

# **MINISTRY OF ENERGY**



**REPUBLIC OF GHANA**

**2020 ANNUAL PROGRESS REPORT (APR)**

**SUBMITTED TO**

**NATIONAL DEVELOPMENT PLANNING COMMISSION  
(NDPC)**

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## ABBREVIATIONS

AOGCP	Accelerated Oil and Gas Capacity Programme
AFD	Agence Francaise De Development
Bcf	Billion Cubic Feet
BPA	Bui Power Authority
CWE	China International Water and Electric Corporation
CWM	Cash Waterfall Mechanism
DP	Development Partners
E&P	Exploration and Production
ECG	Electricity Company of Ghana
GCMC	Ghana Cylinder Manufacturing Company
GEDAP	Ghana Energy Development and Access Project
GNGC	Ghana National Gas Company
GNPC	Ghana National Petroleum Corporation
GRIDCo	Ghana Grid Company Limited
HPS	High Pressure Sodium
GOHRMD	Human Resource Management and Development
HSSE	Health Safety, Security and Environment
IAEA	International Atomic Energy Agency
IGA	Intergovernmental Agreement
IGF	Internally Generated Funds
KIPP	Kpone Independent Power Plant
kV	Kilovolts
kW	Kilowatts
LED	Light Emitting Diode
LPG	Liquefied Petroleum Gas
MDAs	Ministries, Departments and Agencies
M&E	Monitoring and Evaluation
MMscf	Million Standard Cubic Feet
MTDP	Medium Term Development Plan

MW	Megawatts
NEDCO	Northern Electricity Distribution Company
NES	National Electrification Scheme
NMTDPF	National Medium Term Development Plan Framework
NPA	National Petroleum Authority
PPBME	Policy Planning, Budgeting, Monitoring and Evaluation
PSP	Private Sector Participation
PV	Photovoltaic
RE	Renewable Energy
RLPGPP	Rural Liquefied Petroleum Gas Promotion Programme
ROW	Right of Way
RSIM	Research, Statistics and Information Management
QPR	Quarterly Progress Report
SDG	Sustainable Development Goals
SGN	Sankofa Gye Nyame
SHEP	Self Help Electrification Programme
SMTDP	Sector Medium Term Development Plan
VRA	Volta River Authority
WAPCO	West African Power Company
WAPP	West African Power Pool

## 1.0 INTRODUCTION

The Ministry of Energy is responsible for energy policy formulation, monitoring and evaluation as well as supervision and coordination of activities of the Energy Sector. It is also mandated to initiate and develop policies that would ensure efficient, reliable and affordable supply of high-quality energy services for the Ghanaian economy and for export.

As required, the Sector Medium Term Development Plan was developed in consonance with the National Medium Term Policy Framework – An Agenda for Jobs: “Creating Prosperity and Equal Opportunity for All” (2018-2021). The preparation of the Ministry of Energy’s Quarterly Progress Report (QPR) is pursuant to regulations 19 of L.I 2232 stipulating that Sector Ministries, Departments and Agencies should prepare Quarterly and Annual Progress Reports.

This QPR provides the basis for assessing the progress of the Sector for the year 2020. It provides an update of the status of implementation of the projects and programmes identified in the Sector Medium Term Development Plan (SMTDP). The QPR indicates the details of the targets set for the year and the mapping of indicators which serve as a basis of measure of the progress of the projects. The QPR reviews the performances of the Sector with reference to the M&E plan to assess the implementation of its key policies and programmes earmarked for the year.

The key objectives of the APR are to:

1. Provide the background information required to assess the performance of the programmes and projects identified for the year.
2. Provide a precise description of the indicators, targets and goals of the planned programmes and projects.
3. Provide a summary of the project and the overall status of the projects/programmes.
4. Evaluate the progress made during the year toward the projected target (Planned % complete vs. actual % complete)
5. Ensure efficient and effective tracking in relation to information on schedule, project period, budget and cost.
6. Describe the key milestones and significant accomplishments.
7. Use the Report as a basis of strengthening the performance of the Ministry.

## **1.1 PURPOSE OF MONITORING AND EVALUATION FOR 2020**

Monitoring and Evaluation activities conducted during the period under review were to:

- assess the level of implementation of planned programmes and projects for the 2020 financial year in order to improve performance and achieve results.
- highlight challenges encountered during implementation to enable the Ministry reconsider the various implementation measures adopted with a view to improving subsequent performance and impact.

## **1.2 PROCESSES INVOLVED IN CONDUCTING MONITORING AND EVALUATION**

The monitoring and evaluation activities were conducted in a participatory manner. The Policy Planning, Monitoring and Evaluation Directorate (PPMED) collaborated with the Technical Directorates of the Ministry of Energy to carry out M&E activities. The data shows the extent to which the programmes and projects are contributing to the achievement of the sector's mandate, goals and objectives.

Both quantitative and qualitative data were collected through field interviews, surveys, quarterly reports, and measurement of system voltages or energies using the appropriate measuring instruments.

The data was collated and analyzed by the Policy Planning, Budgeting, Monitoring and Evaluation (PPBME) Directorate of the Ministry. Challenges and recommendations identified have been documented in this report.

## **1.3 STATUS OF IMPLEMENTATION OF SECTOR MEDIUM TERM DEVELOPMENT PLAN (SMTDP) 2018-2021**

In 2020, a total of *One Hundred and Eighteen (118)* activities were outlined for implementation in the Work Plan. All the activities are located under the Environment, Infrastructure and Human settlement of the Development Dimension of Policy.

