



# **MILLENNIUM DEVELOPMENT AUTHORITY (MiDA)**

# **GHANA COMPACT II**

# 2021 Mid-Year Performance Report August 2021

# **Ghana Compact II Theme**

"Powering Ghana for Accelerated and Sustainable Economic Growth"

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#### **GLOSSARY OF ABBREVIATIONS**

AAC All Aluminum Conductor ABC Aerial Bundled Cable AG Attorney General

AL Aluminum

BCS Bid Challenge System
BSP Bulk Supply Point

CAMM Contract Administration and Management Manual

CAP-Scan Capacity Scan
CED Compact End Date

CIF Compact Implementation Funding

CP Condition Precedent

DCCN Data Center and Communication Network

DMS Document Management System ECG Electricity Company of Ghana Ltd

ECREEE ECOWAS Centre for Renewable Energy and Energy Efficiency

EEC Energy Efficiency and Conservation

EEDSM Energy Efficiency and Demand Side Management

EOT Extension of Time

EPA Environmental Protection Agency
ERP Enterprise Resource Planning

ESMS Environmental and Social Management System

ESH Environment Social and Health

ESP Environmental and Social Performance

ESIA Environmental and Social Impact Assessment

FAT Factory Acceptance Test

GIS Geographic Information System

GoG Government of Ghana

GPCIMP Ghana Power Compact Internship and Mentoring Program

GSA Ghana Standards Authority
GSI Gender and Social Inclusion

HT High Tension

HVDS High Voltage Distribution System

ICC Interconnecting Circuits

IDIQ Indefinite Delivery Indefinite Quantity

IE Implementing Entity

IEA Implementing Entity Agreement

IFB Invitation for Bids

IFC International Finance Corporation IGEA Investment Grade Energy Audit IPP Independent Power Producer

LV Low Voltage Km Kilometer kV Kilovolt

MCC Millennium Challenge Corporation

M&E Monitoring and Evaluation

MiDA Millennium Development Authority

MoEn Ministry of Energy MoE Ministry of Education MoF Ministry of Finance

MoU Memorandum of Understanding

NaCCA National Council for Curriculum and Assessment

NARUC National Association of Regulatory Utilities Commissioners

NEDCo Northern Electricity Distribution Company Ltd NFOT NEDCo Financial and Operational Turnaround

OPGW Optical Ground Wire PAP Prioritized Action Plan

PCSL Parliamentary Committee on Subsidiary Legislation

PIA Program Implementation Agreement

PIU Program Implementation Unit PMC Program Management Consultant POM Procurement Operations Manual

PoW Progress of Work

PPG Program Procurement Guidelines

PSP Private Sector Participation

PURC Public Utilities Regulatory Commission

RAP Resettlement Action Plan

RCE Resettlement and Community Engagement

RMU Ring Main Unit

RPP Regulatory Partnership Program
SESC Sustainable Energy Services Centers
SGIP Social and Gender Integration Plan

STEM Science Technology Engineering and Mathematics

TP Tariff Plan
VO Variation Order
VRA Volta River Authority

WEM Wholesale Electricity Market

#### **PART ONE: INTRODUCTION**

#### 1.1 SUMMARY OF ACTIVITIES AND ACHIEVEMENTS

The Compact Program, which is being implemented by MiDA seeks to address identified challenges in Ghana's Power Sector by providing an overall framework for strengthening the Ghana Electricity Distribution System.

During the period January-June 2021, MiDA achieved the following major Milestones:

# ECG Financial and Operational Turnaround (EFOT) Project

- Geographic Information System (GIS): The System was 75% complete. The original implementation was 94% complete in March 2021. This new percentage is as a result of the new variation of activities under the Contract.
- Meter Management System (MMS): The System is 98% complete.
- Primary Substations (PSS) & Inter-Connecting Circuits (ICC): Overall progress was 87% for the PSS and 92% for the ICC.
- Pokuase Bulk Supply Point (BSP) and Interconnecting Circuits (ICC): Overall progress is 99% for the BSP and 99% for the ICC. The BSP was energized and operational since 24th May, 2021.
- Kasoa BSP and ICC: Overall progress achieved was approximately 70%.
- Low Voltage (LV) Bifurcation:
  - Dansoman and Kaneshie District 100% complete. Currently going through the Defect Liability Period
  - Kwabenya West District 57%
  - Kwabenya East District— 67%.
  - Work was completed for Achimota and Mampong Districts in December 2020, and currently going through the six (6) months Defect Liability Period. The Defect Liability Period shall be completed on July 1, 2021.

# Access Project

- Overall progress of the High Voltage Distribution System (HVDS) and Security Lighting Project is 48%.
- Lighting Materials, Cables, Conductors, Transformers, and 581 out of 731 (79.5%) Wood Poles were procured and delivered.
- 520 of the planned 731 (71.1%) Wood Poles erected and Civil Works for six of the planned nine Ring Main Units (RMU) Plinths were completed.

# Regulatory Strengthening and Capacity Building (RSCB) Project

 Conducted Partnership Exchange, Peer-to-Peer Forum, and Tariff Training (remotely) for Energy Commission (EC), Public Utilities Regulatory Commission (PURC) and Ghana Grid Company (GRIDCo) under the Regulatory Partnership Program.

# Energy Efficiency and Demand Side Management (EEDSM) Project

- Completed the construction of the AC Test Laboratory Containment Building
- Completed installation of AC Test Laboratory Equipment, and commenced testing.
- Parliamentary Subsidiary Legislation Committee commenced the review of three (3) Regulations on Appliances.
- Completed a successful in-person Sustainable Energy Courses for the three (3)

- Tertiary institutions selected to host Sustainable Energy Services Centers (SESCs).
- The three (3) Sustainable Energy Services Centers (SESCs) prepared and submitted Energy Audit Report for review by MiDA's Consultant, DESL.
- Completed the installation of refrigerators at the Ghana Education Service Main Building, under the Race to Retrofits Sub-Activity.
- Completed the monitoring of the use of the Energy Efficiency and Conservation Curriculum materials in the thirty (30) selected Schools.
- Completed the Energy Efficiency and Conservation Festivals and Fairs in the 30 selected Pilot Schools.
- The Street Lighting Sub-Activity was re-baselined to include additional materials and streets. The following is the progress as at June 2021.
  - West of the Accra Central Business District: 5,185No. Luminaires installed, representing overall progress of 66%.
  - Central Business District: 2,774No. Luminaires installed, representing overall progress of 70%.
  - East of the Accra Central Business District: 3,997No. Luminaires installed, representing overall progress of 64%.

#### **Environmental and Social Performance**

- Continued the monitoring of the implementation of COVID-19 Risk Mitigation Plans for Works Contracts and Consultancies. Recorded no positive case of Covid-19 amongst staff of MiDA, Contractors and Consultants.
- Identified, engaged, assessed and processed for compensation 112 Businesses and Artisans affected by the Kasoa BSP. Also, compensated for relocation the owners of 18 Billboards sited along the Achimota-Kanda route of the Pokuase ICC Project.
- Monitored the implementation of Health, Safety and Environment issues of infrastructure projects. Two (2) fatalities were recorded within the period.
- Construction of the 16-unit 3-Bedroom Block of Flats at Kanda for PAPs is 76% complete as against the 89% planned.

# Gender and Social Inclusion

- Obtained MCC No Objection for the revised and updated Social and Gender Integration Action Plan (SGIAP).
- Organized Mentoring Workshop for Ghana Power Compact Internship and Mentoring Program (GPCIMP) Alumni and National Service Persons serving in the Energy Sector.
- Organized Coaching and Training for ECG GSI Unit.
- Call for Applications sent to Tertiary and TVET Educational Institutions and put on social media platforms for students to fill Internship slots in Energy Organizations for 2021.

# 1.2 CHALLENGES AND MITIGATION STRATEGIES

The COVID-19 pandemic and the resulting travel restrictions continued to cause delays to the following.

- 1. Factory Acceptance Tests (FATs).
- 2. Field activities, involving the presence of foreign-based personnel.
- 3. Capacity Building Workshops.
- 4. Operational Acceptance for the IT Systems being obstructed by the Beneficiary

Organization (i.e. ECG) in order to:

- a. Add more requirements to the scope of the Project
- b. Avoid imminent responsibility for and ownership of the system

The following are the Mitigating Strategies that were pursued.

- 1. Use of Third Parties and Virtual Meetings for the FATS
- 2. Implementation of COVID-19 Risk Mitigation Plans by Consultants and Contractors to avoid and or minimize the risk of COVID-19 infection and spread in the field.
- 3. Adopted alternatives to in-person meetings, particularly Virtual Meeting platforms, to avoid human contact and minimize spread of the virus.
- 4. For the IT Systems, issues escalated to Senior Executives of the Beneficiary Organization to ensure commitment to ownership from the top.

# **Extension of Compact Term**

To claw back time lost on infrastructure activities that were significantly impacted by the COVID-19 restrictions, MCC has granted an extension of the Compact term for nine (9) more months. The new Compact End Date (CED) is June 6, 2022.

#### PART TWO: PLANNED PROGRAMMES AND ACHIEVEMENTS

#### 2.1 INTRODUCTION

The Millennium Development Authority (MiDA) was established by an Act of Parliament (Act 702, 709 & 897 as amended). MiDA was established to oversee, manage and implement the Programmes under the Millennium Challenge Account for poverty reduction through economic growth as set out in each agreement between the Government of Ghana and the Millennium Challenge Corporation acting for and on behalf of the Government of the United States of America, and for any other national development programme of similar nature funded by the Government of Ghana, a Development Partner or both and to provide for related matters.

