



ANNUAL ACTIVITY REPORT AND FINANCIAL STATEMENTS FOR THE YEAR ENDED 31ST DECEMBER 2022



NAWEC

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LIST OF ACRONYMS

BB	Busumbala
BH	BOREHOLE
BJA1	BRIKAMA 1
BPS 1	BRIKAMA POWER STATION 1
BSB	Brusubi
CT	Current transformer
DG	Diesel Generator
EBU	Electricity Business Unit
ECOREAP	Regional Electricity Access Project
GBA	Greater Banjul Area
GCSD	Group Customer Service Directorate
GEAP	Gambia Electricity Access Project
GERMP	Gambia Electricity Restoration and Modernisation Project
GHRD	Group Human Resources Director
G1-9	Generator
GIS	Geography Information System
HFO	Heavy fuel OIL
HSE	Health Safety and Environment



HRs	Hours
IMS	Information Management System
IT	Information system
KPI	Key Performance Indicator
KPS	Kotu Power Station
KVA	kilo-volt Arm
LFO	Light Fuel Oil
MD	Managing Director
MV	Medium voltage
MW	Megawatt
MWH	Megawatt Hour
NASA	Nawec staff association
NAWEC	National Water Electricity Company
NYS	New Yundum Substation
OIC	Organisation Islamic Conference
OMVG	Organisation pour la mise en valeur du fleuve Gambie
OYS	Old Yundum Substation
OUC	Onesait Utilities Customer
PAP	People Affected by Project
PIU	Project Implementation Unit
QTR	Quarters



SAL2	Salagi 2
SNT	Sukuta Nema Transformer
SV	Sukuta Village
SVT	Sukuta Village Transformer
PR	Public Relations
SGS	Sanyang
TNA	Training Needs assessment
T&D	Transmission and Distribution
VT	Voltage Transformer
WBU	Water and Sewerage Business Unit
WLG	Wellingara



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NAWEC SENIOR MANAGEMENT TEAM



Nani Juwara
Managing Director



Edrisa B Jarju
Deputy Managing Director



Bakary L M Kanteh
Group Director
Projects and Planning
Director



Patch Sowe
Chief Operating Officer
Electricity



Maimuna B. John
Group Director Human
Resources and
Administration



Tijan William
Group Director
Internal Audit



Ngoneh Jallow
Group Director
Customer Services



Mustapha Choi
Group Director
Corporate Services



Mariene Maria Roberts Saidy
Chief Operating
Officer Water



Group Finance
Director



BACKGROUND

The National Water and Electricity Company (NAWEC), a limited liability company, was formed in 1996. NAWEC supplies electricity, and water, and offers sewerage services in The Gambia. The Board of Directors oversees the institution's operations and assigns the Managing Director (MD), who is the head of NAWEC as the Managing Director, NAWEC has two (2) Business Units and Six (6) directorates that work closely to fulfill its core mandate. The two Business Units are the Electricity Business Unit and Water and Sewerage Business Unit, whereas the Six Directorates are: Group Corporate Services, Group Projects and Planning, Group Customer Services, Group Finance, Group Human Resources Development and Group Internal Audit.

To enhance good governance, transparency, accountability and oversight, NAWEC is overseen and supported by the Ministry of Petroleum and Energy, Ministry of Finance and Economic Affairs, Gambia Public Utility Regulatory Authority, National Assembly as well as Gambia Public Procurement Authority among others.

In compliance with regulations, NAWEC prepares annual audited accounts, and activity reports and submits them to the key stakeholders for their review and guidance. It is by those protocols that NAWEC prepares this report.

The report highlights the financial status of the institution as well as the activities undertaken by the various directorates during the year under review. It also catalogues the projects currently being implemented, the challenges faced during the implementation stage, and possible steps to mitigate them.

Charged with producing and supplying consumers with clean, affordable water, sewage and electricity, these services are delivered with justice and without discrimination. To carry out our mission, NAWEC purchases, owns, and operates the equipment, buildings, and infrastructure needed to provide water and electricity.

As a result, it can keep a highly qualified and committed workforce across its operations. We are dedicated to achieving high safety standards, and our environmental operations follow the best practices.

The company runs thermal power plants that mostly burn heavy fuel oil to produce electricity.



Corporate Mission Statement

To ensure safe, effective provision of affordable nationwide electricity, water, and sewerage services to satisfy consumer requirements, generate reasonable rates of return on investments and contribute to the socio-economic development of The Gambia.