As at the end of the year, all the 118 planned activities are being implemented and are in various stages of completion.

**TABLE 1: PROPORTION OF THE SMTDP IMPLEMENTED IN FOURTH QUARTER**

Indicators	Baseline	Target	Actual
	2019	2020	2020
<b>1. PROPORTION OF THE FOURTH QUARTER ACTION PLANS IMPLEMENTED:</b>			
a. Percentage completed	60%	65%	53%
b. Percentage of ongoing interventions	25%	30%	47%
c. Percentage of interventions abandoned	5%	-	0%
d. Percentage of interventions yet to start	10%	5%	0%
<b>2. Proportion of the overall Medium-Term Development Plan (2018-2021) implemented</b>	20%	25%	25%

#### 1.4 CHALLENGES ENCOUNTERED

The overall performance of the planned programmes has been slow due to a number of challenges. Some of these include;

##### **The Covid-19 Pandemic**

Due to the outbreak of the Covid-19, the Ministry of Energy's planned programmes and projects to be undertaken in the 2020 Annual Work Plan has been delayed. Unfortunately, the COVID-19 pandemic brought in its wake the need for a social distancing and some COVID-19 protocols which had to be adhered to. These protocols had in turn affected the staff strength, working hours as well as several activities scheduled for the year, 2020 including mid-year work programme retreat, procurement activities, management and stakeholder consultations, monitoring and field



visits, training and capacity building. The Ministry has carried out an assessment to ascertain the impact of the unanticipated outbreak of COVID-19 on the Sector.

### **Inadequate Funds and Delay in Releasing Funds**

In 2020, allocated funds released to the Ministry of Energy by Controller and Accountant-Generals' Department as well as the Ministry of Finance was inadequate for the annual activities and the funds that were available were also released late.

### **Unavailability of Materials for the Effective Implementation of Projects**

The Government of Ghana's goal for universal access to electricity has spurred growth in several sectors of the economy, through creation of cottage industries in communities, towns and villages across the country since the inception of National Electrification Scheme (NES) in 1990. The National Electrification Scheme has come a long way in advancing Ghana towards universal access to electricity with a current access rate of 85.17%. There were however challenges with delays in procurement of some key materials such as poles, stay equipment complete and accessories and conductors at sites and the stores which have stalled the completion of projects and in turn brings high cost during execution of projects.

### **Energy Sector Debt**

The Sector is also faced with the inability to maintain adequate liquidity due to high indebtedness among energy sector agencies and the Government of Ghana exacerbated by high technical and commercial losses. The high indebtedness among Energy sector institutions (i.e.GNGC, ECG, VRA) remains a challenged. Ghana's energy sector is currently undergoing restructuring under the Energy Sector Recovery Programme (ESRP) to address the current issues as well as avoid future recurrence. Under the ESRP implementation, 14 out of 28 Action Items (grouped under Improved Governance and Policy Framework, Cost Reduction Strategy and Revenue Improvement) have been implemented and the rest to be completed by 2023 to improve the financial condition of the Sector, so that citizens of Ghana may continue to benefit from affordable, reliable electricity and gas supply services for Ghana to continue attracting competitive private sector investments.

## 2.0 M&E ACTIVITIES REPORT

### 2.1 PROGRAMMES AND PROJECTS STATUS AS AT END OF DECEMBER,2020

The status of implementation of the planned programmes and projects have been presented in the table 2 below:

**Table 2: PROGRAMMES AND PROJECTS STATUS AS AT END OF DECEMBER,2020**

PROJECT DESCRIPTION	DEVELOPMENT DIMENSION OF POLICY FRAMEWORK	LOCATION	CONTRACTOR /CONSULTANT	CONTRACT SUM	SOURCE OF FUNDING	DATE OF AWARD	DATE OF STARTED	EXPECTED DATE OF COMPLETION	EXPENDITURE TO DATE	OUTSTANDING BALANCE	IMPLEMENTATION STATUS	REMARKS
<b>GENERATION PROJECTS</b>												
Pwalugu Multipurpose Hydropower Project	Environment, Infrastructure and Human Settlement	Pwalugu in Upper East Region	Sinohydro	USD 490M	GoG Sinohydro	Dec. 2019	May, 2020	July, 2024	-	USD 490M	Pre-commencement site activities completed	<p>1. Delay in making advance payment to the EPC contractor could delay the dam construction.</p> <p>2. Difficulties in accessing some part of the boundaries due to absence of roads and heavy rains on some days are the major challenges the survey teams faced</p>
Implementation of 400MW plant by Early Power	Environment, Infrastructure and Human Settlement	Tema	Early Power	-	Earlypower	2016	2017	Phase 1 2019 Phase 2 2020	-	-	Commissioning activities for open cycle phase 1A of	Delays encountered with the plant commissioning activities due to

PROJECT DESCRIPTION	DEVELOPMENT DIMENSION OF POLICY FRAMEWORK	LOCATION	CONTRACTOR /CONSULTANT	CONTRACT SUM	SOURCE OF FUNDING	DATE OF AWARD	DATE OF STARTED	EXPECTED DATE OF COMPLETION	EXPENDITURE TO DATE	OUT STANDING BALANCE	IMPLEMENTATION STATUS	REMARKS
											145.5MW are on going	issues with customs clearance of EPL's equipment