The first 5-Year Millennium Challenge Compact was signed between the United States of America, acting through the Millennium Challenge Corporation (MCC) and the Government of Ghana (GoG) in August 2006. The Compact implementation started on 16<sup>th</sup> February 2007 and ended on 15th February, 2012, and utilized approximately US\$547.009m grant funds.

On 5<sup>th</sup> August 2014, the second Millennium Challenge Compact (also referred to as the Ghana Power Compact) between the Republic of Ghana and the United States of America was signed.

The Power Compact Program originally had a Budget of US\$ 498.2 million, consisting of two Tranches of Program Funding amounting to US\$ 469.3 million and a Compact Implementation Funding (CIF) of US\$ 28.9 million. In addition, there is a Government of Ghana (GoG) contribution of not less than 7.5% (i.e. US\$ 37.4 million), bringing the total Compact Funds to US\$ 535.6 million.

The Tranche II Funds, which amounts to US\$ 190 million of the total, was contingent on meeting a number of Conditions Precedent (CPs), the principal one being Private Sector Participation (PSP) in ECG. MiDA worked with relevant GoG entities to meet the CPs. In particular, a private sector entity, Power Distribution Services Limited (PDS) was handed over the operations of ECG on March 1, 2019 under a 20-year Concession Agreement. However, GoG cancelled the Agreement because PDS did not fully comply with the requirements for the take-over. Thus, the US\$190 million Tranche II Funds are no longer available to be utilized under the Power Compact.

The Compact Program seeks to address identified challenges in Ghana's Power Sector by providing an overall framework for strengthening the Ghana Electricity Distribution System. This was to be achieved by helping the Electricity Company of Ghana (ECG) and the Northern Electricity Distribution Company (NEDCo) to reduce their Technical and Commercial Losses and attract the needed investments. The Compact was also to provide Technical Assistance in the areas of Corporate Governance, Technical Capacity of Sector Regulators, and the integration of Gender issues into the operations of relevant Sector Agencies.

The expected outcome for the Compact Program at the time of Inception was the modernization of the Power Distribution Companies and Capacity Building within the Power

Generation Institutions in Ghana, and to present the Power Distribution Companies as credible Off-takers for current and prospective Independent Power Producers (IPPs).

The Power Compact Program originally consisted of the following six (6) Projects categorized under two key components of the electricity value chain:

- Distribution Projects
  - ECG Financial and Operational Turnaround (EFOT) Project
  - NEDCo Financial and Operational Turnaround (NFOT) Project
  - Access Project
- Generation Projects
  - Regulatory Strengthening and Capacity Building (RSCB) Project
  - Power Generation Sector Improvement (PGSI) Project
  - Energy Efficiency and Demand Side Management (EEDSM) Project

Following a joint MCC-MiDA Mid-Term Review of the Program in February 2019, the NFOT and PGSI Projects were de-scoped. Some sections of the NEDCo Staff were opposed to the Management Contract component of the Project, thus disallowing the implementation of the NFOT Project. In the case of the PGSI Project, most of the Activities planned under the Compact are being funded by the United States Agency for International Development (USAID).

This Performance Report captures Activities related to the following.

- Program Activities
  - Procurements
  - Distribution Projects
  - Generation Projects
  - Environment and Social Performance (ESP)
  - Gender and Social Inclusion (GSI)
- Monitoring and Evaluation
- Communications and Outreach

#### 2.2 PROGRAM ACTIVITIES

#### 2.2.1 Procurements

Procurement implemented by the Millennium Development Authority (MiDA) is in accordance with Compact requirements, the Program Implementation Agreement as well as MCC Program Procurement Guidelines (PPG) and MCC Guidance Papers. These Guidelines are further elaborated in the Procurement Operations Manual (POM) and Contract Administration and Management Manual (CAMM).

Two (2) contracts, valued at US\$ 131,491 were signed in the first half of the year as indicated in Table 1 below. The focus was on Contract Administration. The total value of variations undertaken stood at \$3,857,448.00 (Refer to Table 2 below). As at June 30, 2021, the Power Compact had 108 completed and 66 ongoing Contracts (Refer to Table 3 below).

**Table 1: Contracts signed in January - June 2021** 

Contract No.	Description Description	Method	Туре	Organization	Contract Value USD	Contract Signed
5140800	Environmental, Social, Health Safety (ESH&S) Services - Construction Oversight — Monitoring and Supervision of Works - installation of low voltage bifurcation (Iv) and network improvement activities in the Kwabenya ECG District	IDIQ	CS	SAL Consult Limited	US\$ 122,350	15-Feb- 2021
5810500	MiDA Anti-Virus Software	Shopping	G	Humon Company Limited	US\$ 9,141 GHS 52,300	24-Mar- 2021

Type: CS=Consultancy Services; G=Goods

**Table 2: Contract Amendments, January - June 2021** 

Compact Component	Number	Value US\$
ECG Financial & Operational Turnaround	7	718,918.00
Regulatory Strengthening and Capacity Building	0	0.00
Access	1	322,050.00
Energy Efficiency and Demand Side Management	7	2,816,480.00
Monitoring and Evaluation	0	0.00
Programme Oversight and Administration	0	0.00
TOTAL	15	3,857,448.00

**Table 3: Contract, Work Orders and Task Orders Status as at June 2021** 

Compact Component	Ongoing Procurements	Ongoing Contracts	Completed Contracts
ECG Financial & Operational Turnaround Project	0	42	43
Regulatory Strengthening & Capacity Building Project	0	2	2
Access Project	0	2	0
Energy Efficiency & Demand Side Management Project	0	11	13
Monitoring & Evaluation	0	2	3
Programme Administration & Oversight	0	7	47
TOTALS	0	66	108

# **2.2.2 Distribution Projects**

The Power Distribution Sector Projects consist of the ECG Financial and Operational Turnaround (EFOT) and Access. Progress made in these areas during the reporting period is summarized in the Table below.

Activity	Sub-Activity	January-June 2021 Progress
EFOT Project	:	
Modernizing ECG Operations	Geographic Information System	<ul> <li>The GIS Contractor, Hexagon, commenced work on August 7, 2017.</li> <li>Work Plan has been updated through a Variation Order to add more tasks. The progress is as follows.</li> <li>A Technical Service Consultant from Hexagon started his second visit to Ghana on June 19, 2021 to ensure a smooth roll out of the GIS at ECG.</li> <li>Refresher Training for ECG Trainers - topics have been decided.</li> <li>Detailed Design document has been created for configuring Staging Environment.</li> <li>Finalization of topics for Notation Object Configuration Training.</li> <li>ECG stalled further work towards handing over with a decision to recruit a Consultant to review the Project.</li> </ul>
Technical Loss Reduction	Construction of Kanda and Legon Primary Substations & Interconnecting Circuits	Overall progress of 87% as against planned progress of 97%.  Design and Material – 98% progress as against 99% planned.  Manufacturing, Factory Acceptance and Delivery to Site – 80% progress as against 90% planned.  Site Works – 66% progress, as against 97% planned.  PSS ICC Overall progress of 92% achieved as against planned progress of 96%.  Design and Material – 100% progress against 100%

Activity	Sub-Activity	January-June 2021 Progress
		Manufacturing, Factory Acceptance and Delivery to Site – 98% progress against 100% planned. Site Works – 89% progress against 95% planned.
	Construction of Pokuase Bulk Supply Point & Interconnecting	<b>BSP</b> The Contractor for the Pokuase BSP, Elecnor SA, commenced works on March 5, 2019.
	Circuits	The Pokuase BSP was energized on May 24, 2021 and currently has overall progress of work at 99%.
		The following are 100% complete: <ul><li>Purchasing</li><li>Manufacturing</li></ul>
		<ul><li>Factory Acceptance Test</li><li>Shipment</li></ul>
		<ul> <li>Cable Trench &amp; Cable Laying</li> <li>Electro Mechanical Works – Assembly/erection &amp; SATs</li> </ul>
		<ul> <li>Electro Mechanical Installations [Transformers, Switch Gears, Panels]</li> <li>Civil works (GRIDCo &amp; ECG Control Buildings)</li> </ul>
		<ul> <li>Internal Roads</li> <li>Perimeter/Boundary Wall</li> <li>Training for ECG &amp; GRIDCo Staff.</li> </ul>
		The following Works are in progress:  • External roads and drainage (92%)  • Landscaping (98%)
		<ul> <li>Stone Pitching/Slope Protection Works – 99%</li> <li>Overall equipment deliveries: 99% complete.</li> </ul>
		Additionally, Punch List Items are being managed by the Engineer (SMEC) and Employer (MiDA), with the involvement of the Beneficiaries (ECG and GRIDCo), and direct responsibility by the Contractor (Elecnor).
		<i>ICC</i> The Contractor, Best & Crompton, commenced work on October 1, 2019, with a Contract End Date of April 30, 2021.
		Overall progress is 99%, and the Taking-Over Certificate is due to be issued.
		The following are 100% complete.

