	28.7%



Procurement Type	Quantity	Per Cent	Contract Amounts	Per Cent
Unexecuted Frameworks	7	4%	\$0.00	0%
<b>Total</b>	<b>177</b>	<b>100%</b>	<b>\$ 50,321,376.96</b>	<b>100.0%</b>

Altogether, the procurements were worth about \$50 million with procurement of consulting services accounting for almost half this amount.

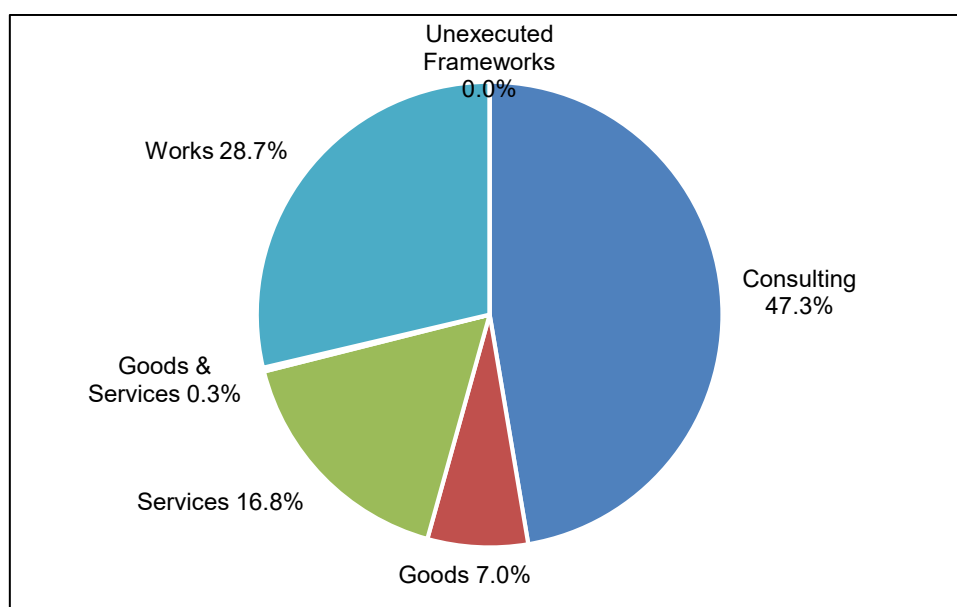


Figure 14: Distribution of Procurement by Type

Project-wise, most of the procurements supported project administration, especially the bid review processes. Figure xxx below breaks down procurements by project.

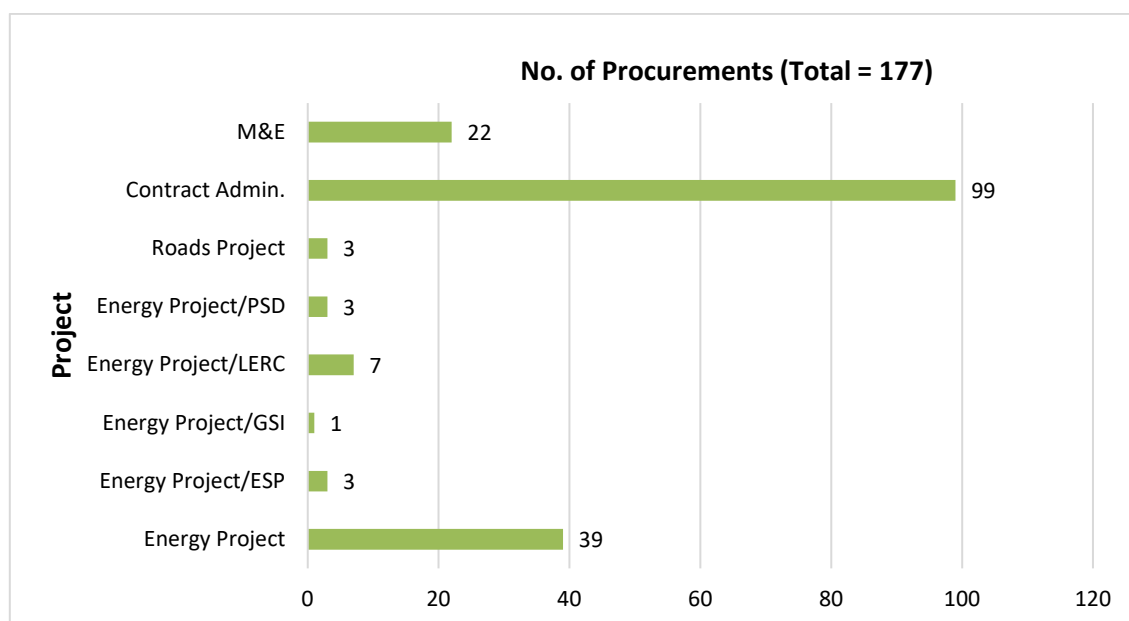


Figure 15: MCA-Liberia Procurements by Project

A full listing of all executed Compact procurements appears in the Annex.

- **Cancelled Procurements**

A total of 53 procurements were either cancelled or not used, including 14 framework consultants that were not called up for Technical Evaluation Panels. Other reasons for the cancellation include delays due to the impacts of COVID-19, insufficient bids, etc.

- **Bid Challenges**

There were three bid challenges on the Compact – two for the Raw Water Pipeline (Design-Build contract and Supervision contract) and one for the recruitment of a Contract Management Consultant. All challenges went through MCA-Liberia's Bid Challenge System (BCS) which requires Challengers to prove that a procurement action violates a procurement rule. All three challenges were denied and none of the Challengers filed an appeal.

- **Contractor's Past Performance Reports**

MCC's Contractor Past Performance Reporting System (CPPRS) mandates regular reporting on contractor performance, thereby facilitating information sharing and standardized use of information relating to contractor performance. This is to better inform decisions regarding the awarding of new contracts or maintaining current contracts with specific contractors who have previously done similar work in other Compacts across MCC partner countries.

During the procurement process the Procurement Office requested CPPRS as part of the evaluation process on competitive procurement methods. This information went into the respective bid evaluation reports. CPPRS inquiries were not directly related to contract award but to verification of a consultant or contractors past performance. No statistical data was maintained on how often the system is used.

As part of its post-performance evaluation, MCA-Liberia also ensured that contractors' and consultants' performance was captured through feedback to the CPPRS. Any reports received were filed in the corresponding contract record. Statistical data on the number of CPPRSs prepared is not maintained by the PA.

### **3.4.8. ADMINISTRATION & FINANCE**

The Administration and Finance office was headed by a Director who was in charge of all financial and administrative matters and reported to the CEO. This office worked in conjunction with the Fiscal Agent to address and advise on the Agency's financial matters in accordance with MCA-Liberia's Fiscal Accountability Plan, of which the latest version (Version 4) was approved in November 2020. Per that plan, MCA-Liberia had to submit a range of financial reports to both MCC and the MCA-Liberia Board of Directors. The Finance and Administration Directorate ensured high standards of financial management and operations of MCA-Liberia budgets and forecasts which were submitted to MCC and the Board in the form of Quarterly Disbursement Request Package (QDRP) and quarterly financial reports. During the Compact, MCA-Liberia submitted 21 QDRPs and 20 financial reports. In addition to the QDRPs, MCA-Liberia also submitted other quarterly and monthly reports to MCC in the form of Data Calls providing grant accrual estimations, advance balances and retention liabilities to MCC.

With the assistance of the Fiscal Agent, monthly financial reports were prepared for Management use since the inception of the compact and weekly disbursements and commitments, and budget versus actual reports were also produced and shared with Management, MCC Resident Mission and Directors.

- **Tax clearance and Program Support**

MCA-Liberia and the Liberia Revenue Authority (LRA) jointly developed a manual establishing LRA's procedure for implementing the Compact's tax exemption provisions. The manual enabled LRA to efficiently handle matters that include the following:

- a) Duty waivers on imported project materials and equipment Facilitating the importation and re-exportation of project machinery and vehicles for contractors.

- b) Facilitating the tax clearance and processing of tax refunds; and
- c) Facilitating tax free purchases for contractors.

The Finance and Administration Directorate also provided project support services to contractors by liaising with other Government entities to obtain various Government permits and licenses such as work permits, visas and residence permits.

### ● **Personnel and Human Resources**

The office's human resources operations were guided by MCA-L's Human Resources manual, dated January 2018. The management and development of staff members was an integral part of MCA-Liberia strategic plan. The office HR also developed or coordinated several policy documents during the Compact period aimed at ensuring compliance with MCC Guidelines, local statutes and MCA-Liberia led policies. These documents included the Conditions of Service Manual, conflicts of interest guidelines and Transport Policy Manual. Employees' employment agreements also formed part of the personnel policy guiding documents. In its final year, the Program Closure Plan was developed and has been the policy guiding document for all closure activities.

MCA-Liberia had a total of 35 designated staff positions of which 32 were filled as in November 2020. Eleven of those were considered key staff.

Over the course of the Compact, there has been a staff turnover of less than five employees over the compact period. One of the departures, the GSI Director, was not replaced and the role ended up being shared between MCC and a Liberian individual consultant.

### ● **Office Lease & Logistics**

MCA-Liberia offices were located on two floors of the F&F Building on UN Drive in Mamba Point, Monrovia. An additional floor was leased to house offices for the Liberia Electricity Regulatory Commission, one of the Compact's sub-activities.

The Compact's projects were located in and outside of Monrovia, at the Mt. Coffee Power Plant (in Careysburg, 50 km north east of Monrovia) and at the Water Treatment Plant (in White Plains, 5 km south of the MCHPP). A fleet of vehicles was procured to facilitate travel between the office, the project sites, and other relevant locations for project implementation and monitoring purposes. All vehicles remained in roadworthy condition throughout the compact's implementation period. In addition to its own vehicles, MCA-Liberia also purchased vehicles for use by project partners and grantees.

### ● **Accommodation and Conferences**

MCA-Liberia procured the services of Cape Hotel and Mamba Point Hotel to host most of its visiting consultants. The two hotels are a 5-minute walk from the MCA offices. In the majority of cases, the Finance and Administration Directorate provided all the necessary logistical support such as accommodation booking, preparation of accommodation, etc. Each booking was made through regular reservation, which was reported as time consuming when signed Blanket Purchase Agreements (BPAs) could probably have been more appropriate.

### ● **Fiscal Agent**

MCA-Liberia hired the services of Cardno Emerging Markets as the Fiscal Agent (FA). The FA assisted the Finance and Administration Directorate in executing payments and preparation of quarterly budgets and forecasts, as well as routine weekly and monthly financial reports and accounting. The FA also assisted in ensuring compliance with MCC guidelines, internal control systems and other policy guidelines.

### ● **Financial Audit**

In January 2018, MCA-Liberia engaged the services of Price Waterhouse Coopers (PWC) to carry out an annual audit of the Compact. There were also some MCC audits carried out by MCC auditors. The Finance and Administration Directorate led and coordinated all audits. Altogether, four audits were conducted over the compact implementation period, with one more scheduled for the closure period.

- **Management Information Systems (MIS) and IT services.**

- a) **SAP Implementation**

MCC directed the use of a customized SAP system as the Operating System to be used by all MCAs. SAP is an integrated system that provides real-time up-to-date information on commitment and disbursement by projects, as well as other financial and operational information that support business analysis and decision-making.

In August 2017, SITA Corporation, a US-based consultant, was hired to develop project implementation guidelines for MCA-L's adoption of a Management Information System (MIS) using SAP software. The resulting project scope, charter, training plan, resource plan, implementation schedule, and change and risk management process were circulated to the implementation core team consisting of the Director of Finance and Administration, Director of Procurement, Director of Monitoring & Evaluation, and the Fiscal Agent. These documents would be amended from time to time as the project was being implemented so as to incorporate new transaction processes and scope.

MCA-Liberia was limited to the following modules within the SAP system:

- Financial Accounting & Controlling (FI/CO) - General Ledger, Accounts Receivable, Accounts payable, Asset Accounting and Cost Controlling
- Funds Management (FM) – Fund Accounting, Budgetary Control, Budget Execution and Commitment Accounting)
- Materials Management (MM) – Material & Vendor Master Data, Requisition and Purchase Order Planning and Control and Invoice Verification.
- Project System (PS) Projects true tracking and costing only (up to the WBS element

Each module was managed by the appropriate personnel i.e.:

- Financial Accounting and Controlling (FICO) – managed by MCA-Liberia Fiscal Agent. The FICO module is for recording all disbursements and any other relevant financial transactions to the General Ledger.
- Funds Management (FM) – managed by MCA-Liberia Finance and Administration the FM module is for creating budgets, monitoring budget availability and preventing budget overruns.
- Materials Management (MM) – managed by MCA-Liberia Procurement. The MM module is used for handling MCA-Liberia procurement logistics of goods and services.

The SAP system also enabled automatic generation of the following reports, which were submitted to MCC monthly and quarterly:

- Monthly Commitment and Disbursement Report (MCDR)
- Detailed Financial Plan (DFP)
- MYFP Allocation (Schedule A)
- Procurement Plan (PP)

- b) **Information Technology (IT) Infrastructure Configurations**

Access to all MCA-Liberia Management Information Systems (MIS) was only available to authorized personnel of MCA-Liberia, FA and PA and all the systems were password-protected. Because the MCA-Liberia data center houses critical equipment including servers, switches and firewall, it was well equipped with redundant power supplies, with two 20KVA UPSs. Each equipment pulls power from the two UPSs. The configuration guarantees continued power supply even after the failure of one UPS. The two 20KVA UPSs have the capability to supply power to the data center equipment and switches for 72 hours without a connection to the power utility grid.

For server redundancy, the MCA-Liberia IT Infrastructure was controlled by Active Directory servers. There were two servers performing this role for the purpose of redundancy. Whilst they share services provided to the network users, each is capable of functioning to maintain the network in the failure of the other.

The MCA-Liberia MIS Infrastructure had several levels of backup and disaster recovery mechanisms, from hardware redundancy to data synchronization/backup and power sources. Users have centralized data repository on the file server. Each section/department has restricted storage on the file server accessible with permissions assigned to specific members of the team. The permissions are determined by the owners of the folder/files.

Each user's data is synchronized from the laptop/desktop to the file server, this ensures recovery of data after a computer is lost or if the hard drive crashed. Using a dedicated backup server and tool (ACRONIS Backup) the system does a daily backup of all data to the file server and also on tape. The tape is removed and placed in a fire-proof safe on a weekly basis. There is also daily user data synchronization to an external hard drive.

All the servers' images (including installation and configuration) are also part of the backup, this ensures easy recovery of failed servers.

#### **3.4.9. LEGAL OFFICE**

- **Legal Counsel**

The principal responsibility of the legal office is to offer counsel to MCA-Liberia. The office has a staff of two – a General Counsel and one Legal Specialist. The office oversees compliance with MCC Compact and its guiding documents. It also works with the Fiduciary Agents and the respective contract managers to handle any legal issues that come during execution of their work. another task is to oversee the implementation of MCC's anti-fraud & corruption policies.

The MCA-Liberia CEO appointed the General Counsel to lead MCA-Liberia' Program Closure Committee, which required the legal team to lead the management of three contracts

- a) Program Closure Plan Consultancy Contract – drawing up and implementing the plan for closing the Compact.
- b) Archiving Consultancy Contract - Archiving the key Compact documents for the Government to safekeep until January 20, 2026
- c) Compact Completion Report Consultancy Contract - the drafting of the Compact Completion Report

- **Liaison with the Board of Directors**

Another responsibility of the Legal Office is to communicate with the Board on behalf of MCA-Liberia. Over the life of the Compact, the Board has held regular meetings and passed a total of 56 resolutions. All deliberations at these meetings were duly recorded and minutes for all the meetings are posted on the MCA-Liberia web site. Due to lockdowns in the on-going COVID-19 pandemic, the last board meeting was convened in February. MCA has been communicating with the board via email since then. There's no comprehensive list that summarizes each resolution. The website is supposed to have the subject of each resolution but unfortunately the resolutions are not in chronological order and not all of them have a description.