PROJECT DESCRIPTION	DEVELOPMENT DIMENSION OF POLICY FRAMEWORK	LOCATION	CONTRACTOR/CONSULTANT	CONTRACT SUM	SOURCE OF FUNDING	DATE OF AWARD	DATE OF STARTED	EXPECTED DATE OF COMPLETION	EXPENDITURE TO DATE	OUT STANDING BALANCE	IMPLEMENTATION STATUS	REMARKS
<b>TRANSMISSION PROJECTS</b>												
330kV Aboadze-Pretea Transmission Line Project	Environment, Infrastructure and Human Settlement	Western Region	Amandi Energy Solutions Limited	USD29.69M	Amandi Energy Solutions Limited	Jun-14	Sep. 2014	August 2020	USD 29,69M	-	This project was completed	
Aboadze 330kV Substation Expansion Project	Environment, Infrastructure and Human Settlement	Western Region	Amandi Energy Solutions Limited	USD31.96M	Amandi Energy Solutions Limited	Oct-15	Sep. 2017	Sep 2020	USD31.96 M	-		There was no activity on the planned activity because aspects of the remedial works required experts from Abroad who could not be available due to the Covid-19.

PROJECT DESCRIPTION	DEVELOPMENT DIMENSION OF POLICY FRAMEWORK	LOCATION	CONTRACTOR/CONSULTANT	CONTRACT SUM	SOURCE OF FUNDING	DATE OF AWARD	DATE OF STARTED	EXPECTED DATE OF COMPLETION	EXPENDITURE TO DATE	OUTSTANDING BALANCE	IMPLEMENTATION STATUS	REMARKS
Volta-Achimota-Mallam 161kV Transmission Line Upgrade	Environment, Infrastructure and Human Settlement	Corridor within Tema, Achimota and Mallam suburbs of Accra	Sieyan and Transrail	USD15M	Agence Francaise De Development (AFD)	Sep-2016	July - 2017	December - 2019	USD10.54 M	USD4.46M	53% and 31% of overall works were completed for the Volta-Achimota and Achimota-Mallam transmission lines respectively	Works under the Volta-Achimota_mallam sections were halted due to suspension of disbursement.
330 kV Kumasi - Bolgatanga Transmission Line Project	Environment, Infrastructure and Human Settlement	Corridor from Kumasi to Bolgatanga through Kintampo and Tamale	WSP/PB of United Kingdom, KEC International Ltd of India and Elecnor of Spain	USD155.32 M	Agence Francaise De Development	Mar-16	August 2018	Dec. 2018	USD\$127,649,683.53	USD27.67M	Contractor resumed work on December 14, 2020 after a long period of suspension.	AFD has confirmed its intention to assist GRIDCo in the payment of outstanding compensation.  GRIDCo has to satisfy the recommendations made by the Consultant hired by AFD to evaluate the compensation payment processes and procedures used by GRIDCo for AFD's assistance to materialize.

PROJECT DESCRIPTION	DEVELOPMENT DIMENSION OF POLICY FRAMEWORK	LOCATION	CONTRACTOR/CONSULTANT	CONTRACT SUM	SOURCE OF FUNDING	DATE OF AWARD	DATE OF STARTED	EXPECTED DATE OF COMPLETION	EXPENDITURE TO DATE	OUTSTANDING BALANCE	IMPLEMENTATION STATUS	REMARKS
												<p>The recommendations are being addressed by GRIDCo.</p> <p>Submitted Draft Contract Amendment for the Extension of project duration for Kumasi-Kintampo TL (Lot 1) to ADF for their no-objection</p>
225kV Bolgatanga-Ouagadougou Interconnection project	Environment, Infrastructure and Human Settlement	Corridor from Bolgatanga to the Ghana/Burkina Faso border	AECOM Canada Ltd. Of Canada, Eiffage Energies of France, Fichtner of Germany	USD 27.12M	Agence Francaise De Development	Dec-15	Feb 2016	June 2018	USD25.97 M	USD1.15M	This project was completed	<p>Engaged the Autotransformer manufacturer to undertake the remedial works since international flights have resumed.</p> <p>It is expected that it will be completed during the last quarter of 2020.</p>

PROJECT DESCRIPTION	DEVELOPMENT DIMENSION OF POLICY FRAMEWORK	LOCATION	CONTRACTOR/CONSULTANT	CONTRACT SUM	SOURCE OF FUNDING	DATE OF AWARD	DATE OF STARTED	EXPECTED DATE OF COMPLETION	EXPENDITURE TO DATE	OUTSTANDING BALANCE	IMPLEMENTATION STATUS	REMARKS
<b>DISTRIBUTION PROJECTS</b>												
Rural Electrification Project (SHEP PROJECTS)	Environment, Infrastructure and Human Settlement	Nation wide	Various contractors	GH¢808,648,925.77	GoG	N/A	Contracts (various) signed	2021	-	-	560 out of 388 communities targeted have been connected to the national grid.	Unavailability of funds and key materials such as poles and conductors
SHEP 4 Turnkey Electrification in Brong Ahafo, Central, & Western Regions	Environment, Infrastructure and Human Settlement	Bono, Bono East, Ahafo, Central, & Western Regions	Weldy Lamont	USD 350M	GoG & US Exim Bank	2006	July 2010	July 2020	USD 330.10M	USD 19.90M	74 communities completed and connected to the grid	
China International Water and Electric Corporation (CWE) – 5 REGIONS - Phase II	Environment, Infrastructure and Human Settlement	Ashanti, Eastern, Western, Volta and Eastern Regions	China International Water and Electric Corporation	USD 103M	GoG Industrial and Commercial Bank of China (ICBC)	March 21, 2019	March 21, 2020	March 21, 2023	0.00	USD 103M	33 communities were completed and connected to the grid.	
SHEP 4 Turnkey Electrification in Eastern, Volta, and Northern	Environment, Infrastructure and Human Settlement	Eastern Volta Northern	China Hunan Construction Group Corporation	USD92M	Industrial and Commercial Bank of China (ICBC) GoG	April 4, 2016	March 26, 2018	March 26, 2021	USD 61.03M	USD30,97M	33 communities have been connected to the national grid	