Activity	Sub-Activity	January-June 2021 Progress
Activity	Construction of Kasoa Bulk Supply Point & Interconnecting Circuits	<ul> <li>Manufacturing of Equipment</li> <li>Routine Test, Type Testing &amp; Factory Acceptance Testing</li> <li>Shipment</li> <li>Delivery of Equipment.</li> <li>Construction</li> <li>33kV Cable Laying</li> <li>11kV Overhead Line Work</li> <li>Cable Termination Work</li> <li>Stringing Works</li> <li>Training for ECG</li> <li>The only work currently outstanding as at June 30, 2021 is connecting the ICC cables to the Kanda PSS.</li> <li>The Contract for the Kasoa BSP with Siemens Energy SAS of France commenced on January 31, 2020. Extension of time has been approved bringing revised completion date to September 30, 2021.</li> <li>Overall progress at the end of June 2021 was 70% against a planned target of 88%.</li> <li>The details of progress are as follows:</li> <li>Engineering Designs are 94% complete, against 100% planned recovery target.</li> <li>Procurement of major Equipment is 98% complete, against 98% planned recovery target.</li> </ul>
		<ul> <li>Manufacturing and Factory Acceptance Tests (FAT) for all major equipment was completed and 99% of equipment delivered to Site.</li> <li>Civil Works execution is 77% complete, against 100% planned recovery target. HV Gallery Works, ECG and GRIDCo Control Building and Cable Trenches, which are on the Critical Path, are ongoing.</li> </ul>
		<ul> <li>Installations are about 41% complete - Installation of 33kV Switchgear in ECG Building and Power Transformers completed.</li> <li>4No. Tension Towers and stringing of 161kV Conductors completed.</li> <li>The following installations are ongoing – 161kV GIS, 161kV Gantries, STATCOM/SVC, MV Cables pulling and terminations, LV Cables pulling and</li> </ul>
		terminations, 34.5kV MV Outdoor Equipment installation, and LV Panel Boards installation.

Activity	Sub-Activity	January-June 2021 Progress
	Low Voltage Bifurcation and Network Improvements – Achimota District	Completed in December 2020, and Defect Liability Period expires on July 1, 2021.
	Low Voltage Bifurcation and Network Improvements – Mampong District	Completed in December 2020, and Defect Liability Period expires July 1, 2021.
	Low Voltage Bifurcation and Network Improvements – Dansoman & Kaneshie District	This Work Order was completed on April 30, 2021 and currently going through six (6) months Defect Liability Period.  All as-built drawings and Operations & maintenance manuals have been submitted. The completed works have been handed over to ECG.
		There are three (3) outstanding activities to be resolved on the Snag List. MiDA continues to engage ECG to provide the needed support to complete these outstanding activities. The outstanding activities are:  1. Commissioning of the GMT Substation behind Accra Academy. This is dependent on ECG to commission the 11kV line from the newly constructed Substation at Mataheko.  2. Decommissioning of 200kVA PMT and all associated 11kV overhead line and RMU connections at Awudome Estate. ECG is engaging the Project Affected Persons to resolve the RAP issue.  3. Awaiting ECG to terminate supply cable to commission Substation behind Karikari Park
	Low Voltage Bifurcation and Network Improvements – Kwabenya West	This Activity is 57% complete.  Pre-construction Survey activities have been completed.  All Material and Equipment Drawings, Technical Data Sheets and Project Management Plans have been completed.
		All Materials and Equipment have been delivered to site except the Gate materials which shall be delivered

Activity	Sub-Activity	January-June 2021 Progress
		by Jul 15, 2021. The items delivered to Site include the LV DPs, Transformers, LV Power Cable and Bare Earthing Conductor, Wood poles, 120sq.mm AAC Conductor, Pole-top Accessories (Surge Arresters, Drop-out fuses, Insulators, Cross-arms, Stays & Overhead line hardware) and Fence materials.
		<ul> <li>Progress of Construction Works in the first half of the year is outlined below:</li> <li>262 11m Wood Poles have been planted (58.4% complete).</li> <li>1,065 9m Wood Poles have been planted (65% complete).</li> <li>18.2km of LV Service Cables have been installed (44.5% complete).</li> <li>23 Transformer injections completed (59% complete).</li> <li>214.3km of Reconductoring (Improvement) Works (49.4% complete).</li> <li>26.1km of 11kV Network Extension (68.7% complete).</li> <li>194.5km of 50sq.mm AAC Conductor retired (44.5% complete).</li> <li>163No. Wood Poles retired (27% complete).</li> <li>Reinstatement works in progress.</li> </ul>
	Low Voltage Bifurcation and Network Improvements – Kwabenya East (Lot 2)	This Activity is 67% complete.  Pre-Construction Survey activities have been completed.  All Material and Equipment Drawings, Technical Data Sheets and Project Management Plans have been completed.  All Materials and Equipment have been delivered to site. They include the LV DPs, Transformers, LV Power Cable and Bare Earthing Conductor, Wood poles, 120sq.mm AAC Conductor, Pole-top Accessories (Surge Arresters, Drop-out fuses, Insulators, Cross-arms, Stays & Overhead line hardware) and Fence and Gate materials.  Progress of Construction Works as at end of the first half of the year is outlined below:  32 Transformer injections (82% complete).  5 Transformer uprates (27.8%) complete.

Activity	Sub-Activity	January-June 2021 Progress
		<ul> <li>43 LV DPs have been mounted (63%) complete.</li> <li>298 11m Wood Poles have been planted (80% complete).</li> <li>986 9m Wood Poles have been planted (100% complete).</li> <li>34.4km of 11kV Network Extension (82% complete).</li> <li>25km of LV Service Cable have been installed (38% complete).</li> <li>99km of Reconductoring (Improvement) Works completed (4% complete).</li> <li>99km of 50sq.mm AAC Conductor retired (14% complete).</li> <li>297 substandard Poles have been retired (38% complete).</li> </ul>
Commercial Loss Reduction	Installation of Meter Management System (MMS)	<ul> <li>All the equipment for the MMS were transported from South Africa to Ghana after the Factory Acceptance Tests. There has been a Site Acceptance Test in Ghana, as well as System Integration.</li> <li>The System Pilot was completed in May 2021.</li> <li>Production cutover was achieved and ECG started taking on Meters - the Production Testing by ECG was completed on June 4, 2021.</li> <li>ECG commenced a 6-week User Acceptance Testing (UAT).</li> </ul>
Access Project	ct	
Infrastructure	High Voltage Distribution System (HVDS) & Security Lighting in Markets and Economic Enclaves (M&EEs)	<ul> <li>The procurement of Equipment and Materials progressed steadily.</li> <li>All materials documentation have been approved and manufacturing ordered except for Energy Meters.</li> <li>Security Lighting fixtures were cleared and stored at the Contractor's warehouse.</li> <li>Cables and Conductors and Transformers arrived at the Tema Port.</li> <li>Shipment of the first batch of Wood Poles from Chile was completed.</li> <li>Lighting Materials, Cables, Conductors, and Transformers have been procured and delivered to the Contractor's warehouse.</li> <li>581 out of 731 wood poles have been delivered (79.5%) to the Contractor's warehouse.</li> </ul>

Activity	Sub-Activity	January-June 2021 Progress
		<ul> <li>RMUs shipped on 6 June 2021 are expected to be delivered on 21 July 2021.</li> <li>Transformer Breaker Boxes shipped on May 6, 2021 are in-country, and undergoing clearing.</li> <li>Construction activities, which covered Wood Pole Erection and RMU Plinths, progressed steadily.</li> <li>The following are the number of Wood Poles erected: <ul> <li>Lot 1 (Makola, Dansoman, Kaneshie and Nii Boiman): 214 out of 246.</li> <li>Lot 2 (Madina, Agbogbloshie, and Accra Timber): 221 out of 351.</li> <li>Lot 3 (Tamale Central, Tamale Timber, and Lamashegu): 78 out of 133.</li> </ul> </li> <li>The following are RMU Plinths constructed: <ul> <li>Makola: 2 out of 4</li> <li>Dansoman: 1 out of 1</li> <li>Accra Timber: 1 out of 1</li> <li>Kaneshie: 1 out of 1</li> <li>Tamale Central: 1 out of 2</li> </ul> </li> </ul>
Social Inclusiveness and Improved Partnerships	Customer Outreach, Normalization of Services, and Facilitation Assistance (COFANS) for new connections	The Consultant submitted final Facilitation Assistance and Normalization of Services Plans.  The Draft Stakeholder Coordination Plan was also submitted for review. Comments were provided to the Consultant to finalize the Plan.  Commenced the assessment of internal wirings of Stores and Stalls, and rewiring/new wiring of same in the selected Markets and Economic Enclaves (M&EEs) to meet Energy Commission's standards.  The Consultant continued with intensive Information Campaigns to encourage more Vendors to undertake the rewiring of their Shops to meet the Energy Commission's acceptable standards.

# **2.2.3 Generation Projects**

Following the de-scoping of the Power Generation Sector Improvement (PGSI) Project, the Generation Sector Projects now consist of the Regulatory Strengthening and Capacity Building (RSCB) Project and the Energy Efficiency and Demand-Side Management (EEDSM) Project.

The Report below covers progress made on these two Projects during the first half of 2021.

Activity	Sub-Activity	January - June 2021 Progress
Regulatory S	trengthening &	Capacity Building Project
Tariff Review and Regulatory Activity	Tariff Study and Tariff Plan	Obtained Quarterly Reports covering three Capacity Building activities, which were carried out remotely by the National Association of Regulatory Utility Commissioners (NARUC) under the Regulatory Partnership Program.
		<ul> <li>The Reports covered:</li> <li>Partnership Exchange on Key Considerations for Wholesale Electricity Market (WEM) for Energy Commission, PURC and GRIDCo;</li> <li>Peer-to-Peer Forum on Technical Performance and Quality of Service for the Energy Commission; and</li> <li>Tariff Training for PURC.</li> </ul>
Energy Effici	ency & Demand	I-Side Management (EEDSM) Project
	Legislative Instruments (LIs)	The Energy Commission Technical Committee finalized the review of the following Draft Regulations for the enforcement of Standards and Labels:  • Electric Kettle – Draft Energy Commission (Energy Efficiency Standards and Labelling) (Electric Kettle) Regulations.  • Rice cooker – Draft Energy Commission (Energy Efficiency Standards and Labelling) (Rice Cooker) Regulations.  • Water Heater - Draft Energy Commission (Energy Efficiency Standards and Labelling) (Water heater) Regulations.  • Industrial Fan - Draft Energy Commission (Energy Efficiency Standards and Labelling) (Industrial Fan) Regulations.  • Ventilating Fan - Draft Energy Commission (Energy Efficiency Standards and Labelling) (Ventilating Fan) Regulations.