One of the biggest challenges to the Board was the frequent turnover in membership, given that all statutory members were in their roles based on their position in government. As such, Board membership directly reflected the period a political appointee would remain in their position.

- **Compact's Conditions Precedent**

MCA-Liberia had to three types of Conditions Precedent over the course of the Compact:

- (i). Conditions precedent for Compact 's entry into force,
- (ii). Conditions precedent for initial disbursement of program funding, and
- (iii).Additional Government of Liberia covenants and commitments.

The Office of Legal Counsel was responsible for tracking and reporting the status of the Compact's Conditions Precedent on a quarterly basis. This report would form part of the Quarterly Disbursement Request Package.

#### **d. Preventing, Detecting and Remediating Fraud and Corruption**

MCA-Liberia approved an Anti-Fraud and Corruption Action Plan (AFCAP) whose purpose was to establish an appropriate framework that defined how its staff and management would join with its implementing entities towards the effective prevention, detection and remediation of fraud and corruption of any description within MCA-Liberia and in connection with all MCC-funded activities under the Compact. The plan addressed all stakeholders involved in the Compact's implementation.

Six types of fraud and corruption were recognized and targeted:

- a) Coercion
- b) Collusion
- c) Corruption
- d) Fraud
- e) Obstruction of investigation into allegations of fraud or corrupt practices
- f) Prohibited practices in accordance with anti-corruption legislation, anti-money laundering legislation, and terrorist financing legislation.

MCA-Liberia employed a range of tools to target these practices, including

- a) Fiscal accountability plan
- b) Program procurement guidelines & standard bidding documents
- c) Bid challenge system
- d) Conflict of interest policy
- e) Confidentiality policy
- f) Compact, PIA and MCA-Liberia bylaws
- g) Human resources manual & Standard staff agreements
- h) Regular audits

Following AFC training by MCC, MCA-Liberia worked on developing an AFC risk assessment matrix for its activities. A Joint MCC/MCA-Liberia Working Group reviewed the matrix and identified procurement, finance and administration, energy sector reform, and the national road maintenance activity as the areas with the highest likelihood of fraud and corruption occurring. The group agreed on the risks involved in each of those areas and pointed out ways to mitigate those risks, the timing of that mitigation, cost of the mitigation and which office or staff member would lead its implementation. A team from MCC later visited Monrovia and met with MCA senior management, staff, board members, stakeholders, implementing entities, contractors, consultants and other beneficiaries. They also met with various members from GoL ministries and organizations. Following from these meetings, the Risk Assessment Matrix was revised. This then formed MCA-Liberia's AFC Action Plan.

## 4. SUMMARY AND CONCLUSION

### 4.1. RELEVANCE OF COMPACT TO POVERTY REDUCTION

#### ENERGY PROJECT

Analysis of the Compact's logic framework indicates that some of the initial assumptions about the project were wrong. Initial reviews of the LEC were based on old or inadequate data. For instance, the utility's commercial losses that were reported at 45% were actually found to be above 70%. The initial assumption was that if commercial losses were addressed LEC would be in position to raise money and invest in the network. But LEC is deficient in resources such as meters, simple tools, safety gear, vehicles, etc. In 2018, LEC was stabilized and in August 2019, the company produced a business plan in which it lays out a 5-year plan for its fiscal recovery. The plan was approved by LEC's Board, presented to Cabinet in Nov 2019 and presented to donors in December 2019. It called for input of working capital and investment capital over the five years. In the three years EBSI has been running the LEC, it has not been able to break even. The status did not change with the January 2021 update of the business plan, covering the period from 2020 to 2024.

Table 24: Short-Term Status of Energy Project Log-Frame Assumptions

NO.	ENERGY PROJECT ASSUMPTIONS	STATUS
A1	Bringing Mt. Coffee online will lower LEC's operating costs.	True
A2	Planned technical support from other donor(s) will complement MCA-L's intervention. Studies funded under the Compact will inform the implementation of the regulatory framework, including the tariff-setting process, and licensing operators.	True
A3	Cost savings from lower-cost generation will be passed onto consumers; tariffs will recover the utility's costs, which is critical for running a sustainable utility.	Partly true
A4	The tariff-setting process will adhere to LERC's regulations as stipulated in Section 13.3 of the 2015 Electricity Law and will be insulated from political interference.	False
A5	LERC has the ability and resources to ensure compliance.	False
A6	LEC has the capacity and resources to manage its operations effectively and efficiently, including reducing losses, increasing collections, and performing routine maintenance; LERC standards are effective.	False
A7	There is sufficient staff capacity and continuity in order to accomplish MSC capacity building objectives. Increased capacity is sustained after MSC ends.	Partly True
A8	LEC increases ability to make customer connections. New customers can afford to pay for electricity; LEC can accommodate increased energy demand during dry season.	Partly True
A9	Increased generation capacity and the planned T&D investments are capable of increasing the quality and reliability of electricity.	True
A10	LEC has sufficient manpower, skill, materials, and operational capacity to respond to user requests for connections.	False
A11	A clear regulatory framework is a critical requirement for private sector investment.	True
A12	Project outputs will result in appreciable improvement in customer services practices; LEC is willing and able to address customer complaints. Customer willingness to pay increases.	Partly True
A13	MSC works to attract donor funding. External actors will extend the transmission and distribution networks as planned. These extensions are critical to expanding LEC's consumer base.	Unknown
A14	LEC will invest in lifecycle maintenance and capital investment.	False
A15	Electricity is used productively. Cost savings are invested and other constraints such as access to finance, or lack of political stability do not inhibit additional investments.	Unknown
A16	Customers pay for the electricity they consume.	Partly True
A17	"Training of Trainers" system is effective.	True
A18	The MSC is able to effect long-term change in LEC operations and stakeholders with interest and influence support these changes	Partly True

Though there were delays in the start of many of the activities, a number of notable achievements have been made through the two projects.

The main impacts of the Mt. Coffee Rehabilitation Activity can be summarized as follows:

- Increased access to and affordability of electricity on the LEC grid, demonstrated by the increased installed capacity, customer connections, output, tariff, and adequacy of supply. Upon completion of the project, the electric tariffs dropped from US \$ 0.55 to US 0.35 per kWh
- Increased reliability of LEC grid, as demonstrated by the SAIDI/SAIFI figures.
- Increased environmental responsibility of the power sector, demonstrated by the tons of CO<sub>2</sub> emissions saved by reducing dependence on thermal plants and getting a greater percentage of the nation's power from a renewable source..
- Enhanced skills' base of LEC and PIU staff, as well as national staff hired by all of the contractors, who received on-the-job training as well as, in some cases, focused training courses.
- Increased job opportunities during the construction phase, particularly for people living in the project affected area.
- Increased job opportunities over the long term, at the Mt. Coffee plant and camp as well as within expanding LEC service areas beyond Monrovia.
- Socioeconomic benefits for residents of the project affected communities, as well as people living along Caldwell Road, and LEC customers.
- The overarching project goal to provide a reliable, sustainable, and cost-efficient supply of electrical energy to the LEC grid, which results in socioeconomic development for Liberia's citizens and improved environmental protection for the country has been achieved.

The benefits from the Raw Water Pipeline include the full-time availability of raw water for the water treatment plant and a higher quality of water due to the absence of saline water in the raw water. And since this is a gravity-fed water scheme, the LWSC will save a lot of money annually in pumping cost. Full benefits from the water going to the plant will however depend upon LWSC eventually building out the distribution network.

## ROADS PROJECT

Dropping of the Regional Maintenance Centers necessitated a rethink of the roads logic. None of the assumptions were holding (see Table 8).

*Table 25: Short-Term Status of Roads Project Log-Frame Assumptions*

NO.	ROADS PROJECT ASSUMPTION	STATUS
A1	The private sector is prepared and capable of performing maintenance.	Unknown
A2	The GoL will ensure that the pilot Road Maintenance Centers have an appropriate number of staff, who are compensated	N/A (Cancelled)
A3	The GoL will determine which units will carry out relevant functions as a part of the Compact interventions.	N/A (Cancelled)
A4	Funds continue to be available with some level of predictability.	True

While the Roads' Project's objectives were not fully achieved, MCA has set a foundation to enable MPW to collect/analyze critical data that will help GoL in its decision making. MPW has benefitted from the investments in acquiring HDM-4 software together with the training, setting up a customized Road Asset Management System (RAMS), and providing equipment & supplies to support sustainability; all of which will facilitate road maintenance planning decisions and management of Liberia's National Road Network to be data-driven, and not randomly influenced by political motivations.

The conclusion is that the two Compact projects have contributed to putting Liberia on the path to reduction in poverty.

## 4.2. EFFICIENCY OF COMPACT IMPLEMENTATION



The efficient implementation of the Compact is based on optimizing the triangle of time, cost, quality management. While the Compact had a statutory time of five years, the practical reality is that effective time spent implementing the two projects was much less. As was discussed earlier in the report, there was no effective pre-compact preparatory period, with the result that the required preparatory tasks all occurred when the Compact should have been under implementation. Secondly, the political 2017/2018 political transition necessitated giving the new GOL additional time so they could review the Compact and provide the necessary political buy-in. Finally, the 2020 COVID-19 pandemic was a calamity of local and international proportions, bringing governments and economies to a halt.

Any determination of efficiencies in Compact implementation should therefore be viewed in that angle.

A review of funds commitment versus the budget indicated a near 90% commitment rate of budgeted funds. Upon commitment, 84% of budgeted funds, and 95% of committed funds had been disbursed as at September 30, 2020. Given the context of the earlier time-related delays, the Compact may be considered adequately implemented from a time-perspective.

A cost-perspective entails a comparison of the original budget to the final budget, and whether the desired scope and quality of work have been achieved within that budget. The review of procurements (Section 3.7) showed that a total of 53 procurements were either cancelled or not used, including 14 framework consultants that were not called up for Technical Evaluation Panels. Insufficient bids and COVID-19 related impacts led to cancellations such as construction of the prawn passage and procurement of equipment for LEC.

There were some implementation challenges related to quality of deliverables. The quality of materials presented by a training Consultant for LEC was considered inadequate by LEC management and were later revised by the trainer that was brought in for the actual training. Several discussions with MCA-Liberia staff however indicated some TOR's could have been better written.

Despite the challenges, however, it is worth noting that out of the total budget of \$256,726,000, only \$15.6m is to be de-obligated, representing 6% of the Compact figure. Of that amount, \$15m was due to GoL not meeting a critical CP on the Roads Project, and the balance of \$613,862 was all related to Program Administration – see Table 26 below.

*Table 26: MCA-Liberia Projected Fund De-obligations*

ACTIVITY DESCRIPTION	MYFP BUDGET as of May 31st, 2020	PROJECTED DE- OBLIGATION
<b>Energy Project</b>		
All Activities	\$ 207,843,034	\$0
<b>Roads Project</b>		
National Roads Maintenance Activity	\$15,000,000	\$15,000,000
<b>Program Administration</b>		
Program Administration	\$14,962,966	\$140,182
Fiscal & Procurement Agents	\$7,500,000	\$151,036
Financial Audits	\$1,000,000	\$322,645
<b>PROJECT TOTAL</b>	<b>\$256,726,000</b>	<b>\$15,613,862</b>

### 4.3. EFFECTIVENESS OF COMPACT RESULTS

While the implementation of the Energy Project resulted in improvements in access to more affordable electricity, a review is required of the assumptions made during preparation of the program's logic framework.

Table 27: Status of Energy Project Assumptions

Status of Energy Project Assumptions	No.
Assumption is True	5
Partly True	6
Unknown	2
False	5

Even with Mt Coffee operational, there are still challenges in the transmission and distribution of power, as well as concerns about LEC's sustainability (see sustainability Section below). The utility lacks operational funding and its future still remains a concern. Some of the benefits are yet to be realized – such as tariffs recovering the utility's costs, which is critical for running a sustainable utility. New customers can afford to pay for electricity; LEC can accommodate increased energy demand during dry season.

Because it is short of materials and operational funds, LEC is yet to increase its ability to make customer connections. It will still need help to move forward.

The Roads Project has laid the foundation for reforming the system of road maintenance in the country, which ultimately should provide meaningful improvement in the nation's road infrastructure. There are also challenges to implementation and sustainability.

#### 4.4. SUSTAINABILITY OF COMPACT RESULT

For sustainability, there is need to look at both institutional and environmental sustainability issues. For the institutions, the long-term success of Mt. Coffee is dependent on a few key factors. While the Compact's projects have made a number of achievements (see Chapter 3), there are many concerns about the sustainability of these achievements over both the short term and long term.

- The success of LEC, which is in turn dependent on good governance and sound economic management.
- The political and financial support and commitment of the Government of Liberia.

While the Management Services Contractor has been able to bring some operational stability to LEC, the organization lacks the capital expenditure (CapEx) and operating expenditure (OpEx) funds that would enable it to move to the next phase of their business plan. The January 2021 update of LEC's Business Plan shows that the utility needs \$109 million of capex funding for its turnaround. The World Bank is in position to fund at least \$42 million of that amount, leaving a gap of \$65 million that needs to be funded through external resources by April 2024. LEC's current financial projections also show a net operating cash flow deficit of \$16 million.

Because of the lack of capitalization, LEC is not able to expand its customer base in response to increased power output. People that cannot get connected resort to illegal connections, thereby exacerbating the utility's losses. LEC is therefore still caught in a spiral of commercial losses which at one time was as high as 74% of power produced. Because GoL has not been able to capitalize the utility, it is not certain if the MSC contract will be picked up after the Compact ends, though it appears the World Bank may fund an extension of the MSC under new terms and conditions. When the utility lacks funds to provide or maintain even basic services like meters, more people go unserved, resulting in more illegal connections. This leads to more equipment blowing, thereby repeating the cycle.

- Bringing LEC Technical and commercial losses under control: An evaluation study by Mathematica found that while LEC has had an almost fourfold increase in MCHPP's total electricity supply (in MWh per month) from 2015 to 2019, total electricity sold only doubled. Similarly, technical losses increased from about 500,000 megawatt hours (MWh) in January 2015 to 1.9 million MWh in

September 2019. More strikingly, commercial losses increased from 1 million MWh in January 2015 to 10.8 MWh in January 2019. Since 2018, commercial losses have steadily risen and stabilized around 58 percent, for a total loss rate of about 70 percent.