PROJECT DESCRIPTION	DEVELOPMENT DIMENSION OF POLICY FRAMEWORK	LOCATION	CONTRACTOR/CONSULTANT	CONTRACT SUM	SOURCE OF FUNDING	DATE OF AWARD	DATE OF STARTED	EXPECTED DATE OF COMPLETION	EXPENDITURE TO DATE	OUTSTANDING BALANCE	IMPLEMENTATION STATUS	REMARKS
Regions-Phase 1												
Rehabilitation/replacements/Installation of streetlights on the Accra-Tema Motorway.	Environment, Infrastructure and Human Settlement	Accra – Tema Motorway	Prefos Limited	GH¢11M	GoG				-	GH¢11M	700 sets of streetlights were installed at Accra-Tema motorway	
<b>RENEWABLE ENERGY PROJECTS</b>												
912kWp Solar Project	Environment, Infrastructure and Human Settlement	Jubilee House	Messr SPS/3SIL	USD1.65M	GoG	Sep. 2, 2019	Oct. 4, 2019	June 30, 2020	-	USD 1.65M	Progress is at 60%	
Mini grid for three Island Communities	Environment, Infrastructure and Human Settlement	Dangbe East District	TTA Spain	Euro1.4M GH¢0.5M	SECO	September 30, 2019	Sept. 30, 2019	Dec. 2022	-	Euro1.4M GH¢0.5M	Mini-grid has been installed at Peditorkope in the Ada East District	
Hydro Studies for medium and small hydro sites	Environment, Infrastructure and Human Settlement	Northern, Western & Central Regions	Studio Ing. G. Pietrangeli Srl, Italy	US\$0.76M	AfDB	June 30, 2017	July 15, 2017	Dec, 30, 2020	US\$0.3M	US\$0.46M	Draft final report submitted	
Nuclear Power Programme	Environment, Infrastructure and Human Settlement	Classified	Not yet procured	USD12B	GoG, DP	N/A	2012	2030	N/A	N/A	The Programme Comprehensive Report of phase 1 has been	

PROJECT DESCRIPTION	DEVELOPMENT DIMENSION OF POLICY FRAMEWORK	LOCATION	CONTRACTOR/CONSULTANT	CONTRACT SUM	SOURCE OF FUNDING	DATE OF AWARD	DATE OF STARTED	EXPECTED DATE OF COMPLETION	EXPENDITURE TO DATE	OUTSTANDING BALANCE	IMPLEMENTATION STATUS	REMARKS
											completed and awaiting Cabinet approval to progress to phase 2	
Scaling-Up Renewable Energy	Environment, Infrastructure and Human Settlement	Nationwide	Tetra Tech ES. Inc. SRC Consulting DevtPlan Consult	USD230M	SEFA AfDB	Oct 2018	Oct 2018	2023	USD 0.8M	USD 229.20M	Scaling-up Renewable Energy in Ho. Electricity generators mix stood at 29	
<b>PETROLEUM DOWNSTREAM</b>												
Rural LPG Promotion	Environment, Infrastructure and Human Settlement	Districts/ Constituencies across the country	GCMC Messrs Sojafrie Industries Limited (2018)	GH¢0.65M	GoG	-		N/A	-	GH¢0.65M	1. 1,500 outstanding cook stoves distributed 2. Procurement process initiated for the supply of remaining 60,000cook	Delay in release of funds from MoF



## 2.2 UPDATE ON DISBURSEMENT FROM FUNDING SOURCES

The table below provides summary of disbursements from funding sources for the key programmes and projects carried out in the year, 2020.

### REVENUE AND EXPENDITURE ANALYSIS

**Table 3: BUDGET PERFORMANCE AS AT DECEMBER 31, 2020**

<b>SOURCE</b>	<b>APPROVED BUDGET (GH¢)</b>	<b>RELEASES (GH¢)</b>	<b>ACTUAL EXP. (GH¢)</b>	<b>VARIANCE (GH¢)</b>	<b>PERCENTAGE UTILIZED (%)</b>
COMPENSATION OF EMPLOYEES (GOG)	4,233,929.00	3,962,975.77	3,962,975.77	270,953.23	93.60
GOOD AND SERVICES (GOG)	2,881,583.00	1,972,540.77	1,972,540.77	909,042.23	68.45
CAPEX (ABFA)	60,000,000.00	54,995,751.00	54,995,751.00	5,004,249.00	91.65
CAPEX (GOG)	100,000,000.00	100,000,000.00	100,000,000.00	0.00	100
DP FUNDS	441,031,150.00	55,131,665.77	54,581,665.77	385,899,484.20	12.50
RETAINED IGF (EC)	77,619,665.00	30,053,449.00	28,789,381.26	45,959,321.51	38.72
<b>TOTAL</b>	<b>685,766,327.00</b>	<b>246,116,382.31</b>	<b>244,302,314.57</b>	<b>438,043,050.17</b>	<b>35.89</b>

## **FINANCIAL PERFORMANCE**

### **COMPENSATION OF EMPLOYEES**

An amount of GHS 4,233,929.00 was allocated to the Ministry of Energy for Compensation of Employees for 2020. As at end of December 2020, an amount of GH¢ 3,962,975.77 has been used by the Ministry for its Employees.