Activity	Sub-Activity	January - June 2021 Progress
		<ul> <li>Parliamentary Subsidiary Legislation Committee commenced the review of three (3) Regulations under Lot 1.</li> <li>Energy Commission (Energy Efficiency Standards and Labelling) Refrigerating Appliances) Regulations, 2021;</li> <li>Energy Commission (Energy Efficiency) (Prohibition of Importation and Sale of Used Electrical Appliances, Used Accessories and Used Parts) Regulations, 2021; and</li> <li>Energy Commission (Energy Efficiency) (Prohibition of manufacture and Sale of Incandescent Filament Lamps and Lamps containing Mercury) Regulations, 2021.</li> </ul>
	Construction of AC Test Laboratory Containment Building	Completed the construction of the AC and Refrigerator Test Laboratory Containment Building on May 8, 2021.
	Supply & Installation of Additional Test Laboratories	<ul> <li>AC and Refrigerator Test Laboratory Equipment supplied and installed at Ghana Standards Authority (GSA).</li> <li>Testing of the AC and Refrigerator Test Laboratory Equipment commenced.</li> <li>There is a request from GSA to upgrade of the Test Laboratory to accommodate the testing of Chest Freezers. GSA has agreed to share the cost with MiDA.</li> </ul>
Improved Energy Auditing	Race to Retrofit & Renewables (RTRR)	<ul> <li>Completed the installation of Refrigerators at Ghana Education Service Main Building under the Race to Retrofits and Renewables Sub-Activity.</li> <li>Prior to the expiration of the Defects Notification Period (DNP) on June 30, 2021, defective Appliances were restored in the retrofitted Ghana Education Service Building.</li> </ul>

Activity	Sub-Activity	January - June 2021 Progress
	Setting Up of Sustainable Energy Services Centers (SESCs)	<ul> <li>Completed a successful in-person Sustainable Energy Course Training for the three (3) Tertiary institutions selected to host Sustainable Energy Services Centers (SESCs). The three Institutions are Accra Technical University, Kwame Nkrumah University of Science and Technology, and University of Energy and Natural Resources.</li> <li>Procured Energy Audit instruments for the three Tertiary Institutions.</li> <li>Completed Energy Audit Training (both theory and practical) for the three (3) Tertiary institutions selected to host Sustainable Energy Services Centers (SESCs).</li> <li>The three (3) Sustainable Energy Services Centers (SESCs) completed a Walk-Through Energy Audit (also known as Preliminary Energy Audit) on seven (7) Office Buildings and one (1) Industrial Building, under the guidance of the Consultant.</li> </ul>
Education & Public Information	Update of Pre- Tertiary School Curriculum on Energy Efficiency and Conservation (EEC)	<ul> <li>Completed the Monitoring of the Use of the Energy Efficiency and Conservation Curriculum materials in the thirty (30) selected Schools.</li> <li>Completed the Energy Efficiency and Conservation Festivals and Fairs in the 30 Pilot Schools.</li> <li>Conducted the EEC End-line Evaluation Training for Field Enumerators.</li> <li>Conducted the Endline Evaluation of the Activity across intervention and non-intervention schools in the three (3) Target Zones (Southern, Middle and Northern)</li> </ul>
Demand-Side Management	Street Lighting	The overall progress, which takes account of the inclusion of additional materials and streets to the Base Work Plan, is as follows:  • West of the Accra Central Business District: 66%.  • Central Business District: 70%.  • East of the Accra Central Business District: 64%.

# 2.2.4 Environment and Social Performance

The Compact requires that all Projects are implemented in compliance with MCC's Environmental Guidelines, the International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability, and Ghanaian Environmental Laws, Regulations, Licenses, and Permits. MiDA continues to ensure that Projects financed under the Compact are implemented consistent with the requirements of these Regulations and Guidelines.

The following were achieved during the period January-June 2021:

# 1. Monitoring of COVID-19 Risk Mitigation Plans

- MiDA monitored the implementation of COVID-19 Risk Mitigation Plans by Contractors and Consultants involved in the implementation of the Compact Projects. Within the period, two (2) Works Contractors recorded positive cases of COVID-19. They are Messrs Eiffage and Elecnor, who are responsible for the construction of the Kanda and UGMC PSS, and the Pokuase BSP Substation respectively. The number of confirmed cases at the PSS Site was two (2) while that of Pokuase BSP was (4) four. The Contractors followed the approved Risk Mitigation Plans to manage the cases by tracing all contacts of the infected persons, carrying out COVID-19 tests, fumigating the Site and ensuring strict adherence to the protocols. All confirmed cases have recovered and resumed work on their various Sites.
- In April-June 2021, to help avoid and minimize the spread of the new Delta strain of the Coronavirus, MiDA put in place additional testing measures to ensure that personnel of Contractors and Consultants who travelled to Ghana from abroad were tested before being admitted to Project Sites and Offices. Within the period, MiDA facilitated PCR Covid-19 testing for 12 Expatriate Staff of the Contractors. All tests returned negative results.
- 2. Resettlement Action Plans (RAP) for Infrastructure Projects. MiDA continued with the implementation of Resettlement Action Plans (RAPs) developed to manage the Resettlement and Community Engagement aspects of the infrastructure projects. Within the reporting period, MiDA facilitated the following Resettlement and Community Engagement activities:

# Kasoa BSP

- i. Compensated PAPs at the Opeikuma Junction where the construction of the 161kV line is underway to connect to the BSP.
- ii. Identified and engaged 112 Businesses and Artisans at the Kasoa Opeikuma Junction, who were inconvenienced by the Tower installation and Conductor stringing works. Their losses have been assessed and processed for compensation by MiDA.

# • Pokuase ICC Project:

- i. Compensated PAPs affected by the construction of the Medium Voltage Towers and stringing of Lines along the Achimota-Kanda Highway.
- ii. 18 Billboards sited along the Achimota-Kanda route of the Pokuase ICC Project were identified to pose health and safety risks to the public from the energization of the installed towers. MiDA engaged the owners and compensated them to relocate the affected billboards.
- Kanda and UMGC PSS ICC: Compensated PAPs impacted by the trenching and

Cable works of the PSS ICC at Kanda. Impacts were mainly relocation of temporary structures and businesses within the utility corridors and locations marked for the construction works. The affected businesses were allowed to return to work after the construction works were completed.

# 3. Reinstatement of affected properties.

 Reinstatement works were monitored to ensure all affected properties had been reinstated according to specifications.

# 4. Health, Safety, Environment and Social.

- Monitored the implementation of the approved Health, Safety, Environment and Social Management Plans of the various works contracts. There were cases of near misses at the various Construction Sites which were reported by the Contractors within the contractual timelines for reporting.
- MiDA recorded two (2) fatalities within the period. The two incidents occurred at the Kasoa BSP site and the LV Bifurcation Project in ECG Kwabenya district.
  - i. The incident at Kasoa happened on May 19, 2021 at 1:45am when a 35 year old male motor rider veered off the main Kasoa-Winneba Highway and crushed through the barricade of the cable gallery area of the 161kV towers of the BSP. He was pronounced dead at the Winneba Government Hospital. Police investigation concluded that the contractor, Siemens Energy has no liability towards the deceased.
  - ii. The second incident happened on June 23 2021 at Taifa Burkina in the ECG Kwabenya District. The incident involved a 23 year old man who was alleged to have been electrocuted by a stay/guy wire installed by ECG on a pole which was worked on by Best and Crompton on the Kwabenya LVB Lot 1. The Police is yet to conclude their investigation.

# 5. Construction of 16 unit 3-bed flats at Kanda

Construction works of the 16 unit 3-Bed Block of Flats at Kanda progressed to 76% completion as against 89% planned. The Project commenced on October 1, 2020 and was scheduled to be complete by July 31 2021. The structural and block works have been completed, while other ancillary works such as plumbing, electrical wiring and plastering are ongoing. The Contractor has requested for three (3) months extension of time.

# 2.2.5 Gender and Social Inclusion

Gender and Social Inclusion (GSI) in MiDA is aimed at ensuring a Gender-responsive and socially inclusive electricity service delivery and enhancing the Quality of Gender and Gender responsiveness in Compact activities.

The GSI Activities during the reporting period covered the following.

- 1. Implementation of the Social and Gender Integration Plan (SGIP)
  - Project Managers signed off on the SGIAP Update for their Projects and Activities.
  - Obtained MCC's No-Objection for the updated Social and Gender Integration Action Plan (SGIAP).

- 2. Incorporation of Gender and Social Inclusive Considerations in Compact Implementation
  - Participated in Monthly Meetings of the Works Contractors.
  - Reviewed Monthly Progress Reports and Evaluation Reports on Projects and Crosscutting Activities to ensure gender and social inclusiveness.
  - Reviewed SMEC GSI Expert's Gender Integration and Trafficking In-Person (TIP) Management Plan.
- 3. Gender Audit/Gender Policy and Institutional Strengthening of ECG.
  - Facilitation of the partnership between ECG and USAID's Engendering Utilities Program was completed.
  - Gender Sensitization Training sessions conducted for ECG Director, Corporate Affairs.
  - Results of Learning Needs Analysis shared with the ECG GSI Team and Director, Corporate Affairs
  - Coaching and Training for ECG GSI Unit conducted in April.
  - Workshop #2 for ECG WinE and Power Queens in conducted May
  - Executives of the ECG Female Employee Associations, the Power Queen Club and ECG WinE, developed Road Maps for the change they want to see in their Associations and ECG.
  - Final Women in Energy Conference (WIEC) 2020 Proceedings Report shared with Stakeholders.