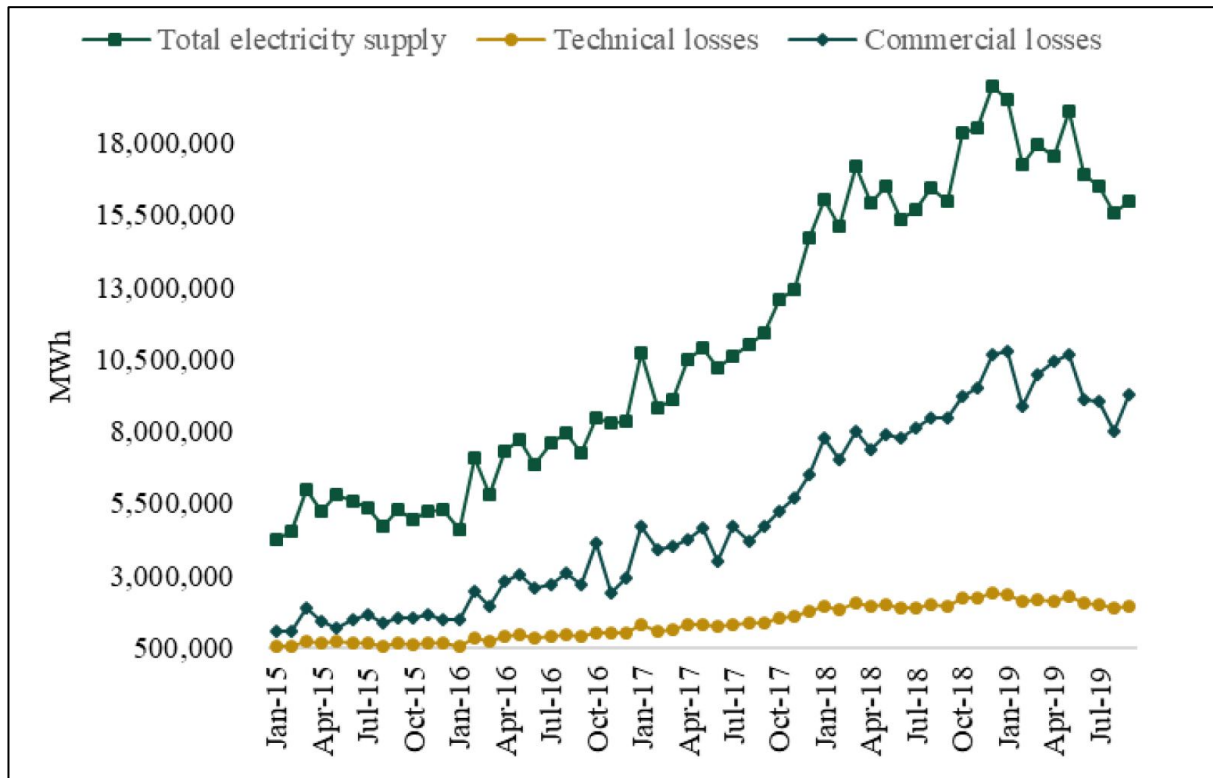


Figure 16: MCHPP power supply and losses (2015 - 2019)

The study went further to conclude that Liberia presents the exact context in which corruption proliferates: weak governance, poverty, poor utility management, high energy demand, and high tariffs. As a result, LEC has one of the highest rates of commercial losses in the world, with a thriving cartel responsible for grand electricity theft and small-scale, but widespread power theft in communities. LEC is beset by technical inefficiencies, an inability to connect customers despite excess generation capacity, expanding corruption, and unsafe infrastructure. The utility requires increased funding for operations and capital expenses, a systematic response to theft and corruption, and support from the Government of Liberia and donors to implement the reform needed to sustain the utility.

- The success of both the LEC Management Services Contract (MSC) and the OMT Contract will influence the longer-term sustainability of the Mt. Coffee Plant.
- **Sustainability:** The Raw water pipeline's right-of-way is demarcated by a chain-link fence that stretches the entire 4.8 km-length of the pipeline. While LWSC currently has workers on a truck assigned to patrol the full length daily, the exercise is already stretching the organization's limited resources (money and personnel) and it is questionable how long these patrols will go on after the Compact closes. While LWSC's position at the moment is that these patrols will continue in perpetuity, there exists the real risk that this will not actually be the case - the patrols may stop, and squatters may encroach on the ROW land once again.
- **Political commitment and goodwill:** LEC and LERC are both key beneficiaries of this Compact's funding. In order for the organizations to realize full benefit of the investments, their management teams need to be able to work hand-in-hand with their Boards and GOL. There have been examples of management or board decisions delayed or not made because of specific government actions or inactions (e.g., a lack of appointed Commissioners impacting LERC's operations). While management teams may work to address the day-to-day operational and management issues, organizations' sustainability will often depend on the bolder operational or financial decisions, such

as approval of new water and power tariff structures, that can only be made at the higher political level. For this they need Boards and a government that have the appropriate political goodwill. Similarly, the PIU's final report on the MCRA for instance reported that in 2018 the Commissioner of Harrisburg began selling land that had been allocated to the project PAPs by the Ministry of Lands, Mines and Energy, in violation of the agreement between the Government and the project funders, and significantly affects the livelihood of the PAPs.

- Continuing to build the capacity of the local employees through a quality training that enables them to carry out their roles independently. It will also be critical that LEC retain these trained staff with adequate salaries and other incentives in order to ensure the sustainability of the Mt. Coffee facility. An effort should also be made to plan for turnover and inevitable change.

For the environment and natural resources, the Community Based Natural Resource Management, WASH and Fish Passage work were not done. All these are elements that are needed for the long-term sustainability of the water and natural resources associated with the hydro-electric dam.

#### **4.5. COMPACT GOVERNANCE**

As the principal Accountable Entity for the Liberia Compact, MCA-Liberia acted on behalf of GoL and was answerable to a Board of Directors chaired by the Minister of Finance & Economic Planning. MCA-Liberia however had to seek MCC's no-objection for designated decisions. As a Board member, the CEO attended all Board meetings while the Legal Counsel acted as its Secretary. Prior to the shutdowns in response to the COVID-19 pandemic, the Board met on a quarterly basis to guide the operations of the Compact. Thereafter it deliberated virtually, mostly through the exchange of emails. There has been no report of impropriety regarding the Board's independence in the execution of the Compact's affairs.

While the Board focused on guiding the direction of MCA-L, the Executive Management and staff attended to the implementation of Compact projects. While the general operation of the entire team is not faulted, there have been so many reports of personnel concerns that they cannot be ignored. In discussions with MCA-Liberia management, the MCC Liberia country office, and MCC Washington DC team, the general feedback was that personnel shortcomings impacted quite a few activities. There appears to be consensus that MCA-Liberia maintained on board poor-performing staff who ended up being a liability to the Compact's operations. There were also occasions when a lack of teamwork appeared to impact coordination of activities. A handful of respondents interviewed shared the view that there was a lot of room for improvement in employees' communication and sharing of project documents. These staff shortcomings were reported to have created more unnecessary work during procurement or fiscal cycles. Across all three entities, the consensus appeared to be that for the general good of the Compact, some of the staff should have been let go earlier.

As for the contract procurement and award process, this appears to have been above board. The few issues that were disputed were all handled professionally and in accordance with MCC guidelines. Services of one consultant retained for the Dispute Adjudication Board have not been required.

MCA-Liberia activities appear to have all been carried out transparently and in full conformance with MCC guidelines and other documents.

#### **4.6. CONCLUSION**

##### **4.6.1. BEST PRACTICES AND LESSONS LEARNED**

Implementation of the Liberia Compact has produced positive achievements and challenges. Though the compact started late, effectively losing the first two years, it has been able to complete most of the projects, with only \$15.4 million going undisbursed. Despite the unfortunate fact that the \$15 million is due to unutilized road sector matching funds, there were a number of best practices that contributed to completion of activities:

- Most of the national staff were of the view that the practice of pairing a local project Director with an MCC counterpart was very effective, and strongly recommended it for all Compacts.
- Success on the compact can be partially attributed to the procurement processes. While some of the project directors were apprehensive about the time it took to complete the procurements, MCC's procurement office confirmed that the average time of a procurement on Liberia compact's was comparable to the time it takes to procure in other country compact procurement. MCC's traditional requirement of having a Procurement Agent is partly to allow the MCA to focus mostly on implementing the projects while the procurement agent and the fiscal agent help with the paperwork aspects that would take away from the project's focus. This arrangement appears to have worked well. However, many local staff did not appear to fully understand how MCC's fiscal and procurement processes work, thereby needing more training.
- The use of international Consultants with support from local firms.

It was also observed that the hiring, management and retention of personnel was a constant challenge. There was a local shortage of some of the skillsets considered ideal for the Compact's implementation, such as ESP and GSI. This shortage also meant that some of the directors did not have a second in command to pick up the workload. Hiring or firing key staff also required approval of the MCA Board and MCC. Because of this, even on occasions when staff capacity was observed to be weak, the poor performers were not always dealt with appropriately. The general Compact consensus was that this undermined achievements in key activities, such as in the environmental area.

There were also challenges with collecting the M&E targets, especially on the roads project. This was complicated by the way the compact was rolled out, resulting in an effective loss of almost three years – two at the start of the project and one for the 2020 pandemic.

Environmental and Social Performance: Given the importance of the need to approve the ESMP before any work can start, closer attention should be paid to evaluating ESP experience in bids and proposals. Not focusing adequately on this resulted in delayed start of projects.

#### **4.6.2. RECOMMENDATIONS**

The following recommendations are made based on the totality of feedback from the document reviews, interviews, surveys and field visits:

- 1) Political transitions can create uncertainty and delays on multi-year projects, hence GoL should establish and adopt a procedure for identifying potential delays on projects that either start after or continue through political transitions, and come up with a binding framework for mitigating delays arising from such transitions.
- 2) Building capacity of local staff: When entering into donor-funded programs (or compacts), GoL/MCA-Liberia should identify the most critical skills necessary for successful implementation of each agreement or compact. The project should then design a training program or workshop in those skills to all local counterparts at the beginning of the compact. The need for this in the Liberia Compact was borne out in many circumstances, for instance:
  - a. Both management and staff reported Compact-wide weakness of local staff in writing specifications and preparing Terms of Reference. When hiring Procurement Agents, MCC/MCAs should explore including a requirement for the PA to provide training workshops to all local staff in writing of specifications and terms of reference, with follow-on training for new hires.
  - b. Senior management reported a number of Directors and Managers having challenges taking and maintaining project records. MCC/MCAs should also consider offering training on keeping and retaining project records.
  - c. Both the Procurement Agent and the Fiscal Agent reported challenges with getting local staff to file fiscal or procurement paperwork in a timely fashion so as not to delay projects.

(MCC and MCAs should consider including a checklist as the first sheet of paper on any form templates).

- 3) Ease of access of donor (MCC) documents and templates: Local staff reported frequent challenges with drafting the wide range of documents required on the Compact. They identified the need for a concerted effort by MCC to either make available more templates of the most commonly used documents or, where these are already available, make it easier for them to be accessed. At the beginning of a new project, GoL and donors need to assess and streamline the ease of access to basic donor-mandated documents and templates for all local project staff.
- 4) Compact conditions precedent: MCA-Liberia management and staff had no control of GoL's ability to meet Conditions Precedent, and the situation was worse where the CPs were recurring (e.g., GoL's obligation to be current with utility bills). Given the disruptive nature not meeting recurring CPs had on MCA-Liberia's management, GoL and donors need to more rigorously assess impact of recurring CPs and explore alternate single-time CPs that may be as affective without multiple specters of future defaults. Similarly, GoL needs to be more mindful of the impact(s) of defaulting on meeting CPs.
- 5) Procurement – GoL and donors should explore more use of blanket purchase agreements to cut down on time spent on repetitive purchases, such as workshop training venues, hotel accommodation to consultants, etc.
- 6) In personnel management, the Human Resources Manager faced confidentiality issues that were in direct conflict with the Director of Finance & Administration, the substantive head of the personnel office. Adequate thought is needed to go into planning the office organization charts and responsibilities so as to avoid ethical or other conflicts. One possible solution is making HR separate and reporting directly to the CEO.
- 7) The multi-disciplinary approach to implementing projects means multiple often similar feedback comments on deliverables. To avoid passing over conflicting comments to a contractor/consultant, MCA-Liberia and all reviewers should either work from one shared document or delegate an individual to reconcile all feedback comments before they get sent to a contractor/consultant.

## **5. ANNEXES**

## 5.1. ANNEX I - LIST OF COMPACT PROJECTS AND IMPLEMENTING ENTITIES

Project	Activity	Sub-Activity/Sub-Task	Accountable Entity	Implementing Entity	Remark
Energy Project	Mt. Coffee Rehabilitation	Cost of 4th turbine-generator (for 88 MW)	LEC	LEC/PIU	
		Cover unfunded MCHPP rehab gaps	LEC	LEC/PIU	
		Cost of a 2nd 66 kV transmission line	LEC	LEC/PIU	
		Establishment of certain dispute adjudication boards			
	Mt. Coffee Support	Small scale Community Infrastructure to PAPs	MCA-Liberia	LEC	Water points, pit latrines, foot bridges, etc.
		Additional HR support to LEC/PIU	MCA-Liberia	LEC	
		Raw Water Intake & Pipeline	MCA-Liberia	LWSC	
		Fisheries studies	MCA-Liberia	MCA-Liberia	
		Livelihood Restoration (Watershed Mgmt. Plan, Fisheries management., WASH, Reforestation, Healthcare Initiatives, etc.)	MCA-Liberia	LEC	
	LEC Training Center	Facility Construction & Equipment	LEC	LEC	Descoped & funds reallocated
		Trainings	LEC	LEC	
		Training of Trainers	LEC	LEC	
		Programmatic Design Sub-activity	LEC	LEC	
	Energy Sector Reform	Establish independent regulator	MCA-Liberia	LERC	<ul style="list-style-type: none"> <li>Establishment of an electricity regulation unit</li> <li>Situation assessment for the electricity sector.</li> <li>Development of a financial model for the electricity sector.</li> </ul>



Project	Activity	Sub-Activity/Sub-Task	Accountable Entity	Implementing Entity	Remark
					<ul style="list-style-type: none"> <li>• Demand, willingness to pay and connection assessment analyses, and a cost-of service study; and</li> <li>• Design of a regulatory information system.</li> </ul>
		Policy, legal & regulatory reforms	MCA-Liberia		
		EPA Institutional Strengthening	MCA-Liberia	LEC	De-scoped, funds moved to RWP.
		Management support to LEC (MSC)	LEC	LEC	Pvt Sector Participation in LEC. Initially under MCA-Liberia as AE.
		Social Inclusion & Gender Integration	MCA-Liberia		<ul style="list-style-type: none"> <li>• Gender &amp; Electricity (Study)</li> <li>• Gender &amp; Electricity</li> <li>• GSI-Strengthen Customer Service</li> <li>• GSI-SocialInclusive/GenderPlanng TA Enrg</li> <li>• GSI-Productive Uses of Energy</li> </ul>
		Gender & Electricity (Study)	MCA-Liberia	LERC	
		Gender & Electricity	MCA-Liberia	LEC	
		GSI-Strengthen Customer Service	MCA-Liberia	LEC	
		GSI-SocialInclusive/GenderPlanng TA Enrg	MCA-Liberia	LEC/MCAL	
		GSI-Productive Uses of Energy	MCA-Liberia	MCAL/LERC	
		PIU Rollover	MCA-Liberia	LEC	
Roads Project	National Roads Maintenance	Construction of Road Maintenance Centers	MCA-Liberia	Min. of Public Works	Descope
		<del>Civil Works Sub-activity</del>	MCA-Liberia	Min. of Public Works	Descope

Project	Activity	Sub-Activity/Sub-Task	Accountable Entity	Implementing Entity	Remark
		Matching Funds for Rd. Maintenance Sub-a	MCA-Liberia	Min. of Public Works	Cancelled
	Roads Sector Reform	Network Analysis / Data Collection	MCA-Liberia	USDOT/Volpe Center	
		Sector Reform / Institutional Strengthening / Capacity Building	MCA-Liberia	USDOT/Volpe Center	<ul style="list-style-type: none"> <li>Capacity building related to the Axle Load Control Law,</li> <li><i>Strengthening the administrative and operational framework of the Road Fund, (Descoped)</i></li> <li>Training and support in transportation planning methods,</li> <li>Assisting in the development of a five-year transportation asset management plan</li> <li>Aiding urban transportation planning in Monrovia,</li> <li>Reviewing existing road safety policies &amp; developing recommendations and an implementation framework</li> </ul>
		Social Inclusion and Gender Integration.	MCA-Liberia	Min. of Public Works	
		Environmental & Social Mitigation Measures.			
		Donor Coordination			
		USAID Coordination			
		Sustainability			<p>Government commitment &amp; coordination related to the long-term function and benefit of the Roads Project –</p> <ul style="list-style-type: none"> <li>Government's adoption of the Road Fund Administration and, subsequently,</li> <li>The establishment &amp; effective operation of the Road Fund</li> </ul>