### **GOODS AND SERVICES**

A total of GHS 2,881,583.00 was approved and allocated for Goods and Services for the Ministry for 2020 fiscal year. As at June 2020, an amount of GH¢ 1,972,540.77 has been utilized by the Ministry.

### **CAPITAL EXPENDITURE**

An amount of GHS 60,000,000.00 from ABFA and GHS 100,000,000.00 from GoG was allocated to the Ministry for Capital Expenditure. As at December 2020, an amount of GH¢ 54,995,751.00 from ABFA and GH¢ 100,000,000.00 from GoG was released to the Ministry and has been utilised.

### **DONOR**

An amount of GHS 441,031,150.00 was approved and allocated to the Ministry for Development Partners. At the end of December 2020, GH¢ 55,131,665.77 was released and GH¢ 54,581,665.77 was utilized by the ministry

### **RETAINED INTERNALLY GENERATED FUNDS (IGF)**

An amount of GHS 77,619,665.00 was approved and allocated for internally generated funds for Energy Commission under Ministry of Energy for the 2020 fiscal year. As at December 2020, an amount of GH¢ 31,660,343.49 was released and GH¢28,789,381.26 was utilized by the Commission.

### **2.3 UPDATE ON INDICATORS AND TARGETS**

In consultation with stakeholders, the National Development Planning Commission as part of the process of monitoring the implementation of the new policy framework, identified some set of indicators. The progress of these set indicators is monitored by the NDPC periodically.

The Ministry also as part of its process to monitor implementation of its Medium-Term Development Plan (MTDP, 2018-2021), identified other sector specific indicators. All these policy outcome indicators and sector output indicators for the third quarter have been assessed and presented in Table 4 below.

**Table 4: KEY POLICY OUTCOME INDICATORS AND TARGETS**

Outcome Indicator Description	Unit of Measurement	Baseline		2018 Actual		2019 Actual		Latest status		Target		Remarks/ Challenges
		Year	Value	Year	Value	Year	Value	Year	Value	Year	Value	
<b>POWER SUB SECTOR</b>												
Access to Electricity increased (SDG Target 7.b)	Percentage of connection	<b>2017</b>	<b>84.15</b>	<b>2018</b>	84.32	<b>2019</b>	84.98	<b>2020</b>	85.17	<b>2020</b>	90	Lack of funds for procurement and payments for goods and services.
Electricity extended to deprived communities (SDG Target 7.b)	Number of communities connected to the national grid.		587		278		448		364		560	Unavailability of funds and key materials such as pole and conductors
Expansion of generation capacity (SDG Target 7.1, 7.a, 7.b)	MW		445		0		340		200		200	Construction of 200MW Early power completed. Commissioning of the plant delay due to COVID-19
Increased penetration of renewable energy in the national energy supply mix (SDG Targets 7.2,7.3,7.a)	RE capacity addition to the grid		0		28.16MW		12.9MW		0		195MW	Work has slowed down due to COVID-19

Outcome Indicator Description	Unit of Measurement	Baseline		2018 Actual		2019 Actual		Latest status		Target		Remarks/ Challenges
		Year	Value	Year	Value	Year	Value	Year	Value	Year	Value	
<b>POWER SUB SECTOR</b>												
Mini-grid Electrification using Renewable Energy technologies in Island and Lakeside communities installed (SDG Targets 7.2, 7.3,7a)	Number of mini- grids installed		-		5		0		0		3	Sensitization in all communities completed.  The mobilization by the Contractor to move to site has delayed due to COVID 19
Low reliance on wood fuels (SDG Targets 7)	Number of cook stoves distributed		37,240		19500		18,500		0		60,000	Delays in release of funds from MoF
<b>PETROLEUM SUB SECTOR PROJECTS</b>												
Increased Production figures from the Jubilee field (SDG Target 9.b)	Annual volume of oil produced in barrels	<b>2017</b>	32.75 mmbbl	<b>2018</b>	24.46 mmbbl	<b>2019</b>	31.92 mmbbl	<b>2020</b>	<b>30.43</b> mmbbl	<b>2020</b>	34.59 mmbbl	Jubilee South East development process commenced
	Associated Gas Production		0.44 mmscf		0.45 Mmscf		20.69 Scf		<b>33,318.</b> <b>59</b> Mmscf		35.58 Bcf	