# 4. Internship and Mentoring Program

- 102 GPCIMP Alumni and National Service Personnel serving in the Energy Sector participated in a virtual Mentorship Program on March 8 -19. They were equipped with the following:
  - Applying for jobs, including CV preparation, job search tools, creation of LinkedIn profiles, Cover Letters and Interview Questions, among others; and
  - Steps to take to be successful Entrepreneurs.
- Energy Organizations provide MiDA with Internship slots for 2021
- Call for Applications sent to Educational Institutions and put on social media platforms
- Development of Internship and Mentoring Manual
  - o Facilitator identified to lead Internship and Mentoring write-shop
  - Communications-for-Development Expert identified to develop the Internship Manual.
- 5. Gender and Energy Working Group (GEWG)
  - Organized a Gender and Energy Working Group Meetings in February and May.
  - Celebrated International Women's Day 2021 under the theme #ChooseToChallenge with Photos and Campaign Messages on Social Media platforms.
- 6. Promote Institutional Development of Gender Equality, focusing on Gender and Energy Organizations and Institutions
  - Participated in ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) Research on the ECOWAS Gender Mainstreaming Policy.
  - Participated in the Women in Energy /West Africa Energy Program Opportunities for Women in Energy Webinar

#### 2.3 MONITORING AND EVALUATION

The following Monitoring and Evaluation (M&E) activities were carried out during the period January-June 2021.

#### 1. M&E Plan

• Identified and proposed to MCC, sections of the M&E Plan that will require revisions, due to changes in the revised Economic Rate of Returns (ERR), and the extension to the Compact period duration.

# 2. Post-Compact M&E Plan

- Initiated the process to meet the Chief of Staff at the Office of the President, to discuss the Proposal to make the National Development Planning Commission (NDPC) the GoG designated Entity to manage the implementation of the Post-Compact M&E Plan.
- Held a follow up Meeting with NDPC on June 25, 2021, to provide an update on the steps taken to move forward the process of confirming NDPC as the GoG Entity to implement the Post-Compact M&E Plan. In attendance was the Director-General of NDPC and the Head of M&E.

# 3. Data Quality Audit

- Trained 146 Staff Members (including 18 Females) of ECG, EC, Ministry of Energy (MoEn) and Ghana Grid Company (GRIDCo), in Monitoring and Evaluation to enhance the overall M&E capacity and improve the quality of Data Collection and Reporting along the Data flow hierarchy. The Training, which took place from February 22 to March 22, 2021, targeted Field Staff who are involved in Data Capture and Transmission, Managers who aggregate the Data and report on Performance, and General Managers and Directors with responsibility for performance of the respective Directorates/Units they head.
- Completed the Third (Final) Round of Data Quality Audit on March 30, 2021.

# 4. Process Evaluation

- Following the completion of the Mid-Term Evaluation of the Compact in the Third Quarter of 2020, MiDA approved the Inception Report for the End-Term Evaluation of the Compact on January 29, 2021.
- The Consultant commenced the Data Collection and Analysis Phase of the contract in February 2021.
- Completed the End-Term Evaluation Consultancy obtained Data Collection and Analysis Report, and the Final End-Term Evaluation Report in June 2021.

# 5. Performance and Impact Evaluations

- Performance Evaluation of the Overall Compact
  - Completed the listing of 9,303 Households and 41,850 Enterprises from 86
    Household Enumeration Areas (H-EAs) and 346 Enterprise Enumeration Areas
    (E-EAs) respectively on January 21, 2021. The results were used for the
    creation of the Sampling Frame for the selection of Households and
    Enterprises to include in the sample to be interviewed.
  - Completed Training of Supervisors for the Computer-Assisted Telephone Interviews (CATI) and the Pretesting of the Household and Enterprise Survey

- Instruments on January 15, 2021.
- Completed the main Training for the Household and Enterprise Survey (using CATI) on January 25, 2021.
- Completed 2,868 Interviews (459 Households and 2,409 Enterprises) under the Household and Enterprise Survey from February 3 to March 12, 2021.
- The Consultant submitted, and MiDA approved, the Data Cleaning Plan.
- Completed and closed the Household and Enterprise Survey Contract obtained the Final versions of the Data Collection Completion Report and a Memo on the Cleaned Dataset.
- The Dataset was delivered to Mathematica, the Independent Evaluator of the Power Compact.
- Reviewed and provided comments to Mathematica to finalize the Qualitative Guide for Key Informant Interviews (KII) with selected Compact Stakeholders.
- Participated in a Lessons Learned Workshops by the Project Implementation Unit (PIU) to guide the design and development of a framework for the preparation of Compact Completion Report.
- Impact Evaluation of Technical Loss Activity of EFOT Project
  - With the possibility of Compact Extension due to the impact of COVID-19 on completion timelines, discussions between MCC, MiDA and the GridWatch Consultant, University of California Berkeley (UCB) began on the potential extension of the GridWatch Contract to continue with the deployment of the PowerWatch Devices.
  - Deployed GridWatch Devices for further measurement of real-time Power Outages, Frequencies, and Voltage levels in Districts within ECG Accra Region.
  - MCC/MiDA approved the Revised COVID-19 Mitigation Plan to allow the GridWatch Consultant, UC-Berkeley, to conduct Training on the GridWatch Technology.
  - Trained 19 Staff of Regulators (Ministry of Energy, Energy Commission and PURC) and 29 Staff of Utilities (ECG and GRIDCo) on the use of GridWatch Technology.

# 6. Reporting of Results

- Indicator Tracking Table (ITT)
  - Submitted the Compact Qtr. 18 (October-December 2020) ITT on the Performance of the Compact to MCC on March 10, 2021, as part of the Disbursement Request Package for Compact Qtr. 20 (April-June 2021).
  - Submitted Compact Qtr. 19 ITT (January-March 2021) on the Performance of the Compact to MCC on June 10, 2021, as part of the Disbursement Request Package for Compact Qtr. 21 (July September 2021).

# 7. Ensuring Compliance with Compact M&E Standards

• Reviewed and provided comments on M&E related matters in draft Reports and Deliverables from Project Consultants and Contractors.

#### 2.4 COMMUNICATIONS AND OUTREACH

# **2.4.1 Communication Strategy**

The Unit continues to apply the approved strategies developed in the 2020 Communication and Outreach Plan. The major Communication activity within the reporting period was the facilitation of media publicity around the visits of the Energy and Information Ministers, Honorable Dr. Matthew Opoku Prempeh and Honorable Kojo Oppong-Nkrumah, to the Pokuase and Kasoa BSP Project Sites. The Unit also facilitated the visit of Member of Parliament for the Awutu Senya East Constituency, Honorable Madam Hawa Koomson, to the Kasoa BSP Project Site.

The following is an update on the implementation of the planned activities in the Communication Strategy for the period January to June, 2021.

# 2.4.2 Implementation of Activities

The activities are categorized under the strategies underpinning the Communication Plan.

- 1. Showcase Compact II Solutions:
  - Developed an Infographic and Factsheet to update Stakeholders on the LV Bifurcation and Geographic Information Systems (GIS) Sub-Activities respectively. These communication materials were widely circulated to the Media and Stakeholders.
  - Developed and disseminated three Press Releases to announce the commencement of LV Bifurcation Project Works in ECG's Kwabenya District, the arrival of three Power Transformers for the Kasoa BSP, and the completion of the AC Test Laboratory Containment Building at GSA. The release on the Containment Building was published along with audio and video clips.
  - Frequent power outages in parts of the country, caused by factors including works occasioned by GRIDCo on its on Transmission Network, and those associated with the Compact Program, caused the Energy Minister, Honorable Matthew Opoku Prempeh and the Information Minister, Honorable Kojo Oppong Nkrumah, to embark on working tours of the various work sites. The site tours included visits to the Pokuase and Kasoa BSP Sites. The visits were to showcase the various interventions and investments being made to improve power quality and reliability. The Communication & Outreach Unit (C & O) coordinated Media reporting on the visits and sponsored four Television live broadcasts of the visits to the two Compact Project sites on April 20 and 27 respectively.
  - Produced and circulated a News Release intended to augment and enforce the contributions the two Bulk Supply Power Substations will make to Ghana's Power Sector and to the improved quality of Power supplied to the respective Project Beneficiary Communities.
  - Factsheets providing updates on the MMS, the Kasoa BSP, the Kanda and UGMC Primary Substations and the AC Test Facility were developed.
- 2. Strengthen the Compact II Brand
  - Developed Information Signage for the LV Bifurcation Works in Kwabenya.

- Supported this year's International Women's Day Celebrations by developing Messages and Visuals communicating the Compact's contributions towards the commemorative theme, #ChooseToChallenge.
- Branded Energy Audit Instruments procured for the Accra Technical University (ATU) under the Sustainable Energy Service Centers (SESCs) Sub-Activity of the EEDSM Project. This was to ensure compliance with the MCC's branding and marking provisions stipulated under the Standards for Global Marking Guidelines.