Project	Activity	Sub-Activity/Sub-Task	Accountable Entity	Implementing Entity	Remark
		Policy, Legal and Regulatory Reforms.			<ul style="list-style-type: none"> <li>Government passes legislation establishing the Road Fund and the Road Fund Administration as a stand-alone legal entity; and</li> <li>Government passes the Axle Load Control Law</li> </ul>
Monitoring & Evaluation	Monitoring & Evaluation	Monitoring Oversight	MCA-Liberia	LEC	
		Capacity Building for M&E	MCA-Liberia	MCA-Liberia	
		Evaluation and Special Studies.	MCA-Liberia	MCAL/LEC	
		MCA Process Evaluations	MCA-Liberia	MCA-Liberia	
Program Adm & Control	MCA-Liberia Admin.	Personnel and Consultants Costs	MCA-Liberia	MCA-Liberia	
		Insurance	MCA-Liberia	MCA-Liberia	
		Communication	MCA-Liberia	MCA-Liberia	
		Utilities	MCA-Liberia	MCA-Liberia	
		Office Lease/Rentals	MCA-Liberia	MCA-Liberia	
		Meeting Expenses (Board Members/Stakehdrs	MCA-Liberia	MCA-Liberia	
		Workshops & Trainings	MCA-Liberia	MCA-Liberia	
		Travel Expenses	MCA-Liberia	MCA-Liberia	
		Newspapers and Publications	MCA-Liberia	MCA-Liberia	
		Vehicle & Transport Expenses	MCA-Liberia	MCA-Liberia	
		Repairs & Maintenance	MCA-Liberia	MCA-Liberia	
		Office Supplies and Expenses	MCA-Liberia	MCA-Liberia	
		Public Relations/Outreach Expenses	MCA-Liberia	MCA-Liberia	
		Evaluations, Consulting & Professional F	MCA-Liberia	MCA-Liberia	
		Advertising & Procurement Notices	MCA-Liberia	MCA-Liberia	
		Recruitment Expenses	MCA-Liberia	MCA-Liberia	

Project	Activity	Sub-Activity/Sub-Task	Accountable Entity	Implementing Entity	Remark
		Miscellaneous Expenses	MCA-Liberia	MCA-Liberia	
		Bank Charges	MCA-Liberia	MCA-Liberia	
		Fixed Assets	MCA-Liberia	MCA-Liberia	
		Management Information Systems	MCA-Liberia	MCA-Liberia	
		Programme Administration Contingency	MCA-Liberia	MCA-Liberia	
		Financial Management and Procurement Con	MCA-Liberia	MCA-Liberia	
		Fiscal Agent	MCA-Liberia	MCA-Liberia	
		Procurement Agent	MCA-Liberia	MCA-Liberia	
		Audit and Compliance	MCA-Liberia	MCA-Liberia	
		Audit	MCA-Liberia	MCA-Liberia	

## 5.2. ANNEX 2 – COMPACT PROCUREMENTS & CONTRACTS

Project Names:

609G = Compact Development & Implementation, EP = Energy Project, M&E = Monitoring & Evaluation, RP = Roads Project, PM = Program Management

No.	Project Name	Contract No.	Description	Procurement Type	Procurement Method Planned	Name of Firm(s) / Individual(s) Contracted	Effective Date of Contract	Completion Date	Original Contract Amount (USD)	Amendment Amount (USD)	New Total Amount (USD)
1	609G	1001-5410701	Implementation Workshop - 4A1506/CA/Shop2	Services	RFQ	Embassy Suites	2-Feb-17	2-Oct-17	9,655.00	0.00	9,655.00
2	609G	1002-5411301	IT Equipment - 4A1506/CA/Shop3	Goods	RFQ	Office Ideas	13-Mar-17	23-Mar-17	33,550.00	0.00	33,550.00
3	PM	1003-5411901-A	Supply, Delivery & Installation of Cabling, Telephone System, Racks Distribution System, & Power & Cooling for the Server Room for MCA-Liberia Lot 1	Goods	Shopping	Network Technology (Net-Tech) Inc.	3-Apr-17	24-Apr-17	21,128.50	0.00	21,128.50
4	PM	1003-5411901-B	Supply, Delivery & Installation of Cabling, Telephone System, Racks Distribution System, & Power & Cooling for the Server Room for MCA-Liberia Lots 2 & 3	Goods	Shopping	Iridium Solutions Inc.	3-Apr-17	23-Apr-17	17,650.00	0.00	17,650.00
5	EP	1004-5140102	CMC for LEC MSC (4A1506/EP/001)	Services	QCBS	Azorom Ltd	6-Jul-17	11-Jan-21	1,675,955.00	0.00	1,675,955.00
6	PM	1005-5411303	Supply and Delivery of MS Office Software and Video Teleconferencing System (4A450/CA-001)	Goods	Shopping	Iridium Solutions Inc.	23-Mar-17	22-Apr-17	42,275.00	0.00	42,275.00
7	EP	1006-5140103-A	Recruitment of 2 Panelists for LEC MSC Bids Evaluation (4A1507/EP/002)	Services	IC	A. John Rezaian	12-Apr-17	31-Jul-17	49,975.00	0.00	49,975.00
8	EP	1006-5140103-B	Recruitment of 2 Panelists for LEC MSC Bids Evaluation (4A1507/EP/002)	Services	IC	Richard P. Smith	13-Apr-17	31-Jul-17	39,026.00	0.00	39,026.00
9	PM	1007-5411001	Vehicles for MCA Liberia Use (4A470/CA/003)	Goods	Shopping	CICA Motors Liberia Inc	25-Apr-17	6-Aug-17	224,552.90	0.00	224,552.90

No.	Project Name	Contract No.	Description	Procurement Type	Procurement Method Planned	Name of Firm(s) / Individual(s) Contracted	Effective Date of Contract	Completion Date	Original Contract Amount (USD)	Amendment Amount (USD)	New Total Amount (USD)
10	PM	1008-5411902	Supply and Delivery of IT-Equipment for MCA-Liberia (Laptops/Desktops with fully installed updated software and peripherals including maintenance cost - HP EliteBook 840G3, HP ProDesk 400G1, Surge Protector, Computer Cleaning Kit, Electronic Blower & Wireless color laser jet pro MFP M277) (4A450/CA/001)	Goods	Shopping	Beever Communications Inc.	11-May-17	6-Oct-17	19,118.81	0.00	19,118.81
11	PM	1010-5430201	Financial Audit of MCC Resources Managed under the Liberia Compact	Services	QCBS	PricewaterHouseCoopers (Liberia) LLC	4-Jan-18	20-May-21	114,325.00	224,440.00	338,765.00
12	PM	1012-5411904	Supply and Delivery of APC Smart-UPS VT rack mounted 40kVA 400V w/4 batt mod. Exp. To 5, w/PDU & startup (4A1506/CA-SH/001)	Goods	Shopping	Beever Communications Inc.	24-May-17	6-Jun-17	36,485.00	0.00	36,485.00
13	PM	1013-5411905	Supply and Delivery of Printer- HP color LaserJet pro M476 with optimal 250-sheet tray, cartridges (Canon Image runner C-EXV (2202N) Printer and HP M476 printer and My cloud storage device wd 8tb (4A450/CA/001)	Goods	Shopping	Beever Communications Inc.	15-Jun-17	24-Jun-17	1,818.00	0.00	1,818.00
14	EP	1015-5120402	Fishery Study (4A1506/EP/004)	Services	QCBS	MRAG Ltd	20-Dec-17	8-Jan-21	253,290.00	396,661.25	649,951.25
15	PM	1016-5412001	SITA Contract - SAP MIS Services - SITA Corporation Services (licenses, implementation services, maintenance fees, ongoing support) 4A1506/CA-DC/002	Services	SS	SITA Corp	2-Aug-17	20-Jan-21	1,038,472.16	107,656.71	1,146,128.87

No.	Project Name	Contract No.	Description	Procurement Type	Procurement Method Planned	Name of Firm(s) / Individual(s) Contracted	Effective Date of Contract	Completion Date	Original Contract Amount (USD)	Amendment Amount (USD)	New Total Amount (USD)
16	PM	1018-5411304 Re-Launch	Supply & Delivery of Branding, Promotional Items and Printing services - Call Cards, Letter Heads, T-shirts, other Corporate Branding, etc.(Lot 2) (4A1508/CA/002)	Goods	Shopping	Holler West Africa Limited (Nigeria)	21-Dec-17	20-Jan-18	29,646.00	0.00	29,646.00
17	PM	1019-5130101	LEC Training Center Program Design (4A1506/EP/009)	Services	QCBS	AZOROM Limited	16-Mar-18	31-Aug-18	452,760.00	0.00	452,760.00
18	PM	1020-5411402A	Bid Challenge System - Independent Review Panel Member (4A1508/CA/003)	Services	IC	Paul Kalumba	18-Dec-17	N/A Framework Agreement	0.00	0.00	-
19	PM	1020-5411402B	Bid Challenge System Independent Review Panel Member (4A1508/CA/003)	Services	IC	Mutaz Qutob	17-Dec-17	31-Dec-18	0.00	0.00	-
20	PM	1020-5411402C	Bid Challenge System Independent Review Panel Member (4A1508/CA/003)	Services	IC	Moseray Momoh	19-Dec-17	31-Dec-18	0.00	0.00	-
21	PM	1020-5411402D	Bid Challenge System - Independent Review Panel Member (4A1508/CA/003)	Services	IC	Hilda Kemigisha Mwesigwa	18-Dec-17	N/A Framework Agreement	0.00	0.00	-
22	PM	1020-5411402E	Bid Challenge System Independent Review Panel Member (4A1508/CA/003)	Services	IC	Jane Akinyi Oduor	15-Dec-17	31-Dec-18	0.00	0.00	-
23	PM	1020-5411402F	Bid Challenge System - Independent Review Panel Member (4A1508/CA/003)	Services	IC	Esther W. Paegar	18-Dec-17	N/A Framework Agreement	0.00	0.00	-
24	PM	1021-5411907	Supply of IT Equipment (various) (4A450/CA/001 1-4 PR's)	Goods	Shopping	Office Ideas	30-Sep-17	10-Oct-17	4,594.00	0.00	4,594.00
25	PM	1022-5411908	Laptops with fully installed updated software and peripherals including maintenance cost (HP LaserJet enterprise 700 color MFP M775dn & set of cartridge) - 4A450/CA/001	Goods	Shopping	Lion Stationery Store	12-Oct-17	23-Oct-17	13,650.00	0.00	13,650.00

No.	Project Name	Contract No.	Description	Procurement Type	Procurement Method Planned	Name of Firm(s) / Individual(s) Contracted	Effective Date of Contract	Completion Date	Original Contract Amount (USD)	Amendment Amount (USD)	New Total Amount (USD)
26	PM	1023-5411909 & 1024-5411910	Online - Adobe acrobat pro DC/Skype along with simple license mgt and easy deployment for team	Goods	Shopping	Beever Communications Inc.	11-Dec-17	16-Dec-17	3,885.00	0.00	3,885.00
27	PM	1025-5411911	Autodesk AutoCAD 2018 commercial new single-user ELD with annual subscription with advance support	Goods	Shopping	Ideate Technologies Limited	19-Oct-17	24-Oct-17	1,140.00	0.00	1,140.00
28	PM	1026-5411912	WebEx Premium (up to 200 participants per host - with yearly subscription)	Goods	Shopping	Cisco WebEx LLC	9-Oct-17	9-Oct-17	2,001.00	420.25	2,421.25
29	PM	1027-5411913	2 Portable Standing A/C 9000 and 2 Portable Standing A/C 12000 (4A430/CA/002)	Goods	Shopping	Homeline Inc.	18-Dec-17	2-Jan-18	2,050.00	0.00	2,050.00
30	PM	1028-5411002 R	Supply and Delivery of 2 Motorbikes for MCA-Liberia (A430/CA/04)	Goods	Shopping	CICA Motors Liberia Inc.	11-Jan-18	21-Jan-18	7,200.00	0.00	7,200.00
31	ME	1029-5310301	GIS Specialist (4A1507/ME/001)	Services	Individual Consultant	Tejuoso Olufemi Johnson	18-Jan-18	17-Jan-19	25,475.00	0.00	25,475.00
32	EP	1030-5140101	Management Service Contract (MSC) for Liberia Electricity Corporation (LEC) (4A1506/EP/002)	Services	QCBS	ESBI Engineering & Facility Management Limited	8-Nov-17	20-Jan-21	14,340,789.00	2,260,444.65	16,601,233.65
33	PM	1031-5411914	Procurement of MIS IT Infrastructure and Services - (4A1506/CA/001)	Services	SSS	Iron Vine Security	27-Apr-17	20-May-21	433,130.26	14,162.50	447,292.76
34	PM	1032-5410702	MCAL Strategic Planning Session (4A1508/CA/004)	Services	Shopping	The Farmington Hotel	5-Dec-17	8-Dec-17	8,896.50	0.00	8,896.50
35	PM	1033-5411915	Supply & Delivery of Office Furniture (Standing Desk) for MCA-Liberia (4A430/CA/002)	Goods	Shopping	United Office Supplies & Equipment	26-Feb-18	25-Mar-18	16,900.00	0.00	16,900.00
36	PM	1034-5411403A	TEP - Evaluation of Proposals (4A1508/CA/003) - (Design Review Supervision Raw Water Pipeline)	Services	IC	Steven Arrey-Mbeng	19-Apr-18	30-Jun-18	12,540.00	1,860.00	14,400.00



No.	Project Name	Contract No.	Description	Procurement Type	Procurement Method Planned	Name of Firm(s) / Individual(s) Contracted	Effective Date of Contract	Completion Date	Original Contract Amount (USD)	Amendment Amount (USD)	New Total Amount (USD)
37	PM	I034-541 I403A-2	TEP - Evaluation of Proposals (Electricity Cost of Service Study (COSS) & the Development of a Cost Reflective Electricity Pricing Model for LERC)	Services	IC	Steven Arrey-Mbeng	13-Sep-19	31-Jan-20	14,400.00	2,760.00	17,160.00
38	PM	I034-541 I403B	TEP - Evaluation of Proposals (4A1508/CA/003) - (Design Review Supervision Raw Water Pipeline)	Services	IC	Hector Emmanuel Adjetei Boye	19-Apr-18	30-Jun-18	3,590.00	345.00	3,935.00
39	PM	I034-541 I403C	TEP - Evaluation of Proposals (4A1508/CA/003) - (Design Review Supervision Raw Water Pipeline)	Services	IC	Helmut Giesa	20-Apr-10 & 29-June-18 Amendment I	30-Jun-18	11,060.00	1,520.00	12,580.00
40	PM	I034-541 I403D-1	TEP - Evaluation of Proposals (4A1508/CA/003) - (Design Build Raw Water Pipeline)	Services	IC	Gary Foster	6-Oct-18	14-Dec-18	14,045.00	-1,440.00	12,605.00
41	PM	I034-541 I403D-2	TEP - Evaluation of Proposals (Utility Training Consultant (UTC) for the Implementation of Training at Liberia Electricity Corporation (LEC)	Services	IC	Gary W. Foster	13-Sep-19	31-Jan-20	11,600.00	0.00	11,600.00
42	PM	I034-541 I403D-3	TEP Member (Data Quality Review Consultant)	Services	IC	Gary W. Foster	22-Jul-20	30-Sep-20	7,200.00	0.00	7,200.00
43	PM	I034-541 I403F-1	TEP - Evaluation of Proposals (4A1508/CA/003) - Senior M&E Consultant for LEC	Services	IC	Ka-Rufus Morris	29-Oct-19		3,909.15	0.00	3,909.15
44	PM	I034-541 I403F-2	TEP Member (Senior M&E Consultant for LEC) Re-Launch	Services	IC	Ka-Rufus Morris	22-Jun-20	22-Jul-20	3,823.75	0.00	3,823.75
45	PM	I034-541 I403F-3	TEP Member (Data Quality Review Consultant)	Services	IC	Ka-Rufus G. Morris	22-Jul-20	30-Sep-20	5,462.50	0.00	5,462.50
46	PM	I034-541 I403G	TEP - Evaluation of Proposals (4A1508/CA/003) - (CBNRM)	Services	IC	John Jomo Morris	8-Jun-18	2-Jul-18	5,946.60	-3,867.60	2,079.00
47	PM	I034-541 I403G-2	TEP - Evaluation of Proposals (4A1508/CA/003) - (Senior M&E Consultant for LEC)	Services	IC	John Jomo Morris	29-Oct-19		2,448.60	0.00	2,448.60