Outcome Indicator Description	Unit of Measurement	Baseline		2018 Actual		2019 Actual		Latest status		Target		Remarks/ Challenges
		Year	Value	Year	Value	Year	Value	Year	Value	Year	Value	
<b>POWER SUB SECTOR</b>												
Increased Production figures from the TEN field (SDG Target 9.b)	Annual volume of oil produced in barrels		19.82 mmbbl		23.56 mmbbl		22.32 mmbbl		<b>17.81</b> <b>mmbbl</b>		24.93 mmbbl	Drilling activities underway on NT09- P well
	Associated Gas Production		0.27 mmscf		0.39 Mmscf		0.69 Scf		<b>58,674.</b> <b>67</b> <b>Mmscf</b>		8.22 Bcf	
Increased Production figures from the SGN field (SDG Target 9.b)	Annual volume of oil produced in barrels		5.46 mmbbl		10.1mmbb l		17.2 mmbbl		<b>18.70</b> <b>mmbbl</b>		17.41 mmbbl	No drilling activities in the month of March.
	Associated Gas Production		7.21 Bcf		<b>AG:</b> 17.28 Bcf  <b>NAG:</b> 7.14		31.45 Bcf		<b>11,378.</b> <b>13mms</b> <b>cf</b> <b>15,516.</b> <b>30</b> <b>mmscf</b>		62.59 Bcf	

The details of the policy outcome indicators and targets are in Appendix 1.

## **2.4 UPDATE ON CRITICAL DEVELOPMENT**

In the beginning of the year, the Ministry highlighted and earmarked a number of projects and programmes in the 2020 work plan which is in line with the programme and projects outlined in the Medium-Term Expenditure Framework (MTEF). These programmes were broken down into deliverables which reflected the expected milestones forecasted to be achieved in every quarter.

Notwithstanding the emergence of Covid-19 during the period under review, some remarkable achievements have been made on the programmes and projects that were earmarked for the fourth quarter of 2020. These are highlighted below;

### **POWER GENERATION**

As part of Government's commitment to ensure increased availability of power to the nation as well as its neighbouring countries, the following captures an updated overview of the Power Generation Sector in 2020.

As at the end of 2019, the total installed capacity was 4,743MW with a projected demand of 2803.7 MW.

In 2020, Ghana's total installed capacity was increased to 5,043MW with a dependable capacity of 4363 MW. The installed capacity is made up of a mix of 3 hydroelectric plants with a total installed capacity of 1,584MW (32%), 15 thermal power plants with total installed capacity of 3,411MW (67%) and 4 solar PV plants with total installed capacity of 48.5MW (<1%).

The coincident peak load recorded for the year 2020 was 3,090.0 MW which occurred at 20.15 hrs on December 4, 2020. This was very close to the projected 2020 peak of 3115 MW.

To increase private sector participation in the Power Sector through Independent Power Producers (IPPs), the target for 2020 was to ensure the successful completion of Early Power phase 1, to increase Ghana's installed generation capacity by 200MW. However, works on this project steadily progressed to 85% as at the end of December, 2020. Commissioning activities for Early Power's open cycle phase 1A of 145.5MW are still ongoing with delays encountered due to issues with Covid-19 travel restrictions and delays in customs clearance of some Early Power's equipment.

Similarly, the 190MW Amandi power plant under construction in Takoradi did not complete commission activities for the plant as envisaged at the beginning of 2020. It is expected to be completed and in service in the 1<sup>st</sup> quarter of 2021.

The Ministry of Energy negotiated and submitted tariff reduction proposal from CENIT, Karpower and AKSA to Cabinet. A broader consultation process in collaboration with MOF was initiated to restructure all PPA's & GSA's. The 3rd round of consultations was concluded with selected IPPs in 2020. CENIT and AKSA agreed on new renegotiated terms with the government renegotiation team.

Currently, the power capacity that is provided by IPPs and non-state-run power plants in Ghana stands at approximately 2750 MW, which is greater than all installed capacity operated and owned state-backed electricity generation utilities i.e., Volta River Authority (VRA) and Bui Power Authority (BPA). The trend is expected to continue due the policy of government to attract more investment from the private sector into the energy sector.

## **POWER TRANSMISSION**

In line with Government's policy to create a non-congested transmission system GRIDCo continued with the Transmission System Reinforcement Project to improve operational reliability, security and control among others. Key among these includes the 330kV Kumasi-Bolgatanga Transmission Line completed in the year 2020.

The 225kV Bolgatanga-Ouagadougou Interconnection Project which allowed Ghana to export an average 120MW Electricity to Burkina Faso following the successful commissioning of the Kinta-Tamale -Bolgatanga sections of the 330kV Kumasi-Bolgatanga Transmission Line.

The works under the Volta-Achimota-Mallam sections were halted due to suspension of disbursement by AFD, resulting in non-payment of invoices by the Contractors. However, the overall works done was 53% and 31% for the Volta-Achimota and Achimota-Mallam transmission line sections respectively.



## **POWER DISTRIBUTION**

### **Rural Electrification Programme**

Under the Rural Electrification Programme, a total of 560 communities were expected to be connected to the national grid. The Ministry of Energy has connected 388 communities to the grid, 2020. The National Electricity Access rate increased from 84.98% in January to 85.17% in December, 2020 with over 10,000 communities so far connected to the grid.

### **Energy Efficiency and Demand-Side Management**

- The replacement and rehabilitation of the inefficient 250W High Pressure Sodium (HPS) with LED streetlights on selected roads in Kumasi has been completed and Accra has also been completed.
- Installation of LED streetlights on selected roads in Bongo, Hohoe, Karaga, Alavanyo, Kwabenya have been completed. 200 out of 700 sets of streetlights were installed at Accra –Tema Motorway and have been energised.