# 3. Improve Stakeholder Relations:

- Participated in the Stakeholder Engagement Meeting between MiDA, the Contractor, the Program Management Consultant (SMEC) and the Ga East Municipal Assembly on the planned interventions to upgrade the Electricity Network in ECG's Kwabenya District.
- Facilitated a Meeting of the Implementing Entity Communication Committee to deliberate and agree on each institution's role during the visit of the Energy and Information Ministers to the BSP Sites. The Meeting contributed to the successful visits and the largely positive reportage received on the activity.
- A key strategy to ensuring that Stakeholders are aware and appreciate the Compact Program's investments to the Power Sector and in their communities, the Unit planned and coordinated the visit of Hon. Hawa Koomson (MP for Awutu Senya East Constituency) to the Kasoa BSP Project site. The Municipal Chief Executive and some Constituency and Municipal figures accompanied the MP to the Project Site. The visit offered the Unit to further draw additional publicity to the Project.

# 4. Other activities

- Developed top line Compact Close messaging to ensure that there is message alignment among Stakeholders and Spokespersons communicating before and during Compact Closure activities.
- Submitted a proposal outlining how completed projects will be inaugurated and handed over to their respective Beneficiary Institutions. Considering that the Pokuase Power Substation has been completed, the Unit commenced preparations towards the facility's inauguration and handover ceremony.
- The MiDA CEO, accompanied by the COO and the Technical Controller, embarked on project site tours to assess the progress of work at the AC Test Laboratory, the UGMC and Kanda Primary Substations. The C&O Unit participated in these tours providing photography coverage. Similarly, the Unit participated in and covered a 2-day GridWatch Stakeholders Training Workshop held in Accra.
- Participated in an audit to ascertain the status of installed Street Lights in parts of Accra.
- Updated the MiDA Website with approved Board Meeting Minutes to comply with the Compact Program's conditions.
- Designed and produced Certificates for the GPCIMP Trainees.

# 5. Summary of Media Activities

 An estimated 4,521 website visits, and 1,718 were reached across all Social Media Platforms. A total of 64 Media mentions across Online News Portals were reported.

#### **PART THREE: CHALLENGES**

# 3.1 CRITICAL ISSUES

The support of Staff of the Implementing Entities is critical for the success of the Compact.

The COVID-19 pandemic has resulted in delays to Contract Deliverables because of travel restrictions imposed by most Governments. This affected the travel plans of Key Staff of Works Contract and Consultancy Firms. Factory Acceptance Tests (FAT) were delayed or deferred in some cases, resulting in delays to the delivery of Materials and Equipment.

#### 3.2 PROJECT-SPECIFIC CHALLENGES

# **3.2.1 Distribution Projects Challenges**

The challenges that have hindered the achievement of Targets in relation to the Distribution Projects are as follows:

# **EFOT Project**

# IT Infrastructure (GIS/MMS)

- COVID-19 restrictions continued to delay work and training of ECG Staff. The
  travel bans also prevented Contractors from working for some period of time, and
  prevented participants of FAT from traveling. In addition to the COVID-19,
  integration of the system with Third Parties not contracted to MiDA caused further
  delays.
- The GIS and MIS are approaching completion and ECG has to take over responsibility for the systems. Approving the tests completed on the System became a challenge as ECG continued to introduce new requirements for the system which delayed work. The Go-Live of the system has been significantly delayed as a result of this.

# PSS and ICC

- Travel restrictions and lockdowns as a result of the COVID-19 pandemic and relocation of Ghana Water Company Limited (GWCL) Pipeline & MV Cables at the Kanda Substation Site has caused delays. Unforeseeable physical conditions also caused delays to work and delivery of Equipment and Material to Site.
- Extension of time is required to compensate for delays caused by modification works required on the 11kV Switchboard to incorporate MV fuses on the primary side of incomer Voltage Transformers.

#### Pokuase BSP and ICC

- Defects on two (2) Transformers (GRIDCo side) detected during the Site Acceptance Tests (SATs) are being carefully managed by various Stakeholders to ensure minimum impact on implementation. The Engineer is yet to have a final determination, pending receipt of Investigation Reports and Proposals from the Contractor.
- The finalization of Stakeholder engagements with respect to Power Outages on the 330kV Transmission Line required for energization, is work-in-progress.

- Managing the communication with the public by GRIDCo and ECG is critical due to the expected Outages.
- Following energization, the Pokuase BSP has been duly integrated into the ECG and GRIDCo Network. Subsequently, in the absence of the Taking-Over Certificate (TOC) and full handing over to the Utilities, there is the need to manage any potential conflicts between the operational activities of the Utilities versus the works of the Contractor (Elecnor) in order not to complicate the warranty and contractual responsibilities. Punch List items are currently being managed, with the view of issuing the TOC as soon as possible, and the commencement of the Defects Notification Period.
- The Achimota-Kanda Line of the ICC is yet to be commissioned, after the timely completion by the Contractor (Best & Cromption) in accordance to the schedule. There is a dependency on the progress of works at the Kanda PSS, hence the TOC to the Contractor is yet to be issued. MiDA plans to issue the TOC for the commissioned works, with an exception of the Achimota-Kanda Works.

# Kasoa BSP and ICC

- One of the Containers of the 161kV GIS crashed into an overhead bridge en route from the Tema Port to the Site on March 19, 2021. An assessment was conducted and the Equipment was found to be badly damaged, therefore necessitating an order to be placed for a new one. This is expected to be delivered to Site by December 2021. Even though the Substation could be commissioned prior to delivery of the replacement Equipment, the potential time and cost impact on the final commissioning of the station could be significant.
- While preparing cable pulling and cable termination activities for LV Cables between 161kV Gas Insulated Switchgear and LV Control Cables (LCCs), the Siemens Energy Site Team discovered that no LV Control Cables were delivered with the 161kV GIS crates. This is likely to impact Project completion. Siemens Energy placed Purchase Order to Indian cable manufacturer KECRPG who proposed the best manufacturing and transit lead time. Tentative target is to get the LV Cables delivered at Kasoa BSP site by end of August 2021.
- Due to the COVID-19 pandemic, and the travel ban imposed by countries, the
  offshore Training planned to be organized for GRIDCo and ECG Staff could not
  take place. Siemens Energy submitted the Training Program at the end June
  2021. The Trainings are tentatively scheduled from the end of October 2021 to
  beginning of February 2022. Siemens Energy, the Engineer, and MiDA, the
  Employer together with GRIDCo and ECG will meet to streamline the Training
  Program, with specific emphasis on the timing.
- The reported poor performance of Siemens Energy's Subcontractor for Civil Works, Micheletti, continues to pose a challenge to timely delivery. As at the end of June 2021, delivery of the HV Gallery Works package continued to be on the critical path.

# LV Bifurcation

- Dansoman & Kaneshie Work Order:
  - The works in these Districts have been particularly hampered by extensive RAP related issues. There is slow pace of Pole retirement and reconductoring due to the inaccessibility to the Pole locations. A considerable number of Poles

- in Dansoman District are located in the bedroom, washroom, living room, and other properties of PAPs.
- Restrictions on planned Power Outages by ECG delayed the reconductoring, commissioning and other activities that require Outages.
- Delays by Telcos to remove their Overhead Infrastructure to allow for Overhead line stringing and retiring works by the Contractor delayed the progress of work.
- The commissioning of the 200kVA PMT Substation and associated 11kV
   Overhead Line at Awudome Estate was delayed as a result of PAP aggression.
- Delay by ECG in energizing the newly constructed 11kV Line at Accra Academy affected the energization of the newly installed GMT Substation.

# Kwabenya West and Kwabenya East:

- The delivery of several items, including Wood Poles, Surge Arresters, Dropout Fuses, Insulators, Cross-arms, Stays and Overhead Line hardware and 120AAC are behind schedule due to delays in shipment and impact of COVID-19 pandemic at the Manufacturers' countries.
- Increased Container cost of over 300% as a result of global shortage has become a major challenge to the Contractors and caused delays to the work.
- Delay in delivery of the 120sq.mm AAC Conductor and the last consignment of the wood poles affected the progress of Overhead Line stringing works.
   These items were delivered at the end of the first half of the year.
- Increased RAP issues at several locations hampered the progress of work.
- There was a temporary suspension of construction activities from 23-Jun-2021 for a week when a man was electrocuted at Taifa on 22-Jun-2021 when he slipped and held unto an LV Stay which happened to be energized.

# Institutionalizing Gender responsiveness in ECG

 COVID-19 restrictions have prevented many of the Energy Sector organizations from offering placements for the Interns to get practical experience.

# Access Project

- The issue of Energy Meters dragged on into the end of June 2021, with no resolution. The initial Supplier/Manufacturer, Hexcell, has been dropped for non-compatibility of their meters with the Compact-funded Meter Management System (MMS). Meters of a newly proposed Manufacturer/ Supplier, Hexing, is still undergoing testing at ECG. NEDCo has already approved the Hexing Meters. As at the close of this reporting period, the Meters are yet to be approved for procurement. It is expected that the Energy Meter issue will be resolved by July 15, 2021.
- Only marginal progress has been made with the re-wiring of Stalls and Stores in M&EEs since the commencement of the exercise. Vendors have shown little commitment to undertake re-wiring of shops. It is anticipated that the rewiring activity will peak when Vendors see significant progress with HVDS & Security Lighting construction.
- Due to COVID-19 and other challenges, the delivery of some Equipment and materials has delayed, thus affecting the implementation schedule. In view of this, the Contractor would be required to deploy adequate number of Staff,

execute the work in all Markets concurrently, and undertake majority of the work at night and outside business hours.

# **3.2.2 Generation Projects Challenges**

The challenges faced were as follows.

# **RSCB Project**

 The Partnership Exchanges for the remaining activities under the RPP resumed but were conducted in virtual mode due to COVID-19 pandemic.