No.	Project Name	Contract No.	Description	Procurement Type	Procurement Method Planned	Name of Firm(s) / Individual(s) Contracted	Effective Date of Contract	Completion Date	Original Contract Amount (USD)	Amendment Amount (USD)	New Total Amount (USD)
48	PM	1034-5411403H-1	TEP Member (Senior M&E Consultant for LEC) Re-Launch	Services	IC	Guy Oswald Demtare	22-Jun-20	22-Jul-20	2,994.60	0.00	2,994.60
49	PM	1034-5411403I	TEP - Evaluation of Proposals (4A1508/CA/003) - (Contract - CBNRM), (1st Amendment - WASH), (2nd Amendment - CBNRM & WASH)	Services	IC	Charles Balina	8-Jun-18	13-Aug-18	5,240.65	12,694.69	17,935.34
50	PM	1034-5411403L	TEP - Evaluation of Proposals (4A1508/CA/003) - (WASH)	Services	IC	Charles Cieza-Hoyos	5-Apr-18	4-Dec-20	6,605.00	515.00	7,120.00
51	PM	1034-5411403L-2	TEP - Evaluation of Proposals (4A1508/CA/003) - (Feasibility Study)	Services	IC	Charles Cieza-Hoyos	31-Aug-18	3-Nov-18	7,215.00	0.00	7,215.00
52	PM	1034-5411403N-1	TEP - Evaluation of Proposals (4A1508/CA/003) - (Design Build Raw Water Pipeline)	Services	IC	Adolf Jacobus Hare	7-Oct-18	14-Dec-18	13,280.00	-1,350.00	11,930.00
53	PM	1034-541403N-2	TEP - Evaluation of Proposals (Electricity Cost of Service Study (COSS) & the Development of a Cost Reflective Electricity Pricing Model for LERC)	Services	IC	Adolf Jacobus Hare (Alf)	12-Sep-19	31-Jan-20	10,970.00	2,025.00	12,995.00
54	PM	1034-541403O-1	TEP - Evaluation of Proposals (Electricity Cost of Service Study (COSS) & the Development of a Cost Reflective Electricity Pricing Model for LERC)	Services	IC	A. John Rezaian	13-Sep-19	31-Jan-20	22,520.00	4,500.00	27,020.00
55	PM	1034-5411403P	TEP - Evaluation of Proposals (4A1508/CA/003) - (Contract - WASH), (Amendment 1 - WASH)	Services	IC	Jose Cabral	11-Jun-18 & 2-Jul-18	13-Aug-18	12,005.00	1,415.00	13,420.00
56	PM	1034-5411403P-2	TEP - Evaluation of Proposals (4A1508/CA/003) - (Design Build Raw Water Pipeline)	Services	IC	Jose Cabral	7-Oct-18	14-Dec-18	16,255.00	-1,700.00	14,555.00
57	PM	1035-5140902	GSI Specialist Consultant (4A1507/EP/004)	Services	IC	Mardea E. Martin-Wiles	30-Apr-18	31-Jul-19	61,005.00	19,112.80	80,117.80

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58	PM	1036-5430302	Recruitment of Individual Consultant for Energy Audit (4A1508/CA/006)	Services	IC	Omar V. AL Sherif	1-May-18 (original) 7-June-18 (A1) 31-Aug-18 (A2)	15-Nov-18	4,600.00	1,160.00	5,760.00
59	PM	1037-5411404	Environmental and Social Performance (ESP) Specialist (4A1507/EP/001)	Services	IC	Stephen K. Kolee	9-May-18	20-Jan-21	36,157.08	63,141.57	99,298.65
60	EP	1038-5120301	Design Review Supervision Raw Water Pipeline (ESP) (4A1506/EP/007)	Services	QCBS	Nicholas O'Dwyer Limited	10-Oct-18	24-Nov-21	1,785,785.29	-16,851.58	1,768,933.71
61	PM	1039-5410703	Provision of a Venue and Meals for the MCA-Liberia Media Orientation Workshop (4A1508/CA/005)	Services	Shopping	The Cape Hotel	8-Jun-18 & 17-Jul-18	15-Jun-18	1,130.00	204.00	1,334.00
62	PM	1040-5411405	Baseline Survey Consultant (4A1508/CA/005)	Services	IC	Alfred B. Hill	15-Jun-18	17-Sep-18	9,880.00	0.00	9,880.00
63	PM	1041-5411406	Operators' Census Consultant (4A1507/EP/006)	Services	IC	Richard Fatorma Ngafuan	8-Oct-18	31-Aug-19	37,921.80	0.00	37,921.80
64	PM	1044-5410704	Provision of a Venue and Meals for the MCA-Liberia Social and Gender Integration Plan (SGIP) Workshop (4A1508/CA/005)	Services	Shopping	Mamba Point Hotel	27-Apr-18	2-May-18	8,510.00	0.00	8,510.00
65	PM	1050-5411920	Laptops with fully installed updated software and peripherals including maintenance cost (4A450/CA/001)	Goods	Shopping	Office Ideas	3-Aug-18	13-Aug-18	15,930.00	-34.56	15,895.44
66	PM	1051-5410705	Training & Workshop (Review Session of the Program Implementation Plan) (4A1508/CA/005)	Services	Shopping	Boulevard Palace	8-Jun-18	12-Jun-18	1,536.00	0.00	1,536.00
67	PM	1052-5411921	Supply of Computer User License (4A450/CA/001)	Goods	Shopping	CS Solutions	22-Aug-18	3-Sep-18	24,367.50	0.00	24,367.50

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68	EP	1053-5140903	LEC Customer Service Telephone System (4A450/EP/001)	Goods	Shopping	Mwetana Consulting and Technology Group	28-Aug-18	13-Oct-18	34,446.20	0.00	34,446.20
69	PM	1055-5410706	Trainings & Workshops - Training on Results-Based M&E for Implementing Entities (4A1508/CA/005)	Services	Shopping	Boulevard Palace	26-Jun-18	29-Jun-18	6,090.00	0.00	6,090.00
70	PM	1056-5411407	Consultancy for RAP Services (IC) (4A1507/EP/007)	Services	IC	Godwin K. Senagah	4-Sep-18	3-Sep-19	24,318.81	1,783.25	26,102.06
71	PM	1057-5411408	Contract Management Expert (4A1507/EP/008)	Services	IC	George A.S. Obitre-Gama	9-Dec-18	31-Jan-20	140,685.84	-40,176.67	100,509.17
72	EP	1058-5130501 (Re-Launch)	LEC Electrical Utility Poles (4A430/EP/002)	Goods	Shopping	Rousant International Limited	8-Feb-19	10-May-19	223,461.03	0.00	223,461.03
73	PM	1059-5411922	Laptops with fully installed updated software and peripherals including maintenance cost (cisco catalyst 3650, 1000 bt sfp transceiver, cisco 640w ac con fig & cisco 3650 24 port poe) (4A450/CA/001)	Goods	Shopping	CS Solutions Inc	19-Nov-18	1-Dec-18	7,048.00	0.00	7,048.00
74	EP	1060-5120302	Design-Build of Raw Water Pipeline (4A1507/EP/009)	Works	CB	Denys NV	31-Jan-19	24-Nov-20	14,213,996.19	2,330,591.35	16,544,587.54
75	EP	1061-5130502	Supply of Spare Parts for LEC's Bushrod Island 18 MW Thermal Power Plant (4A430/EP/003)	Goods	Shopping	Wartsila West Africa S.A.	15-Nov-18	14-Dec-18	352,984.31	0.00	352,984.31
76	PM	1062-5411409	External Legal Counsel (4A1507/CA/009)	Services	CQS	The International Group of Legal Advocates & Consultants, Inc.	23-Jan-19	22-Jan-20	0.00	2,727.27	2,727.27
77	EP	1063-5130503 Re-Launch - terminated	Specialized Vehicle for LEC (4A430/EP/001)	Goods	Shopping	American Procurement Services, LLC	5-Aug-19		293,850.80	0.00	293,850.80
78	PM	1064-5411410	Website Re-design Consultancy (4A1507/EP/011)	Services	IC	Samuka A. Kanneh	22-Jan-19	20-Jan-21	24,090.00	26,367.00	50,457.00

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79	EP	1066-5140905A	Office Furniture for GSI Units - LEC (4A1509/EP/004)	Goods	Shopping	United Office Supplies & Equipment	30-Nov-18	21-Dec-18	6,107.00	0.00	6,107.00
80	EP	1066-5140905B	Office Furniture for GSI Units - LEC (4A1509/EP/004)	Goods	Shopping	Beever Communications Inc.	28-Nov-18	30-Nov-18	1,500.00	0.00	1,500.00
81	EP	1067-5411411	Private Sector Development (Short-Term Consultant) (4A1507/EP/010)	Services	SS	Krystle Cooper	31-Oct-18	31-Dec-18	9,600.00	0.00	9,600.00
82	EP	1068-5130500A	LEC Electrical Equipment (Lots 1 & 3) (4A430/EP/004) Lots 1 & 3	Goods	CB	Rousant International Limited	11-Mar-19	10-May-19	407,797.12	8,332.00	416,129.12
83	EP	1068-5130500B	LEC Electrical Equipment (Lot 2) (4A430/EP/004)	Goods	CB	Armese Consulting LTD	20-Mar-19	19-May-19	224,476.82	0.00	224,476.82
84	EP	1068-5130500C	LEC Electrical Equipment (Lot 4) (4A430/EP/004) Lot 4	Goods	CB	Unit Export Ltd	14-Mar-19	3-May-19	149,900.00	0.00	149,900.00
85	PM	1069-5411900	Office Furniture (4A430/CA/002)	Goods	Shopping	United Office Supplies & Equipment	10-Jan-19	25-Jan-19	3,180.00	0.00	3,180.00
86	PM	1070-5410700	Trainings & Workshops - MCA-L Strategic Planning Workshop 2018 (5-8 Dec 2018) (4A1508/CA/005)	Services	Shopping	The Farmington Hotel	3-Dec-18	8-Dec-18	18,777.27	-3,418.27	15,359.00
87	PM	1071-5410700	Trainings & Workshops -MCC IPM Training Workshop 2018 (5-8 Dec 2018) (4A1508/CA/005)	Services	Shopping	The Farmington Hotel	3-Dec-18	14-Dec-18	19,800.00	-3,293.00	16,507.00
88	PM	1072-5411900	Laptops/Desktops with fully installed updated software and peripherals including maintenance cost (HP elitebook, internal drive....) (4A450/CA/001)	Goods	Shopping	RAJ Enterprises	22-Jan-19	21-Feb-19	23,175.00	0.00	23,175.00
89	PM	1073-5411900	IT Equipment including software & other accessories (4A450/CA/001-2)	Goods	Shopping	Office Express Incorporated	21-Feb-19	11-Mar-19	18,385.00	0.00	18,385.00
90	EP	1074-5140800	Architect Services LEC CSC (4A1509/EP/009)	Services	IC	B.Garmondyu Zogar	29-Jan-19	28-Feb-20	30,738.92	30,412.80	61,151.72

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91	EP	1075-5140300	Recruitment of a Consulting Firm to Provide Design, Development, Implementation & Website Hosting Services (4A1508/LERC/004)	Services	CQS	HAK Technology	20-Nov-19		18,230.00	0.00	18,230.00
92	ME	1078-5310300	Insulated Bucket Truck for LEC ACMS (4A430/ME/001)	Goods	Shopping	COM.INT-S.P.A	24-Apr-19	21-Oct-19	127,000.00	0.00	127,000.00
93	EP	1079-5140300	LERC Vehicles (4A430/LERC/003)	Goods	Shopping	KJAER & KJAER A/S	4-Jun-19	22-Aug-19	119,423.00	0.00	119,423.00
94	EP	1080-5140300	LERC IT Equipment (4A430/LERC/001)	Goods	Shopping	Techno IT Inc.	15-May-19	14-Jun-19	65,900.00	0.00	65,900.00
95	PM	1082-5411900	Office Furniture (4A430/CA/002)	Goods	Shopping	Lion Stationery Store	3-Jun-19	5-Jun-19	1,062.00	0.00	1,062.00
96	ME	1084-5310300	Handheld tablets with project app installed (4A1506/ME/011)	Goods	Shopping	Office Ideas	4-Jun-19	18-Jun-19	16,500.00	0.00	16,500.00
97	ME	1085-5310300A	Data collector's uniform, promotional materials & Poles tagging (4A1506/ME/010, 4A1506/ME/012 & 4A1506/ME/014)	Goods	Shopping	Holler West Africa Limited	17-Jun-19	16-Jul-19	18,246.00	0.00	18,246.00
98	ME	1085-5310300B	Data collector's uniform, promotional materials & Poles tagging (4A1506/ME/010, 4A1506/ME/012 & 4A1506/ME/014)	Goods	Shopping	King Sign & Design	14-Jun-19	29-Jul-19	3,600.00	0.00	3,600.00
99	PM	1087-5412000	Management Information System (Online Helpdesk Platform)(4A450/CA/001)	Goods	Shopping	CS Solutions Inc	1-Oct-19	16-Oct-19	3,576.00	0.00	3,576.00
100	ME	1088-5310300	Production and Printing of Training Materials (4A1506/ME/009)	Goods	Shopping	King Sign & Design	3-Jun-19	18-Jun-19	640.00	0.00	640.00
101	EP	1090-5140900	LEC Communications Outreach Campaign (4A1509/EP/012)	Services	IC	Frank Sainworla	7-Aug-19	14-Feb-20	34,194.50	0.00	34,194.50

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102	EP	1091-5140900	TA for Ministry of Gender, Children & Social Protection (MGCSP) and Implementing Entities (IEs) (4A1506/EP/024)	Services	IC	Puchu Leona Bernard	19-Aug-19	25-Sep-19	62,044.20	0.00	62,044.20
103	PM	1094-5411900	Cell Phones (4A450/CA/001)	Goods	Shopping	Holler West Africa Limited	23-Jul-19	5-Aug-19	1,028.00	0.00	1,028.00
104	PM	1095-5410700	Compact Close-Out workshop (4A1508/CA/005)	Services	Shopping	The Farmington Hotel	13-Jun-19	12-Jul-19	40,000.00	-7,550.00	32,450.00
105	PM	1096-5411400	Compact Close-Out Consultant (4A1508/CA/005)	Services	IC	Valentin Bozu	5-Jul-19	20-May-21	231,626.00	708.00	232,334.00
106	PM	1097-5412000	Laptops with fully installed updated software (HP Elitebook 840G5) & HP ProDesk 600 G4) (4A450/CA/001)	Goods	Shopping	Beever Communication Inc.	8-Jul-19	19-Jul-19	11,910.00	0.00	11,910.00
107	PM	1098-5410700	Program Closure Sustainability Workshop (Lots 1 & 2) (4A1508/CA/005)	Services	Shopping	Mamba Point Hotel	3-Jul-19	16-Jul-19	7,325.00	0.00	7,325.00
108	PM	1099-5411300	Media & Public Engagement including radio spots, SMS blasts, promotional video production, etc. (Recording Studio, Radio Station & Drama Group) & (Printing Press or a Branding Company) (4A1508/CA/006)	Goods	Shopping	Trust Enterprise	1-Aug-19	16-Aug-19	1,020.00	0.00	1,020.00
109	PM	1100-5411300	Media & Public Engagement including radio spots, SMS blasts, promotional video production, etc. (Recording Studio, Radio Station & Drama Group) & (Printing Press or a Branding Company) (4A1508/CA/006)	Goods	Shopping	Graceland International Inc	30-Jul-19	20-Aug-19	7,375.00	1,837.00	9,212.00
110	PM	1101-5411300	Brochures, Printing, Billboards (MCA-L Banners) (4A1508/CA/007)	Goods	Shopping	King Sign & Design	30-Sep-19	11-Oct-19	500.00	0.00	500.00
111	EP	1102-5140100	Personal Protective Equipment (4A430/EP/004-1)	Goods	Shopping	Holler West Africa Limited	2-Sep-19	2-Oct-19	11,564.00	0.00	11,564.00