## **PETROLEUM SECTOR**

### **Oil and Gas Production**

Total crude oil production from the three (3) producing fields was 71.44 million bbls from January to December 2020, translating to an average daily oil production of 230,504.01 bbls. A total of 185,426.76million standard cubic feet (MMscf) of gas translating to average daily gas export of 829.80 million standard cubic feet (MMscf) was delivered for power generation and non-power gas users.

#### **a) Greater Jubilee Field**

Oil production from the Greater Jubilee field in 2020 amounted to 30.43million barrels (mmbbls); averaging 161,195.26 barrels of oil per day (bopd). Gas export to the GPP for the year 2020 amounted to 33,318.59 million standard cubic feet (MMscf).

### **b) Tweneboa-Enyenra-Ntomme (TEN)**

Total crude oil produced from the Tweneboa-Enyenra-Ntomme (TEN) Field was 17.81 million barrels (mmbbls) averaging 93,679.83 barrels of oil per day (bopd) as of December 2020. The field also accounted for a 58,674.67 MMscf of gas export to the GPP.

### **c) Sankofa-Gye-Nyame (SGN)**

Total crude oil production at the Sankofa-Gye-Nyame was 18.70 million barrels (mmbbls); averaging 101,189.59 barrels of oil per day (bopd) as of December 2020. A total of 65,185.34million standard cubic feet (MMscf) of non-associated gas was produce out of which 59,523.13 million standard cubic feet (MMscf) was delivered for power generation

### **Petroleum Agreement**

The Ghana Negotiation Team (GNT) continued negotiation with the two winners of the Licensing Round in 2020. Negotiation with First Exploration and Petroleum Development Company (Ghana) Limited was 80% complete and that with ENI Ghana Exploration & Production Limited was 70% complete in respect of GH\_WB\_02 (Ghana Western Basin Block 02) and GH\_WB\_03 (Ghana Western Basin Block 03) respectively of the Republic of Ghana.

### **Development of a Petroleum Hub**

The Petroleum Hub Corporation Bill has been successfully passed by Parliament into law on 23<sup>rd</sup> October, 2020.

### **3.0 THE WAY FORWARD**

#### **3.1 KEY ISSUES ADDRESSED**

The Ministry during the fourth quarter, made significant progress in the implementation of planned programmes and projects, highlights of the implemented projects include:

- i. The replacement and rehabilitation of the inefficient 250W High Pressure Sodium (HPS) with LED streetlights on selected roads in Accra has been completed
- ii. The completion and commissioning of the Streetlight installations at Bongo, Hohoe, Karaga, Alavanyo and Kwabenya
- iii. The Renewable Energy (Amendment) Bill, were passed
- iv. Bui Power Authority (Amendment) Bill, 2020 passed
- v. Petroleum hub bill passed.
- vi. Parliamentary approval obtained for the construction of Pwalugu Multipurpose Dam.
- vii. The completion and commissioning of the Streetlight installations at Hohoe, Alavanyo Ph-I, Bongo and Karaga
- viii. Contract signed for the procurement and distribution of 500,000 Improved Cook Stoves to urban and peri-urban areas in Ghana
- ix. The completion of the distribution of 1,500 cook stoves which were outstanding from the previous year contract.

#### **3.2 KEY ISSUES YET TO BE ADDRESSED**

Though the Sector achieved some progress, there are still efforts to complete/implement planned programmes and projects. Some key projects and programmes yet to be addressed include;

- i. Supply of 6W, 9W and 13W LED bulbs
- ii. Rehabilitation/replacement/installation of streetlights on the Accra-Tema Motorway
- iii. Development of Pwalugu Multipurpose dam
- iv. Supply of cables and conductors
- v. Completion of the Karpower Relocation Grid interconnection
- vi. Completion of Aboadze – Prestea 330kV Transmission Line;
- vii. Completion of the Volta-Achimota-Mallam 161 kV Line

- viii. Completion of Jubilee House 912kWp Solar Project
- ix. Replacement of T3 Gas Turbines
- x. Implementation of Gas Mater plan
- xi. Interconnection of GNGC and WAPCO Pipeline Systems.
- xii. Completion of National Fuel Quality Policy
- xiii. Review National Energy Policy is before Cabinet

### **3.3 RECOMMENDATIONS**

- i. The Ministry will implement the Cash Waterfall Mechanism to address the high indebtedness among relevant Sector Agencies and improve the financial sustainability of the energy sector.
  
- ii. The Ministry will also continue to develop and focus on strategies that encourage expanded activities and investments in the Upstream sector that are geared towards making significant discoveries to increase reserves and sustain oil and gas production.
  
- iii. The Ministry will also advise the Ministry of Finance and the Controller and Accountant-General's Department to ensure prompt releases of funds in the subsequent year to enable the Ministry deliver upon its mandate and facilitate its planned programmes and projects.