# **EEDSM Project**

- Additional Street Lighting materials, including Underground Cables, 3-Phase Control Cubicles, Cable-laying Accessories, Energy Meters, Circuit Breakers, Feeding Cables, Cable Terminations and Lugs, have been ordered by the Contractors. The materials are currently being manufactured but have long lead-times. Therefore, work on some of the Streets/Roads will have to wait until the materials arrive.
- Most of the Consultancy Services activities were held virtually.

# 3.2.3 Cross-Cutting Projects

#### Communications and Outreach

 The COVID-19 pandemic prevented MiDA from carrying out planned Media Site Visits, and the Groundbreaking Ceremony for the Kasoa Project.

# 3.2.4 Extension to the Compact Period

Discussions with MCC for the possible extension of the Compact period to complete specific infrastructure activities that were significantly impacted by the COVID-19 related restrictions was concluded, and the Compact has been extended for nine (9) more months. Thus, the Compact Completion Date has been revised from September 6, 2021 to June 6, 2022.

#### **PART FOUR: FORWARD LOOK**

The following have been planned for completion in the next half of the year, July-December, 2021.

# 4.1 ECG FINANCIAL AND OPERATIONAL TURNAROUND PROJECT

# **Modernizing Utility Operations Activity**

Geographic Information System (GIS)

- Complete the VO6 activities by September 2021
- Ensure Maintenance of the System until Compact End Date
- Roll out the System within the ECG Districts in Accra East and West Regions

# **Technical Loss Reduction Activity**

#### **PSS** and ICC

- Complete Control Building, Installation of Equipment and Civil Works for Kanda and Legon Primary Substations.
- Continue with Construction Works for Interconnecting and Offloading Circuits.
- Continue with delivery of Materials and Equipment to Sites.

# Pokuase BSP & ICC

- Connect the Inter-Connecting Circuits (Cables) to the Kanda PSS.
- Officially commission the completed and energized BSP.

# Kasoa BSP and ICC

- Complete all Engineering Designs.
- Complete remaining Civil Works packages, except for Road Works and Substation Surfacing Works.
- Continue with Erection and Installation Works.
- Continue with testing and commissioning of installed Equipment.
- Commence Training for GRIDCo and ECG Staff.

# LV Bifurcation and Network Improvement

#### Achimota

• Manage Defect Liability Period (to end on July 1, 2021).

#### Mampona

Manage Defect Liability Period (to end on 1, July 2021).

#### Dansoman & Kaneshie

- Manage Defect Liability Period.
- ECG to provide the needed support to complete all outstanding activities on the Snag List.

# Kwabenya West and Kwabenya East:

- Procurement, Transportation and Delivery of Materials and Equipment
  - Contractor to deliver gate materials.
  - End of procurement activities.
- Carry out the following Construction activities
  - Complete pole planting
  - Complete stringing of Overhead Line.
  - o Complete installation of transformers and LV DPs.
  - o Commence testing & commissioning activities.
  - Complete pole retirement
  - o Retirement of undersized Conductors (50sq.mm AAC).

# **Commercial Loss Reduction**

Implementation of a Meter Management System (MMS)

- ECG to complete the User Acceptance Tests (UAT) by July 2021
- Go-Live of the System in July 2021
- Maintain the System until Compact End Date.

#### 4.2 REGULATORY STRENGTHENING AND CAPACITY BUILDING PROJECT

• Review M&E and Closeout Reports for approval and close out the RPP Activity.

# **4.3 ACCESS PROJECT**

- Take delivery of the outstanding 150 Wood Poles in two shipments on July 27 and August 24, 2021 respectively. Contractor to procure additional 38 Wood Poles as buffer just in case of any breakages.
- Complete Pole planting in selected Markets and Economic Enclaves.
- Commence stringing of HV and MV Lines.
- Commence installation of Transformers and RMUs
- Resolve issues with Energy Meters and place a firm Order for manufacturing and supply.
- Make corrections to sub-standard internal wirings in Stores and Stalls.
- Resolve challenges with the procurement of Energy Meters by July 15, 2021.

#### 4.4 ENERGY EFFICIENCY AND DEMAND-SIDE MANAGEMENT PROJECT

Development and Enforcement of Standards and Labels

- Continue to work with the Energy Commission, Office of the Attorney General and the Parliamentary Subsidiary Legislation Committee to formally lay the following first three (3) Regulations in Parliament for promulgation.
  - Energy Commission (Energy Efficiency Standards and Labelling) Refrigerating Appliances) Regulations, 2021;
  - Energy Commission (Energy Efficiency) (Prohibition of Importation and Sale of Used Electrical Appliances, Used Accessories and Used Parts) Regulations, 2021;
  - Energy Commission (Energy Efficiency) (Prohibition of manufacture and Sale of

Incandescent Filament Lamps and Lamps containing Mercury) Regulations, 2021.

- Work with the Energy Commission, Office of the Attorney General and the Parliamentary Subsidiary Legislation Committee to review subsequent sets of Regulations on Standards and Labels for Appliances, and lay in Parliament for promulgation.
- Complete Testing and Technical Handover (from Contractor to MiDA) of the AC and Refrigerator Test Laboratory Equipment at Ghana Standards Authority.
- Complete training of Master of Trainers from Ghana Standards Authority (GSA) and Energy Commission on the use of the AC and Refrigerator Test Laboratory Equipment.
- Undertake External Works and provide Standby Generator at the AC and Refrigerator Test Laboratory Facility at GSA.
- Inaugurate and commission the AC and Refrigerator Test Facility and formally handover to the GSA.

# Improved Energy Auditing

- The three (3) SESCs to finalize Energy Audit Reports, such as Walk-Through Audits, Investment Grade Energy Audits, Implementation Plans, M&V Plans, Financial Plans and Tender Documents, under the guidance of the Consultant.
- Obtain Final Reports and complete the Consultancy Services for the three (3) Sustainable Energy Services Centers (SESCs).
- Inaugurate the three (3) Sustainable Energy Services Centers (SESCs).
- Obtain Final Completion Reports and closeout the Consultancy Services for the Race to Retrofit Program.

# **Education and Public Information**

- Facilitate and organize Stakeholders Workshop on the Pre-Tertiary EEC Curriculum Update and disseminate results.
- Obtain the Final Completion Reports and closeout the Consultancy Services for the Pre-Tertiary EEC Curriculum Update Program.
- In collaboration with the Energy Commission, commence publicity of the promulgated LIs on upgraded Standards and Labels via various Media platforms.

#### DSM Activity

- Works Contractors to ship and deliver manufactured Street Lighting materials to Ghana.
- Continue with the Works Phase of the Street Lighting Replacements.

#### 4.5 ENVIRONMENT AND SOCIAL PROTECTION

- Continue to develop and implement RAP to relocate PAPs at the Kasoa 161 kV to allow access by the Contractor.
- Monitor implementation of HSE issues of Infrastructure activities, including COVID-19 Risk Mitigation measures.
- Monitor the construction of the Block of Flats at Kanda to ensure timely completion.

#### 4.6 GENDER AND SOCIAL INCLUSION

- 1. Implementation of the Social and Gender Integration Plan (SGIP)
  - Continue monitoring SGIAP implementation.
- 2. Incorporation of GSI considerations in Compact Implementation
  - Continue support to all Projects and Cross-Cutting Activities to ensure compliance with all GSI requirements.
  - Participate in Contractor Meetings for Infrastructure Projects
- 3. Gender Audit/Gender Policy and Institutional Strengthening of ECG.
  - Support to ECG Action Plan
    - Organize Final Workshop for ECG WinE and Power Queens
    - Organize Workshop #3 for ECG GSI Unit
- 4. Internship and Mentoring Program
  - Hold Inaugural Meeting of the Internship and Mentoring Steering Committee
  - Provide Orientation for Employers
  - Recruit, provide Orientation to, and place Interns
  - Match Interns with Mentors
  - Carry out Monitoring Visits
  - Organize Reflective Forum for Educators, Employers and Mentors
  - Write-shop for the development of the Internship and Mentoring Manual
- 5. Gender and Energy Working Group (GEWG)
  - Participate in Gender Working Group Meeting in August
  - Participate in WIEC 2021 Planning Committee Meeting 1
- 6. Promote Institutional Development of Gender Equality, focusing on Gender and Energy Organizations and Institutions
  - Participate in Blue Day (Anti-Trafficking) Celebrations

# 4.7 MONITORING AND EVALUATION AND ECONOMICS

- M&E Plan
  - Revise the M&E Plan to respond to the ERR revisions and Compact Extension.
- 2. Post-Compact M&E Plan
  - Revise further the Draft Post-Compact M&E Plan.
- 3. Performance and Impact Evaluations
  - Obtain MiDA Board's approval for a nine-month Extension to the GridWatch Contract.
  - Coordinate Key Informant Interviews by Mathematica.
- 4. Reporting of Results
  - Submit Compact Qtr. 20 ITT (Apr-Jun 2021) as part of the Qtr. 22 Disbursement Request Package.

- 5. Ensuring Compliance with Compact M&E Standards
  - Review and provide comments on Draft Reports and Deliverables from Project Consultants and Contractors, to ensure M&E compliance.