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112	PM	1103-5410700	MCAL Training Sessions, Events & Workshops leading to CED (Catering Service for MCC/MCA Reception) (4A1508/CA/005-1)	Services	Shopping	Royal Grand Hotel	13-Jul-19	15-Jul-19	2,290.00	0.00	2,290.00
113	EP	1104-5140400	Electricity Cost of Service Study (COSS) and Development of a Cost Reflective Electricity Pricing Model for LERC	Services	QCBS	Tetra Tech ES, Inc	10-Feb-20	20-Oct-20	965,163.00	0.00	965,163.00
114	EP	1105-5130400	Utility Training Consultant (UTC) for the Establishment of Enterprise-Based Training center at LEC	Services	QCBS	The TATA Power Company Limited	18-Dec-19	12-Oct-20	972,170.00	742,500.24	1,714,670.24
115	PM	1106-5140300	LERC Setup Procurement - Furniture (4A430/LERC/002)	Goods	Shopping	United Office Supplies & Equipment	30-Sep-19	1-Oct-19	26,404.96	6,586.06	19,818.90
116	EP	1107-5410700	Provision of Catering Service for Operator Census Report Validation Workshop for Thirty-Five (35) Persons	Services	Shopping	Lila Brown Inc	14-Aug-19	14-Aug-19	560.00	0.00	560.00
117	PM	1108-5412000-A	Supply & Delivery of Genuine Software & Peripherals/Parts for MCA-Liberia (Lot 1)	Goods	Shopping	Sparktek	14-Oct-19	19-Oct-19	10,735.40	0.00	10,735.40
118	PM	1108-5412000-B	Supply & Delivery of Genuine Software & Peripherals/Parts for MCA-Liberia (Lots 2 & 3)	Goods	Shopping	United Office Supplies & Equipment	21-Oct-19	16-Nov-19	606.60	0.00	606.60
119	EP	1109-5140800	Supply, Delivery & Installation of Furniture for Customer Service Center at Waterside of Liberia Electricity Corporation	Goods	Shopping	Office Ideas	19-Jul-20	26-Jul-20	17,236.36	0.00	17,236.36
120	EP	1110-5140800	Supply, Delivery & Installation of Information Technology Infrastructure & Other Equipment for CSC at Waterside of LEC	Goods	Shopping	United Office Supplies & Equipment Company	30-Jul-20	29-Aug-20	70,113.15	0.00	70,113.15
121	PM	1113-5310300	Provision of Clearing Agent Services to MCA-Liberia & First Amendment	Services	Shopping	Hoke Expedition Service	2-Oct-19	2-Nov-19	1,680.00	0.00	1,680.00



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122	EP	1114-5140300	Provision of Fiber Internet Connection with Wi-Fi Access to Two (2) Floors for LERC	Services	Shopping	Power Net	1-Nov-19	31-Dec-20	9,800.00	16,900.00	26,700.00
123	ME	1115-5310300	Supply & Delivery of Handheld Tablets for LEC	Goods	Shopping	RAJ Enterprises	19-Dec-19	9-Jan-20	30,000.00	0.00	30,000.00
124	PM	1116-5411900	CCTV and Security Camera Maintenance and Repair Services to MCA-Liberia	Services	Shopping	Dynamic Global Technologies (DGT)	19-Feb-20	20-May-21	3,300.00	0.00	3,300.00
125	ME	1117-5130300	Supply & Delivery of Tools and Equipment for the LEC Asset and Customer Mapping Study	Goods	Shopping	Trust Enterprise	20-Feb-20	22-Mar-20	23,350.00	0.00	23,350.00
126	ME	1118-5310300	Printing, Supply & Delivery of Business & Flyers(Assorted)	Goods	Shopping	Pro Designs Inc	19-Dec-19	24-Dec-19	1,960.00	0.00	1,960.00
127	ME	1119-5310300	Production, Supply & Delivery of Outreach & Sensitization Campaign Services(Assorted) for Creation of ACMS	Services	Shopping	Flomo Theater Inc	20-Dec-19	27-Mar-20	8,765.42	0.00	8,765.42
128	ME	1120-5310300	Production, Delivery & Broadcast of Radio Jingles (Assorted) for Creation of Awareness in LEC Asset Customer & Mapping Study (ACMS)	Services	Shopping	Flomo Theater Inc	26-Mar-20	20-Jan-21	8,037.00	81.18	8,118.18
129	PM	1121-5411300	Production & Printing of Four Brochures & Flex Banners for MCA-Liberia	Goods	Shopping	King Sign & Design	29-Oct-19	4-Nov-19	667.50	0.00	667.50
130	PM	1122-5411300	Provision of Catering Services for Groundbreaking of Raw Water Pipeline Project & World Energy Day Commemoration	Services	Shopping	Millennium Guest House & Suites	25-Oct-19	1-Nov-19	1,875.00	0.00	1,875.00
131	ME	1123-5310300	Supply & Delivery of Assorted Branded Training Materials (Notebooks & Pens) for ACMS Data Collectors'(4A1506/ME/022)	Goods	Shopping	Graceland International Inc	9-Jan-20	6-Feb-20	1,000.00	0.00	1,000.00

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132	EP	1124-5310300	Supply & Delivery of Data Collectors' Uniforms & PPEs for LEC Asset Customer Mapping Study(4A1506/ME/021)	Goods	Shopping	Trust Enterprise	18-Dec-19	2-Jan-20	7,080.00	0.00	7,080.00
133	EP	1125-5140800 / 5140300-A	Supply & Delivery of One (1) SUV and Three (3) 4x4 Double-Cabin Pickups for LERC & LEC CSC - Lot 1(4A430/LERC/003-1 / 4A430/EP/005)	Goods	Shopping	Toyota Gibraltar Stockholdings Ltd	24-Apr-20	20-Jul-20	114,755.33	0.00	114,755.33
134	EP	1125-5140800 / 5140300-B	Supply & Delivery of One (1) Sedan for LEC Customer Service Center Lot 2(4A430/LERC/003-1 / 4A430/EP/005)	Goods	Shopping	Elias Antoune Motors	24-Apr-20	4-May-20	16,893.55	0.00	16,893.55
135	PM	1126-5412000	Supply & Delivery of Computer Accessories and a 71-inch LED TV Screen for MCA-Liberia (4A450/CA/010)	Goods	Shopping	United Office Supplies & Equipment	20-Feb-20	21-Feb-20	4,172.72	0.00	4,172.72
136	EP	1127-5140300	Cleaning Services for LERC (4A1507/EP/003)	Services	Shopping	Judith K. Ezika Housekeeping & Janitorial Services Inc, Liberia	10-Jan-20	31-Dec-20	14,851.97	1,800.07	16,652.04
137	EP	1128-5140400	RIMS Development Consultant 4A1509/EP/003	Services	IC	Oumar Ndiaye	27-Feb-20	20-Jan-21	240,955.00	-24,955.00	216,000.00
138	EP	1129-5140300	Provision of a Hall & Catering Service for 50Persons Attending LERC Stakeholders' Workshop (Lots 1 & 2)	Services	Shopping	Bella Casa Hotel	25-Oct-19	30-Oct-19	3,675.00	0.00	3,675.00
139	EP	1130-5140800	Leasing of Temporary Office Space for Customer Service Center (CSC) of the Liberia Electricity Corporation (LEC)	Services	Shopping	Bridgeway Corporation	17-Jan-20	30-Nov-20	44,100.00	39,900.00	84,000.00
140	EP	1131-5140100	Supply & Delivery of CT Smart Meters	Goods	Shopping	Inhegrid Co. Ltd	30-Mar-20	14-Jan-21	203,436.00	286.00	203,722.00
141	PM	1132-5411900	Supply & Delivery of a Podium for MCA-Liberia	Goods	Shopping	J-Mart Inc.	28-Oct-19	31-Oct-19	219.00	0.00	219.00
142	EP	1133-5140800	Reconstruction & Remodeling of LEC Customer Service Center	Works	Shopping	Starks Foundation Incorporated	20-Jan-20	20-Aug-20	210,538.35	0.00	210,538.35

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143	PM	1134-5410700	MCAL Training Sessions, Events & Workshops leading to CED (Strategic Planning), 4A1508/CA/005-1	Services	Shopping	The Farmington Hotel	9-Dec-19	13-Dec-19	13,690.00	305.00	13,995.00
144	ME	1138-5310300	ACMS Additional Insulated Bucket Trucks	Goods	Shopping	Triple K Trade & Service SAL Offshore	27-Apr-20	23-Oct-20	171,500.00	0.00	171,500.00
145	ME	1139-5310300	Supply and Delivery of Double Cabin Pick-up for ACMS	Goods	Shopping	Toyota Gibraltar Stockholdings Ltd	21-Apr-20	20-Jul-20	25,966.34	0.00	25,966.34
146	ME	1140-5310300	Provision of Hall, Room & Meals for LEC ACMS Training Workshop Sessions	Services	Shopping	Bella Casa Hotel	19-Jun-20	8-Aug-20	78,530.00	625.00	79,155.00
147	ME	1141-5310300	Provision of Vehicle Rental Services for ACMS LEC	Goods	Shopping	YAP Enterprises Inc	2-Jul-20	31-Dec-20	81,600.00	447,998.79	529,598.79
148	RP	1143-5220400	Supply, Delivery and Installation of Office Equipment for the New GSI Unit/MPW	Goods	Shopping	Beever Communications Inc.	9-Mar-20	24-Mar-20	19,744.60	0.00	19,744.60
149	RP	1144-5220400	Supply and Delivery of Office Furniture for the New GSI Unit/MPW, 4A430/RP/002	Goods	Shopping	United Office Supplies & Equipment	9-Mar-20	10-Mar-20	1,900.00	0.00	1,900.00
150	EP	1145-5411400	Contract Management Consultant	Services	IC	Muvenga Manjonjo	20-Aug-20	20-Jan-21	105,854.77	-10,697.76	95,157.01
151	PM	1147-5411400	MCA-Liberia Compact Completion Report (CCR) Consultant	Services	IC	Dr. Charles M. Balina	22-Jul-20	20-Jan-21	126,526.90	0.00	126,526.90
152	ME	1148-5310300	Supply & Delivery of Office Equipment for ACMS - 4A1506/ME/025	Goods	Shopping	Electrocity Inc	27-Mar-20	11-May-20	118,150.00	0.00	118,150.00
153	RP	1149-5220200	Customization and Implementation of a Road Asset Management System (RAMS) for Liberia	Goods	CB	NEXTEC Industrial Technologies (Pty) Ltd	2-Jun-20	1-Jan-21	835,315.70	82,831.81	918,147.51
154	PM	1152-5411300	MCA-L Strategic Communications Plan Implementation (LEC's Anti-Power Theft Campaign)	Services	Shopping	Graceland International Inc	19-Jun-20	20-Jul-20	20,150.00	0.00	20,150.00

No.	Project Name	Contract No.	Description	Procurement Type	Procurement Method Planned	Name of Firm(s) / Individual(s) Contracted	Effective Date of Contract	Completion Date	Original Contract Amount (USD)	Amendment Amount (USD)	New Total Amount (USD)
155	EP	1153-5140900	Supply & Delivery of Office Equipment for Gender TA and MME GSIU	Goods	Shopping	Office Express Incorporated	20-May-20	4-Jun-20	12,170.00	0.00	12,170.00
156	EP	1154-5140900	Supply & Delivery of Office Furniture for Gender TA	Goods	Shopping	United Office Supplies & Equipment Company	29-May-20	30-May-20	1,774.20	0.00	1,774.20
157	EP	1155-5140900	Gender TA Workshop	Services	Shopping	Lila Brown Inc	24-Jun-20	29-Jun-20	450.00	0.00	450.00
158	PM	1157-5410700	Provision of Accommodation & Meals for MCA-Liberia Temporary Stay (COVID-19)	Services	Shopping	RJL Kendeja Resort & Villas	24-Mar-20	27-Mar-20	59,250.00	0.00	59,250.00
159	PM	1158-5410700	Provision of Accommodation & Meals for MCA-Liberia Temporary Stay (COVID-19)	Services	Shopping	Bella Casa Hotel & Suites	23-Mar-20	27-Mar-20	23,456.00	0.00	23,456.00
160	ME	1159-5310100	Senior M&E Consultant for LEC	Services	IC	Egbe Awo Egbe	30-Sep-20	20-Jan-21	75,125.00	0.00	75,125.00
161	EP	1161-5140300	Supply, Delivery & Installation of Additional Office Furniture for LERC	Goods	Shopping	United Office Supplies & Equipment	26-Jun-20	27-Jun-20	16,728.08	0.00	16,728.08
162	PM	1162-5411400	Archiving System and Services	Services	Shopping	Mwetana Consulting and Tech Group Inc	25-Aug-20	20-May-21	133,900.00	0.00	133,900.00
163	PM	1163-5412000	Provision of WebEx Services to MCA Liberia	Services	DC	Iridium Solutions Inc	1-Apr-20	31-Mar-20	5,543.00	0.00	5,543.00
164	PM	1164-5411300	Printing, Supply & Delivery of Manuals for Ministry of Public Works	Goods	Shopping	King Sign and Design	25-Jun-20	2-Jul-20	283.70	0.00	283.70
165	ME	1165-5310100	Data Quality Review	Services	QCBS	CRISIL Risk & Infrastructure Solutions Ltd	12-Dec-20		199,302.00	0.00	199,302.00
166	PM	1167-5411300	Design, Production, Supply & Delivery of Promotional Materials & Supply & Delivery of Video Production Equipment (Lots 1 & 2)	Goods	Shopping	Graceland International Inc	28-Sep-20	12-Nov-20	16,185.00	0.00	16,185.00
167	PM	1170-5130300	Supply, Delivery & Installation of Video Conferencing System & Equipment for LEC	Goods	Shopping	Beever Communications Inc.	30-Jul-20	19-Aug-20	25,365.00	0.00	25,365.00