### 3.4 ANNEXES

#### UPDATE ON POLICY OUTCOME INDICATORS AND TARGETS

NO	INDICATOR	UNIT OF MEASURE	2017 BASELINE	2018 Values	2019 Values	2020 Value	Target for 2020
1.	Total installed capacity of power generation plants (MW)	MW	445 (2017 Actual)	4,889MW	5,026	5,040	
2.	Distribution losses	%	NEDCO – 31.9% ECG – 24.25	NEDCo = 30.4% ECG = 24.3%	NEDCo=27.5% ECG =24.8%		
3.	Percentage change in Transmission losses	%	4.10(2017 Actual)	4.43%	4.71%		
4.	Percentage of communities with access to electricity	%	84.15%	84.32%	84.98%	85.17	
5.	Increased System Capacity for Export  Improved reliability in transmission network  Enhanced Efficiency of System	%	330kV Aboadze-Prestea Transmission Line Project – 97%	95%	100%	100%	Completion of 100% remedial works
		%	Volta-Achimota-Mallam 161kV Transmission Line Project – 70%	Volta-Achimota 53% Achimota-Mallam 30%	Volta-Achimota 53% Achimota-Mallam 30%	53% 30%	100%
		%	330 kV Kumasi - Bolgatanga Transmission Line Project – 80%	85%	90%	95%	100%
		%	330 kV Kumasi, Tamale and Bolgatanga Substations under the 330kV Transmission Line Project – 70%	100%	98%	98%	100%
6.		%	Aboadze 330kV Substation Expansion Project – 20%	100%	70%	90%	100%

## OTHER SECTOR OUTPUT INDICATORS AND TARGETS

No	Indicator	Type of Indicator	Target for 2020	Actual for 2020	Data Sources	Monitoring Frequency	Responsibility	Remarks
1	Number of communities completed and connected to the national grid	Output	560	388	Distribution Directorate	Monthly	Director/ Distribution Contractor	Unavailability of funds and key materials
2	Percentage completion of replacement and Rehabilitation works in selected streets in Accra and Kumasi	Output	100%	Kumasi: 100% Accra: 100%	Distribution Directorate	Monthly	Director/ Distribution Contractor5	Delayed payment to contractors
3	Number of staff to be trained	Output	70	0	Human Resource Mgt and Development Directorate	Quarterly	Director/HR	Availability of funds
4	Number of Staff health checks and screening organized	Output	3	0	Human Resource Management Directorate Quarterly reports	Quarterly	Director/ HR	Unavailability of funds
5	Number of impact analysis conducted on Solar Lantern Distribution Programme	Output	1	1	RSIM Quarterly Report	Quarterly	Director/RSIM	
6	Number of impact analysis conducted on Rural LPG Promotion Programme	Output	1	1	RSIM Quarterly Report	Quarterly	Director/RSIM	
7	Number of Impact assessment on Mini	Output	1	0	RSIM Quarterly Report	Quarterly	D/RSIM	Untimely release of funds

No	Indicator	Type of Indicator	Target for 2020	Actual for 2020	Data Sources	Monitoring Frequency	Responsibility	Remarks
	Grid Electrification installations							
8	Number of Entity Tender committee Meetings held	Output	4	3	General Administration Directorate	Quarterly	D/GA	Directive by government for people to practice social distance due to the outbreak of COVID 19 has brought about disruption of procurement activities
9	Number of reconciliation report of physical stock quantities prepared	Output	4	2	Procurement Unit	Quarterly	D/GA	
9	Number of Management Meetings held	Output	12	3	General Administration Directorate	Monthly	D/GA	Management meetings for the month of February and March could not be held due to lockdown in Accra
10	Number of Ministerial Advisory Board meetings organised	Output	4	1	General Administration Directorate	Quarterly	D/GA	Ministerial Advisory Board meeting for 1 <sup>st</sup> quarter could not be held due to lockdown in Accra
11	Number of Audit Committee Meetings held	Output	4	1	General Administration Directorate Internal Audit Unit	Quarterly	D/GA	Audit Committee meeting for 1 <sup>st</sup> quarter could not be held due to lockdown in Accra. Meeting was scheduled but had to be cancelled.

No	Indicator	Type of Indicator	Target for 2020	Actual for 2020	Data Sources	Monitoring Frequency	Responsibility	Remarks
12	Preparation of Quarterly Sector Reports for OHCS	Output	4	4	All Directorates and Units	Quarterly	D/PPBME	First quarter report prepared and submitted to OHCS in due time
13	Preparation of Annual Performance Report	Output	1	1	All Directorates and Units	Annual	D/PPBME	APR submitted to OHCS. Challenges in receiving prompt responses from Directorates
14	Preparation of 2019-2022 Budget	Output	4	3	All Directorates and Units	Annual	D/PPBME	First quarter budget report prepared and submitted to MoF in due time
15	Work Programme Retreat organized	Output	1	0	PPBME Directorate	Annually	D/PPBME	Reports available. Retreat held
16	Mid-Year Performance Review Retreat organised	Output	1	0	PPBME Directorate	Annually	D/PPBME	
17	Awareness programs of the industry and opportunities to Secondary Schools	Output	20	20	Local Content Unit	Quarterly Report	Head/Local Content	
18	Cylinders and stoves distributed under the Rural LPG	Output	3000 cook stoves	1500	Petroleum Downstream Quarterly Report	Quarterly	D/Downstream	Delays in release of funds from MoF



No	Indicator	Type of Indicator	Target for 2020	Actual for 2020	Data Sources	Monitoring Frequency	Responsibility	Remarks
	Promotion Policy (SDG Targets 7.)							
19	Solar Lantern Distribution	Output	100,000	80,000	Renewable Directorate	Quarterly	D/Renewable	Delay in the release of funds due to COVID-19