#### 4.8 COMMUNICATIONS AND OUTREACH

# **ECG IT Projects**

- Develop Information Education and Communication materials
- Produce short Video
- Launch GIS Go-Live
- Facilitate Radio and TV Interviews

#### Kasoa BSP

- Produce a short Video
- Develop Infographics
- Publish Press Advertorial
- Facilitate Media Briefing/Site Visit
- Publish on Social Media
- Publish Feature Article

#### Pokuase BSP

- Produce a short Video
- Plan and host Project Closure and Commissioning events

# **Primary Substation**

- Develop Factsheets and Infographics
- Publish Media Advertorial publication
- Develop Features and Editorials
- Develop Project Infomercial
- Publish on Social Media
- Facilitate Media Site Visits

#### LV Bifurcation

- Develop Project Factsheets, infographics and Backgrounders
- Publish Media Advertorial
- Produce a short Video
- Publish short Video on Social Media and other approved Media channels
- Carry out Stakeholder Engagements and Outreach.

# Street Lighting

- Produce and publish of Project Infomercial
- Develop Street Lighting Infographics
- Publish on Social Media
- Publish Project Advertorial
- Facilitate Media Briefing.

# PART FIVE: CONCLUSION AND RECOMMENDATIONS

# 5.1 CONCLUSION

In the period under review, significant progress was made in the implementation of activities, with the observation of the necessary protocols contained in the COVID-19 Risk Mitigation Plans that are in place for all contracts.

With MiDA securing and extension of the Power CED from September 6, 2021 to June 6, 2022, some activities that faced completion risks are now likely to be completed by the new CED.

#### 5.2 **RECOMMENDATIONS**

The following are recommendations to ensure the smooth closure of Compact Activities.

- 1. There is the need to plan towards GoG providing funding for Infrastructure works that may not be completed by the new CED, as a back-up strategy.
- 2. Make provision for GoG funding for the implementation of the Post-Compact M&E Plan by NDPC.

# **PART SIX: REPORTING MATRIX**

Programmes & Sub- Programmes	Activities (Operations)	Baseline	Targets for the 2 <sup>nd</sup> Half of 2021	Actual Results	Output Indicators	Means of Verification	Challenges	Mitigation Measures
Ghana Power Compact Program: ECG Financial and Operational Turnaround	Modernizing Utility Operations Activity	N/A	N/A	GIS project is at 75% completion. Operational Acceptance achieved and now in Maintenance phase. VO6 activities ongoing.	GIS-based distribution management system in place	GIS Consultant's Report	None- Activity on track	
		N/A	N/A	Activity has been de-scoped. It will no longer take under the Compact.	Enterprise Resource Planning System in place	ERP Consultant's Report	None	
		0	250	- 180 qualified students have their capacities enhanced - 217 females have been selected for the Mentoring Program As a result of COVID-19 there will be no internship placements this year.	Number of females participating in STEM Internship and Mentoring Program	Program Records	None- Activity on track	
	Technical Loss Reduction Activity	0 (2016)	1102.52	LV Bifurcation & Network Improvement Project is 100% complete for Achimota; 100% complete for Kaneshie/ Dansoman; 100 % complete for Mampong Akwapim Kwabenya West (57%), Kwabenya East (67%)	Kilometers of distribution lines upgraded or built	EFOT Project Report	None- Activity on track	
		0 (2016)	0	Kanda and UGTH Primary Substations (PSS) works are 71% complete BSP Works are steadily progressing.	Distribution substation capacity added	EFOT Project Report	None- Activity on track	
		0 (2016)	0	The Pokuase BSP project is 99% complete while the Kasoa BSP has an overall progress of 70%.	Number of Bulk supply points (BSPs)	EFOT Project Report	None- Activity on track	

Programmes & Sub- Programmes	Activities (Operations)	Baseline	Targets for the 2 <sup>nd</sup> Half of 2021	Actual Results	Output Indicators	Means of Verification	Challenges	Mitigation Measures
		0 (2016)	0	Kanda and UGTH Primary Substations Interconnecting circuits has achieved an overall progress completion status of 92% while the Pokuase BSP Sub- Transmission-ICC works has an overall progress completion status of 99%	Kilometers of interconnecting subtransmission lines (33kV)	EFOT Project Report	None- Activity on track	
	Commercial Loss Reduction Activity	0 (2016)	N/A	Meter management system is 99% complete. System is now in Production and ECG performing User acceptance tests to end July 2021 and then Go-Live in same month.	A standard Meter management system in place	EFOT Project Report	Meter integration challenges persist as very few meters of ECG current population are found to be compliant with MMS.	The Contractor, Siemens is working with ECG to ensure sufficient meters are deployed in PILOT and system is thoroughly proven
	Outage Reduction Activity	N/A	N/A	Activity has been de-scoped. It will no longer take under the Compact.	Outage management system in place	Program Records	None- Activity on track	
RSCB Project:	Tariff Review and Regulatory Activity	0	N/A	89 (28 Females) from EC, PURC, ECG, NEDCo, VRA and IPPs trained. Trainings included but not limited to Peer Review of PURC's Tariff Methodologies, Adjudication for Administrative Agencies, Boards & Tribunals Course, Utility Regulation and Strategy and Practicing Leadership in a Political Environment by The World Bank, Introduction to Regulation of Flexibility in the Power Grid, Peer Review on Performance Monitoring and Quality of Service Regulation, Key	Number of training participants	Regulatory Program Partnership Report	COVID-19 pandemic has delayed the planned Training.	

Programmes & Sub- Programmes	Activities (Operations)	Baseline	Targets for the 2 <sup>nd</sup> Half of 2021	Actual Results	Output Indicators	Means of Verification	Challenges	Mitigation Measures
				Considerations for WEM Design, and Tariff Setting				
Access Project: Infrastructure Activity		0	N/A	<ul> <li>40 Transformers of capacity 200 kVA each cleared from the Tema Port to Contractor's warehouse.</li> <li>Civil works for 6 of the planned 9 Ring Main Units (RMU) Plinths completed.</li> </ul>	Transformer capacity installed	Supervision Consultant's Periodic Reports	None- Activity on track	
		0	N/A	Secondary LV ABC cables and Conductors cleared from the Tema Ports to Contractor's warehouse.	Length of secondary LV ABC cables installed	Supervision Consultant's Periodic Reports	None- Activity on track	
		0	N/A	•581 of 731 wood poles have been delivered (79.5%) to the Contractor's warehouse. •520 of the planned 731 Wood Poles erected (71.1%).	Number of pole mounted prepayment meters	Supervision Consultant's Periodic Reports	None- Activity on track	
		0	N/A	Security Lighting fixtures cleared from Port to the contractor's warehouse.	Number of security lights installed	Supervision Consultant's Periodic Reports	None- Activity on track	
Access Project: Social Inclusiveness & Improved Partnerships Activity		0	TBD (after Census)	Customer Census in 10     M&EEs completed.     Customer Information and     Outreach Programme     (CIOP) completed.     Assessment of internal     wirings of Stores and Stalls,     and rewiring/new wiring of     same to meet Energy     Commission's standards     Commenced.     Intensive Information     Campaigns to encourage     more Vendors to undertake     rewiring of their Shops to	Number of customers assisted through outreach for electricity connection	Supervision Consultant's Periodic Reports	None- Activity on track	

Programmes & Sub- Programmes	Activities (Operations)	Baseline	Targets for the 2 <sup>nd</sup> Half of 2021	Actual Results	Output Indicators	Means of Verification	Challenges	Mitigation Measures
				meet Energy Commission's acceptable standards.				
EEDSM Project: Development and		0	20	21	Number of products with standards developed	Project Report	None- Activity on track	
Enforcement of Standards and Labels Activity		0	20	21	Number of products with legislative instruments drafted	Project Report	None- Activity on track	
		0 (2016)	0	0	Number of products with LIs on standards passed in Parliament	Project Report	None- Activity on track	
		0 (2016)	1	Construction of AC & Refrigerator Test Laboratory Containment Building completed.  AC & Refrigerator Test Laboratory Equipment installation completed at GSA. Testing commenced.  A dedicated 500 kVA Transformer installed for the Test facility.	Number of appliance test labs established	Project Report	None- Activity on track	
EEDSM Project: Improved Energy Auditing		0 (2016)	7	7	Number of institutions participating in race to retrofits and renewables	Project Report	None- Activity on track	
		0 (2016)	18	26 (8 more faculties trained as a result of the inclusion of one additional Tertiary Institution to host the SESC)	Number of SESCs trainers trained in energy auditing	Project Report	None- Activity on track	
		0	0	<ul> <li>Faculty for the three (3)     host Tertiary Institutions     trained,</li> <li>A generic Business Plan and     Operations Manual for each     participating Tertiary</li> </ul>	Number of sustainable energy services centers (SESCs) established	Project Report	None- Activity on track	

Programmes & Sub- Programmes	Activities (Operations)	Baseline	Targets for the 2 <sup>nd</sup> Half of 2021	Actual Results	Output Indicators	Means of Verification	Challenges	Mitigation Measures
			TDD	Institution to adapt to their specific needs prepared.  •The three (3) Tertiary Institutions completed successful in-person Training in two (2) Sustainable Energy Courses, with observation and feedback from the Consultant.  •Energy audit instruments for the three (3) Tertiary Institutions procured.  •The three (3) Tertiary Institutions to host the SESCs completed Walk-Through Energy Audits on 8 Buildings, under the guidance of the Consultant.				
EEDSM Project: Education and Public Information		0 (2016)	TBD	0	Number of unique public education outreach on energy efficiency	Project Report	None- Activity on track	
Activity		0	84	89	Number of teachers trained on energy efficiency and conservation curriculum	Project Report	None- Activity on track	
		0 (2016)	9,575	8,744 (3809 females)	Number of students reached through energy efficiency and conservation curriculum	Project Report	None- Activity on track	
EEDSM Project: DSM Infrastructure Activity		0 (2016)	11,305	2,575	Number of poles constructed	Project Report	None- Activity on track	
		0	14,558	11,956	Number of LED lights installed	Project Report	None- Activity on track	