No.	Project Name	Contract No.	Description	Procurement Type	Procurement Method Planned	Name of Firm(s) / Individual(s) Contracted	Effective Date of Contract	Completion Date	Original Contract Amount (USD)	Amendment Amount (USD)	New Total Amount (USD)
168	PM	1171-5130300	Provision of WebEx Service to Liberia Electricity Corporation (LEC)	Services	DC	Iridium Solutions Inc	20-Jul-20	20-May-21	5,543.00	0.00	5,543.00
169	ME	1172-5310100	ACMS Field Operations (Field Offices)	Services	Shopping	Bridgeway Corporation	23-Oct-20		18,900.00	0.00	18,900.00
170	ME	1173-5310300	ACMS GIS Consultant	Consulting	IC	Amit Epstein	18-Nov-20		45,512.40	0.00	45,512.40
171	EP	1174-5130300	Supply & Delivery of Laptops for UTC Training	Goods	Shopping	Beever Communications Inc.	18-Sep-20	24-Sep-20	20,400.00	0.00	20,400.00
172	EP	1175-5310300	Supply & Delivery of Handheld Tablets for UTC Training	Goods	Shopping	Holler West Africa Ltd	28-Sep-20	5-Oct-20	11,300.00	0.00	11,300.00
173	PM	1176-5411400	Financial Consultant	Consulting	IC	Kennedy Auka	12-Nov-20		73,623.00	0.00	73,623.00
174	ME	1178-5310300	Production, Supply & Delivery of ACMS Asset Pole Tags	Goods	Shopping	Leodium Management Services Limited	25-Sep-20	5-Oct-20	14,200.00	21,300.00	35,500.00
175	EP	1180-5140300-A	Supply, Delivery & Installation of Additional Office IT Equipment & Software for LERC (Lot 1)	Goods	Shopping	Electrocity Incorporated	3-Dec-20	18-Jan-21	77,000.00	0.00	77,000.00
176	EP	1180-5140300-B	Supply, Delivery & Installation of Additional Office IT Equipment & Software for LERC (Lot 2)	Goods	Shopping	Electrocity Incorporated	16-Dec-20	8-Jan-21	28,000.00	0.00	28,000.00
177	ME	1181-5310300	Supply and Delivery of COVID-19 Personal Protective Supplies for MCA-Liberia	Goods	Shopping	Harbel Supermarket Corporation	4-Sep-20	7-Sep-20	16,165.00	0.00	16,165.00
178	RP	1183-5220400	Supply & Delivery of IT Equipment for NRF	Goods		Office Ideas	3-Nov-20	18-Nov-20	23,740.91	0.00	23,740.91
179	RP	1184-5220400	Supply, Delivery & Installation of Office Security IT Equipment for NRF	Services		United Office Supplies & Equipment	11-Nov-20	14-Dec-20	20,565.00	0.00	20,565.00
180	EP	1185-5130300	Zoom Online Subscription	Services	DC	Zoom Online	18-Sep-20	21-Apr-21	1,999.00	0.00	1,999.00
181	EP	1186-5410400	Dropbox for Business	Services	DC	Dropbox	11-Sep-20	20-May-21	720.00	0.00	720.00
182	EP	1188-5140300	Supply, Delivery & Broadcasting of Jingles & Digital Media Services for LERC	Services	Shopping	Flomo Theater Inc	9-Nov-20	20-Jan-21	12,327.28	0.00	12,327.28

No.	Project Name	Contract No.	Description	Procurement Type	Procurement Method Planned	Name of Firm(s) / Individual(s) Contracted	Effective Date of Contract	Completion Date	Original Contract Amount (USD)	Amendment Amount (USD)	New Total Amount (USD)
183	PM	1189-5411300	Supply, Delivery, Broadcasting & Hosting Live Shows for MCA-Liberia	Services	Shopping	Okay Communications, Inc (Okay FM)	16-Nov-20	30-Apr-21	6,375.00	0.00	6,375.00
184	PM	1190-5411300	Supply & Delivery of Monthly Wall Photos Calendars & Billboards	Goods	Shopping	Graceland International Inc	17-Nov-20	18-Dec-20	23,000.00	0.00	23,000.00
185	PM	1191-5411700	Clearing Agent Services	Services	Shopping	Astech Clearing and Forwarding	2-Dec-20	20-Jan-21	2,422.00	0.00	2,422.00
186	PM	1192-5411300	Provision of Catering Services for MCA-Liberia Meetings with Project Affected Communities in Harrisburg and White Plains, Media Editors and Community Leaders in Monrovia	Services	Shopping	La Jolla Spice	21-Dec-20	29-Jan-21	2,162.50	0.00	2,162.50
187	PM	1194-5411300	Communication Survey	Services	Shopping	Pert Consultancy Inc	6-Jan-21	25-Feb-21	16,890.00	0.00	16,890.00
188	PM	1195-5411300	Design, Production, Supply & Delivery of Fishery Booklet	Goods	Shopping	Graceland International Inc	30-Dec-20	20-Jan-21	8,000.00	0.00	8,000.00
189	PM	1196-5411300	Video Documentaries	Services	Shopping	Public Trust Media Group	6-Jan-21	4-Mar-21	43,200.00	0.00	43,200.00
190	EP	1197-5140300	Printing of Promotional Materials for LEC	Services	Shopping	Graceland International Inc	5-Jan-21	15-Jan-21	17,800.00	0.00	17,800.00
191	RP	1198-5220100	Supply and Delivery of Double Cabin Pick Truck	Goods	Shopping	CICA Motors	11-Jan-21	18-Jan-21	31,000.00	0.00	31,000.00
192	RP	1200-5220100	Supply & Delivery of Data Collection Equipment & Supplies	Goods	Shopping	Trust Enterprise	17-Dec-20	11-Jan-21	32,314.00	0.00	32,314.00
193	RP	1201-5220100	Supply, Delivery & Installation of Office Equipment & Supplies for RAMS	Goods	Shopping	Office Ideas	17-Dec-20	30-Dec-20	38,872.00	0.00	38,872.00
194	RP	1202-5410100	Supply and Delivery of MS Office Standard License (SAPk OLP Gov)	Services	Shopping	Iridium Solutions Inc.	17-Dec-20	21-Dec-20	5,709.24	0.00	5,709.24
195	ME	1203-5310300	Office Furniture for ACMS	Goods	Shopping	United Office Supplies & Equipment	11-Jan-21	15-Jan-21	20,455.88	0.00	20,455.88
196	ME	1205-5310300	Printing of Maps for ACMS	Services	Shopping	Geo Consultancy Ltd	16-Jan-21	18-Jan-21	7,875.00	0.00	7,875.00

No.	Project Name	Contract No.	Description	Procurement Type	Procurement Method Planned	Name of Firm(s) / Individual(s) Contracted	Effective Date of Contract	Completion Date	Original Contract Amount (USD)	Amendment Amount (USD)	New Total Amount (USD)
197	EP	1206-5140300	Generator for LERC	Goods	Shopping	Technotec Inc	6-Jan-21	11-Jan-21	17,800.00	0.00	17,800.00
198	EP	1207-5140300-A	LERC Office Refurbishment -Lot 1 - Partitioning Installation	Works	Shopping	Stark Foundation Inc	6-Jan-21	15-Jan-21	44,019.00	0.00	44,019.00
199	EP	1207-5140300-B	Supply and Installation of A/Cs for LERC - Lot 2	Goods	Shopping	Trust Enterprise	7-Jan-21	15-Jan-21	7,680.00	0.00	7,680.00
200	EP	1207-5140300-C	Lot 3 - Supply & Delivery if IT Infra & Network Cabling	Goods	Shopping	International Aluminum Factory Inc	6-Jan-21	15-Jan-21	3,757.59	0.00	3,757.59
201	RP	1208-5220100	Provision of a Hall and One Breakout Room for MPW & NRF Road Asset Management System (RAMS) Training Workshop Sessions	Services	Shopping	Mamba Point Hotel	1-Dec-20	11-Dec-20	6,136.36	0.00	6,136.36
202	EP	1209-5140300	Printing LERC Regulatory Instrument	Services	Shopping	Graceland International Inc	14-Jan-21	18-Jan-21	2,000.00	0.00	2,000.00
203	EP	1210-5140800	Heavy Fuel Oil for LEC	Goods	Shopping	Petro Trade Inc	11-Jan-21	18-Jan-21	649,969.10	0.00	649,969.10
204	PM	1211-5411400	Refurbishment of Archiving Space	Works	Shopping	International Aluminum Factory Inc	23-Jan-21	22-Feb-21	31,178.72	0.00	31,178.72
205	EP	1212-5140400	Supply, Delivery and Installation of Office 365 Business Standard	Goods	DC	Iridium Solutions Inc.	30-Dec-20	5-Dec-20	3,200.00	0.00	3,200.00
206	EP	1213-5140400-A	Lot 1 - Accounting Software, Lot 3 - Laptops, and Lot 4 - UPS	Goods	Shopping	United Office Supplies and Equipment	13-Jan-21	15-Jan-21	11,447.00	0.00	11,447.00
207	EP	1213-5140400-B	Lot 2 - Supply and Delivery of Call Manager /PBX and Lot 5 - Backup Software	Goods	Shopping	K. Kartik Stationary	14-Jan-21	15-Jan-21	3,135.00	0.00	3,135.00
208	PM	4A1505/CA/020/F AA-1	Procurement Agent Contract (4A1505/CA/020)	Services	FBS	Cardno Emerging Markets USA Ltd	23-Dec-16	20-May-21	3,570,864.00	95,454.80	3,666,318.80
209	PM	4A1506/CA/020/F AA-2	Fiscal Agent Contract (4A1505/CA/021)	Services	FBS	Cardno Emerging Markets USA Ltd	23-Dec-16	20-May-21	3,520,646.00	162,000.00	3,682,646.00
210	PM	4A1506/CA/DC/001/IT-01	Procurement of MIS IT Infrastructure and Services - SITE Assessment (4A1506/CA/DC/001)	Services	DC	Iron Vine Security	14-Nov-16	20-May-21	48,000.00	0.00	48,000.00
											<b>58,855,113.72</b>

### 5.3. ANNEX 3 – PIU RESULTS FRAMEWORK

No.	Outputs	Indicators
1.	Ensure that Mt. Coffee is reconstructed in a technically sound manner, while deploying all efforts to meet budget targets and deadlines throughout the two phases, procurement of contracts and construction.	One Owner's Engineer contract (Norplan Fichtner) and six construction contracts (Voith, Andritz, Dawnus, NCC, Eltel, and PSM JV) are implemented in line with the approved Mt. Coffee budget and implementation plan, and substantially completed by December 31, 2017 <sup>1</sup> .
2.	Establish the PIU as a semi-autonomous unit in LEC with the required reporting and accounting frameworks	a. PIU established and staff positions filled in line with approved PIU organization chart. b. Financial Management Manual stipulating reporting and accounting frameworks is updated at required, approved by MFA, and in force.
3.	Develop and maintain a project master schedule and control budget that will form the basis for project implementation and monitoring.	Submission of Mt. Coffee project budget and schedule on a no less than bi-annual basis over the period of the Project.
4.	Develop, implement and manage a financial tracking and reporting system to meet the information needs of the PIU, funders, and GOL, and to provide the required inputs into the LEC Corporate Financial Reporting System. There shall be no comingling of Mt. Coffee capital funding with other LEC capital programs, and separate bank accounts and reconciliations will be carried out.	a. Financial Management Manual stipulating reporting and accounting frameworks is updated at required, approved by MFA, and in force. b. Submission of required Financial and Audit Reports within the timeframe required.
5.	On a monthly basis provide LEC Finance with all required inputs for corporate financial reporting and asset registration	LEC General Ledger incorporates up to date PIU accounting information.
6.	Ensure that the PIU is properly staffed with both international and local staff at all times.	PIU established and staff positions filled in line with approved PIU organization chart.
7.	Ensure that other specialists and experts (either international or local) are provided to address specific needs over the course of the project.	PIU established and staff positions filled in line with approved PIU organization chart.
8.	Manage all procurement in accordance with the Liberian Public Procurement and Concessions Commission (PPCC) regulations and manage contracts with the Owner's Engineer, and Suppliers and Contractors engaged for the implementation of the Project. (It was subsequently agreed with KfW and EIB that all project procurement would follow KfW procurement guidelines, while the PIU's procurement would follow PPCC guidelines).	PIU has carried out all procurement in line with the relevant guidelines (KfW or PPCC): a. Funder no objections are requested and obtained in line with approved PIU authorities as defined at the July 2015 Quarterly Stakeholder Meeting. b. Annual procurement plan is submitted to LEC for onward forwarding to and approval of PPCC.
9.	Represent LEC in meetings (internationally and domestically) which concern Mt. Coffee, when called upon to do so. Develop a public website for the Mt. Coffee Project as the official source of information concerning the project.	a. PIU organizes quarterly stakeholder meetings, with the meeting occurring in the first calendar quarter serving as the Annual Project meeting. b. Web site is operating at <a href="http://www.mtcoffeeliberia.com">www.mtcoffeeliberia.com</a> .
10.	Ensure that the Transmission Infrastructure and System control and communications systems necessary to supply all the electricity generated by the Project is in place at the time of the commissioning of the Project.	The Bushrod-Mt. Coffee transmission line is commissioned prior to December 16, 2016.



No.	Outputs	Indicators
11.	Ensure that the reporting, controls and information requirements of the funders are met and that sufficient and appropriate reporting procedures to the funders are put in place. Coordinate with the Funders to ensure availability of funds in time to avoid any delays in the project, through the provision of up-to-date payment schedules.	<ul style="list-style-type: none"> <li>a. Monthly and quarterly progress reports are submitted to the project stakeholders throughout the Project period.</li> <li>b. Disbursement requests are submitted to Mt. Coffee funders including Schedule 2 (Project Budget and Disbursement Actual and Forecast) in line with cash flow requirements but no less than bi-annually.</li> </ul>
12.	Complete and implement the required Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), and Resettlement Action Plan (RAP) documents for the Project.	<ul style="list-style-type: none"> <li>a. ESIA's, ESMPs, and RAPs are finalized, approved by the Mt. Coffee funders, and made available on the Project Web site (<a href="http://www.mtcoffeeliberia.com">www.mtcoffeeliberia.com</a>).</li> <li>b. Implementation of ESMPs and RAPs is reported regularly in the project monthly and quarterly progress reports.</li> </ul>

## 5.4. ANNEX 4 – BINDING CONDITION ANALYSIS FRAMEWORK SUMMARY

Type of Investment Incentive	Input	Test 1	Test 2	Test 3	Test 4	Findings	Certainty
Access to Finance	Finance	Negative	Positive	Negative	Negative	Not Binding	Strong
Low appropriability of investment returns	Market Failures					Not binding but concern for coordination challenges with implications for value chain development	Moderate
	Governance (Political Stability, Rule of Law, Government effectiveness, Regulatory Quality)					Four Tests not applied but evidence presented indicate that these constraints do not bind and that there is measurable progress. But strong risks remain as progress appears to have slowed	Moderate
	Corruption	Negative	Positive			Corruption poses a very serious risk and cuts across several sector. Low shadow price suggest may not bind but remains serious risk. Difficult to apply Test 3 and 4	Moderate
	Contract Enforcement	Mixed	Positive	Negative	Inconclusive	Not binding	Moderate
	Land Access	Mixed	Mixed	Mixed	Positive	Leaning Binding	Moderate
	Taxation	Negative	Inconclusive, inadequate time to determine impact of tax reduction	Positive, but motive inconclusive	Negative	Not binding	Strong
	Fiscal policy	Negative				Not binding	Strong
	Monetary policy	Negative				Not binding	Strong
	Exchange rate	Negative				Not binding	Strong
Low overall return to investment	Education	Negative	Positive	Negative	Negative	Not Binding, but concern expressed for quality education	Moderate
	Health	Mixed	Positive	Negative	Negative	Not Binding	Moderate
	Water and Sanitation	Negative				Not binding	Moderate
	<b>Inland transport</b>	<b>Positive</b>	<b>Positive</b>	<b>Positive</b>	<b>Positive</b>	<b>Binding</b>	<b>Strong</b>
	Air	Negative				Not binding	Strong

Type of Investment Incentive	Input	Test 1	Test 2	Test 3	Test 4	Findings	Certainty
	Sea	Negative	Positive			Not binding, but could concern expressed for future gas and oil industry	Strong
	<i>Electric energy</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Binding</i>	<i>Strong</i>
	ICT	Negative				Not binding	Strong

Source – Millennium Challenge Corporation: Liberia Constraints Analysis (Sep 2013)

## 5.5. ANNEX 5 – COMPACT CONDITIONS PRECEDENT

PIA Article No.	Timeframe / Quarter	Project/ Activity	Condition Precedent
3 §3.2 (a)	Condition Precedent to the Initial Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	The Compact has entered into force as provided in Article 7 of the Compact.
3 §3.2 (b)	Condition Precedent to the Initial Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	Each of the Key Staff has been selected and engaged by MCA-Liberia and approved by MCC
3 §3.2 (c)	Condition Precedent to the Initial Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	MCA-Liberia has appointed an entity or individual to provide fiscal agent services.
3 §3.2 (d)	Condition Precedent to the Initial Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	MCA-Liberia has appointed an entity or individual to provide procurement agent services
3 §3.2 (e)	Condition Precedent to the Initial Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	MCA-Liberia has executed the Bank Agreement and the Permitted Accounts have been established.
3 §3.2 (f)	Condition Precedent to the Initial Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	MCA-Liberia has developed the Fiscal Accountability Plan (or an interim version), and the plan has been approved by MCC
3 §3.2 (g)	Condition Precedent to the Initial Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	MCA-Liberia has developed a complete Implementation Plan.
3 §3.2 (h)	Condition Precedent to the Initial Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	MCA-Liberia has developed a Procurement Plan.
3 §3.3 (a) (i)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	A completed Disbursement Request, together with the Periodic Reports covering the related Disbursement Period
3 §3.3 (a) (ii)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	Copies of any reports from any technical (including environmental) auditors engaged by MCA-Liberia for any Activity delivered since the previous Disbursement Request
3 §3.3 (a) (iii)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	A certificate of MCA-Liberia, dated as of the date of such Disbursement Request, substantially in the form provided by MCC
3 §3.3 (a) (iv)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	A certificate of the Procurement Agent, substantially in the form provided by MCC
3 §3.3 (a) (v)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	A certificate of the Fiscal Agent, substantially in the form provided by MCC

PIA Article No.	Timeframe / Quarter	Project/ Activity	Condition Precedent
3 §3.3 (b) (i)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	All applicable conditions precedent in Annex V of the Program Implementation Agreement have been duly satisfied, deferred or waived as provided in the Program Implementation Agreement
3 §3.3 (b) (ii)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	No material default or breach of any covenant, obligation or responsibility by the Government, MCA-Liberia or any Government entity has occurred and is continuing under the Compact, this Agreement or any other Supplemental Agreement
3 §3.3 (b) (iii)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	The activities to be funded with such Disbursement will not violate any applicable law or regulation
3 §3.3 (b) (iv)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	The Implementation Plan Documents and Fiscal Accountability Plan are current and updated and are in form and substance satisfactory to MCC, and there has been progress satisfactory to MCC on the components of the Implementation Plan for any relevant Projects or Activities related to such Disbursement
3 §3.3 (b) (v)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	There has been progress satisfactory to MCC on the M&E Plan and Social and Gender Integration Plan for the Program, relevant Project or Activity and substantial compliance with the requirements of the M&E Plan and Social and Gender Integration Plan (including the targets set forth therein and any applicable reporting requirements set forth therein for the relevant Disbursement Period)
3 §3.3 (b) (vi)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	All Government entities involved in the implementation of the Program, including the Implementing Entities, are coordinating successfully with MCA-Liberia and dedicating the necessary staff and other resources to ensure successful implementation of the Program
3 §3.3 (b) (vii)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	There has been no material negative finding in any MCA-Liberia financial audit report delivered in accordance with the Compact and Audit Plan, for the prior two quarters (or such other period as the Audit Plan may require)

PIA Article No.	Timeframe / Quarter	Project/ Activity	Condition Precedent
3 §3.3 (b) (viii)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	Any Taxes paid with MCC Funding through the date ninety (90) days prior to the start of the applicable Disbursement Period have been reimbursed by the Government in full in accordance with Section 2.6(c) of the Compact
3 §3.3 (b) (ix)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	The Government has satisfied all of its payment obligations, including any insurance, indemnification, tax payments or other obligations, and contributed all resources required from it, under the Compact, the Program Implementation Agreement and any other Supplemental Agreement
3 §3.3 (b) (x)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	MCC does not have grounds for concluding that any matter certified to it in the related MCA Disbursement Certificate, Procurement Agent Disbursement Certificate or Fiscal Agent Disbursement Certificate is not as certified
3 §3.3 (b) (xi)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	No act, omission, condition, or event has occurred that would be the basis for MCC to suspend or terminate, in whole or in part, the Compact or MCC Funding in accordance with Section 5.1 of the Compact
3 §3.3 (b) (xii)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	Each of the Key Staff remains engaged, or if a position is vacant, MCA-Liberia is actively engaged, to MCC's satisfaction, in recruiting a replacement
3 §3.3 (b) (xiii)	Condition Precedent to Each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	MCA-Liberia has complied in all material respects with its obligations set forth in Section 2.1(d) with respect to the establishment of a BCS and its obligations set forth in Section 2.3 with respect to the establishment of an M&E Plan
Annex V §1 (a)	Condition Precedent to any Disbursement of MCC Funding on or after the commencement of year five (5) of the Compact term	All Projects	The Government must have submitted to MCC an initial draft Compact Closure Plan in accordance with the MCC Program Closure Guidelines
Annex V §2 (a)	Condition Precedent to the fourth Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	MCA-Liberia will have submitted to MCC evidence in form and substance satisfactory to MCC that MCA-Liberia has developed and adopted a comprehensive Environmental and Social Management System ("ESMS")

PIA Article No.	Timeframe / Quarter	Project/ Activity	Condition Precedent
Annex V §2 (b) (i)	Condition Precedent to the initial and each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity for payment under a particular works or construction contract for a given Project or Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	MCA-Liberia or the appropriate Government entity has developed and adopted an Environmental and Social Impact Assessment (“ESIA”), an Environmental and Social Management Plan (“ESMP”), a Health and Safety Management Plan (“HSMP”) and/or a Resettlement Action Plan (“RAP”), as appropriate, with respect to such Project or Activity, each of which must be in form and substance satisfactory to MCC
Annex V §2 (b) (ii)	Condition Precedent to the initial and each Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity for payment under a particular works or construction contract for a given Project or Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	MCA-Liberia or the appropriate Government entity is implementing the requirements of each ESMS, ESIA, ESMP, HSMP or RAP, as appropriate, in all material respects and consistent with the MCC Environmental Guidelines (including the IFC Performance Standards that are incorporated by reference therein)
Annex V §2 (b) (iii)	Condition Precedent to the fourth Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity for payment under a particular works or construction contract for a given Project or Activity	All Projects except for the Mt. Coffee Rehabilitation Activity	Prior to the fourth Disbursement of MCC Funding for all Projects except for the Mt. Coffee Rehabilitation Activity, MCA-Liberia will have developed and approved a comprehensive Social and Gender Integration Plan, in form and substance satisfactory to MCC.
Annex V §3 (a)	Condition Precedent to the Initial Energy Project Disbursement	Energy Project	The Government will have passed the 2015 Electricity Law of Liberia, in form and substance satisfactory to MCC.
Annex V §3 (b)	Condition Precedent to Each Energy Project Disbursement on or after February 1, 2016	Energy Project	The Government must have communicated in writing to MCC, a selected management arrangement for LEC, and MCC and the Government will have agreed on such arrangement
Annex V §3 (c)	Condition Precedent to Each Energy Project Disbursement on or after March 15, 2016	Energy Project	The Government must have submitted to MCC a management implementation plan approved and adopted by the board of directors of LEC with a schedule of milestones for the implementation of the selected management arrangement, including any required interim arrangement for the management of LEC prior to the implementation of the selected management arrangement, in form and substance satisfactory to MCC

PIA Article No.	Timeframe / Quarter	Project/ Activity	Condition Precedent
Annex V §3 (d)	Condition Precedent to Each Energy Project Disbursement following the adoption of the management implementation plan	Energy Project	The Government must have submitted evidence, in form and substance satisfactory to MCC, that LEC is implementing such plan and is in compliance with the requirements of the plan
Annex V §3 (e)	Condition Precedent to Each Mt. Coffee Support Activity Disbursement on or after year three (3) of the Compact Term	Energy Project	The Government will have provided evidence of LEC's commitment to absorb the funding of the additional LEC full time permanent staff positions funded under the Mt. Coffee Support Activity so that prior to the commencement of the fourth year of the Compact, LEC will be responsible for solely funding such positions
Annex V §3 (f)	Condition Precedent to the Initial Disbursement of MCC Funding after September 30, 2018 for the Establishment of an Independent Regulator Sub-Activity	Energy Project	Prior to the initial Disbursement of MCC Funding after September 30, 2018 that includes funding for the Liberia Electricity Regulatory Commission ("LERC"), the Government shall have nominated candidates acceptable to MCC, and such candidates shall have been confirmed, as the chair and commissioners of LERC pursuant to Section 13.1 of the 2015 Electricity Law of Liberia
Annex V §3 (g)	Condition Precedent to each Disbursement of MCC Funding after September 30, 2018 for the Establishment of an Independent Regulator Sub-Activity	Energy Project	Prior to each subsequent Disbursement of MCC Funding that includes funding for LERC, such chair and each commissioner noted in (f) above remain in place, or if such position has become vacant, the Government has nominated a replacement candidate acceptable to MCC
Annex V §3 (h)	Condition Precedent to Each Energy Project Disbursement on or after September 30, 2018	Energy Project	Prior to any Disbursement of MCC Funding that includes funding for the Energy Project, the Government shall have: (i) appointed two LEC board members representing the private sector with the technical and managerial qualifications to provide substantive oversight and governance to LEC and the management services contractor (and if such position(s) become vacant, the Government is actively engaged, to MCC's satisfaction, in nominating a replacement(s)), and (ii) established a payment plan acceptable to MCC to liquidate all Government payables to LEC, and be in substantial compliance with such plan as of the date of such Disbursement



PIA Article No.	Timeframe / Quarter	Project/ Activity	Condition Precedent
Annex V §3 (i)	Condition Precedent to Each Energy Project Disbursement on or after September 30, 2018	Energy Project	Prior to any Disbursement of MCC Funding that includes funding for the Energy Project, MCC must be satisfied that: (i) the LEC board is providing timely oversight for, and otherwise in compliance with the terms and conditions of, the management services contract, including, without limitation (1) timely review and approval of all applicable contract deliverables and (2) granting the management services contractor the exclusive, day-to-day authority to manage all of the operational, commercial, and financial affairs of LEC in accordance with the management services contract, including without limitation Section 10.1 thereof, (ii) LEC has developed, and is complying with, workplace codes of conduct and related procedures, in each case satisfactory to MCC, governing standards for employee behavior and misconduct, and (ii) the Government and LEC are facilitating the timely assessment and adjudication of any specific cases or issues related to LEC's activities, in each case in accordance with applicable law.
Annex V §5 (a)	Conditions Precedent to the Initial Disbursement of MCC Funding for the Matching Road Maintenance Fund Sub-Activity	Roads Project	The Government will have delivered evidence, in form and substance satisfactory to MCC, that a five year road maintenance plan to be updated annually for the implementation of both routine and periodic maintenance work, including annual maintenance targets and maintenance prioritization, has been adopted by the Government ("Five-Year Plan").
Annex V §5 (b)(i)	Conditions Precedent to the Initial Disbursement of MCC Funding for the Matching Road Maintenance Fund Sub-Activity	Roads Project	The Government will have delivered evidence, in form and substance satisfactory to MCC, that the National Road Fund ("NRF") has been established and is fully operational under the laws of Liberia, including that the Inter-Ministerial Steering Committee ("IMSC"), the National Road Fund Manager, and any necessary NRF staff are in place.

PIA Article No.	Timeframe / Quarter	Project/ Activity	Condition Precedent
Annex V §5 (b)(ii)	Conditions Precedent to the Initial Disbursement of MCC Funding for the Matching Road Maintenance Fund Sub-Activity	Roads Project	The Government will have delivered evidence, in form and substance satisfactory to MCC, that the NRF has established financial systems and adopted manuals of administrative, financial, auditing, and accounting procedures in and form and substance satisfactory to MCC.
Annex V §5 (b)(iii)	Conditions Precedent to the Initial Disbursement of MCC Funding for the Matching Road Maintenance Fund Sub-Activity	Roads Project	The Government will have delivered evidence, in form and substance satisfactory to MCC, that a unique and independent commercial bank account in the name of the NRF for receiving the Government's contribution towards the Matching Road Maintenance Fund Sub-Activity has been opened.
Annex V §5 (b)(iv)	Conditions Precedent to the Initial Disbursement of MCC Funding for the Matching Road Maintenance Fund Sub-Activity	Roads Project	The Government will have delivered evidence, in form and substance satisfactory to MCC, that the IMSC has adopted governing bylaws and procedures for the management and administration of the NRF, including provisions to provide for a panel of private sector and road user representatives to be appointed as non-voting members to the IMSC, details and procedures for providing the IMSC members with notice for meetings, requirements associated with quorums, and for obtaining IMSC approvals through written consent.
Annex V §5 (b)(v)	Conditions Precedent to the Initial Disbursement of MCC Funding for the Matching Road Maintenance Fund Sub-Activity	Roads Project	The Government will have delivered evidence, in form and substance satisfactory to MCC, that the NRF has developed and adopted an operational strategy which provides for the management of the NRF, including the procedures for evaluation and approval of road maintenance program of works, and definition of works performance indicators including as relevant environmental and social performance quality mitigative measures to be monitored by the NRF, satisfactory to MCC.

PIA Article No.	Timeframe / Quarter	Project/ Activity	Condition Precedent
Annex V §5 (c)(i)	Conditions Precedent to the Initial Disbursement of MCC Funding for the Matching Road Maintenance Fund Sub-Activity	Roads Project	MCA-Liberia and the NRF will have executed a grant agreement, in form and substance satisfactory to MCC, stipulating among other things, the mechanisms for tax exemption, procurements, commitment of funds, permitted and excluded costs, cash disbursements and financial and technical audits (including as relevant environmental, social/resettlement audits) of MRMF works.
Annex V §5 (c)(ii)	Conditions Precedent to the Initial Disbursement of MCC Funding for the Matching Road Maintenance Fund Sub-Activity	Roads Project	The NRF and the Infrastructure Implementation Unit (“IIU”) of the Ministry of Public Works or its successor will have signed a memorandum of understanding, in form and substance satisfactory to MCC, stating the roles and responsibilities of each entity in respect of the periodic road maintenance works financed through the Matching Road Maintenance Fund Sub-Activity.
Annex V §5 (d)	Conditions Precedent to the Initial Disbursement of MCC Funding for the Matching Road Maintenance Fund Sub-Activity	Roads Project	The IIU or its successor will have provided evidence, in form and substance satisfactory to MCC, that it has the appropriate financial and procurement policies, procedures and/or manuals, and other relevant documents, as the case may be, in place for the engagement of construction contractors and engineers for the implementation of periodic road maintenance to be financed under the Matching Road Maintenance Fund Sub-Activity.
Annex V §5 (e)(i)	Conditions Precedent to each Disbursement of MCC Funding for the Matching Road Maintenance Fund Sub-Activity	Roads Project	The Government will have provided evidence, in form and substance satisfactory to MCC that at least 90% of the total road user charges collected for the purpose of the NRF are duly deposited to a bank account established for the purposes of the collection and disbursement of funds on behalf of the NRF (the “NRF Account”) as per an agreed transfer schedule between the Minister of Finance and Development Planning and the National Road Fund Manager.

PIA Article No.	Timeframe / Quarter	Project/ Activity	Condition Precedent
Annex V §5 (e)(ii)	Conditions Precedent to each Disbursement of MCC Funding for the Matching Road Maintenance Fund Sub-Activity	Roads Project	The Government will have provided evidence, in form and substance satisfactory to MCC that the transfer of Government funding for the periodic maintenance works to be funded by the Government under the MRMF Sub-Activity is made by the Ministry of Finance and Development Planning to the MRMF Account, according to the time frame and amounts stipulated in the disbursement schedule derived from the Government's Five-Year Plan.