Core Values

Motivated to become a well-reputed company, NAWEC staff are directed towards observing corporate Core Values that include:

- Customer focus and Service Orientation
- Honesty and Integrity
- Transparency and Accountability
- Commitment and Loyalty



MESSAGE FROM THE CHAIRMAN, BOARD OF DIRECTORS

As we reflect on the conclusion of another remarkable year at the National Water and Electricity Company (NAWEC), I am honored to address you as Chairman of the Board of Directors. The achievements and impact demonstrated by NAWEC throughout 2022 have been truly outstanding. It is with great pride that I present some of the key milestones in this year's annual report.

The past year has been transformative, marked by notable progress in our mission to provide sustainable and reliable electricity, water, and sewerage services to our customers.

The 2022 fiscal year was characterized by a mix of successes, opportunities, and challenges. Global economic pressures, including escalating fuel prices and supply chain disruptions, tested our resilience and adaptability. However, these challenges only strengthened our commitment to innovation, sustainability, and operational efficiency.

The Board remained unwavering in its strategic oversight, ensuring that NAWEC's activities aligned with national development priorities and global sustainability goals.

Throughout the year, NAWEC achieved significant progress in several key areas:

- **Infrastructure Expansion:** We continued to invest in electrifying rural communities, extending essential services to more Gambians than ever before.
- **Green Energy Transition:** The Board prioritized renewable energy initiatives, culminating in the successful implementation of solar energy installations in Jambur. These efforts underscore our alignment with The Gambia's climate commitments to international frameworks.
- **Financial Stability:** Despite economic challenges, NAWEC demonstrated prudent financial management, creating a strong foundation for sustainable growth.

As a Board, we remain steadfast in upholding the highest standards of governance, transparency, and accountability. During the year, we strengthened internal controls and ensured that our decision-making processes were inclusive, transparent, and focused on sustainability and long-term success.

Looking ahead, our focus will be on accelerating the transition to renewable energy to reduce dependence on fossil fuels. We are also committed to enhancing the reliability and efficiency



of our services through infrastructure modernization and deepening partnerships with stakeholders to unlock funding and technical expertise.

I would like to extend my deepest gratitude to my fellow Board members for their dedication, the management team for their visionary leadership, and NAWEC's employees for their unwavering commitment. I also express heartfelt appreciation to the Government of The Gambia, our development partners, and, most importantly, our customers for their trust and support.

Together, we will continue to build a future where every Gambian has access to reliable electricity, water, and sewerage services, powered by sustainable energy solutions.

Crispin Grey Johnson

Chairman, Board of Directors

National Water and Electricity Company (NAWEC)



MESSAGE FROM THE MANAGING DIRECTOR

It is with great pleasure and opportunity that I present the 2022 Annual Report of the National Water and Electricity Company (NAWEC). This report highlights our journey, accomplishments, and the challenges we faced in fulfilling our mandate to provide reliable water, electricity and sewerage services to our customers in The Gambia.

The year 2022 was marked by significant milestones that I am pleased to report. Among the key achievements are investments in critical infrastructure that enabled us to expand electricity access to under-served communities as part of efforts geared towards universal access to electricity. Furthermore, since green energy transition is key in combating and mitigating the effects of climate change and is also in line with broader national commitment to foster sustainable development practices, NAWEC took proactive measures in embracing renewable energy solutions. In this regard, we initiated the 23 MW Jambur Solar Project to provide clean energy and as a translation of our commitment to sustainability objectives. This project further reflects our dedication to reducing carbon emissions and enhancing energy security. Additionally, through modernization efforts and process optimization, we improved service delivery, reduced losses, and strengthened customer satisfaction during the period under review.

However, the year was not without challenges as we navigated through a volatile operational landscape, resulting from major global events such as covid 19 and the Russia/Ukraine conflict. Consequently, rising fuel costs due to global supply chain disruptions, economic recovery efforts as well as climate-related issues represent major challenges. Equally, endogenous factors such as high operational costs as a result of aging infrastructure, exchange rate shocks and the non-cost reflective tariff greatly tested our resilience.

Despite these challenges, NAWEC achieved remarkable strides in expanding our service coverage and improving system reliability through innovation, strategic partnerships, and the commitment of our workforce.

As we move forward, our strategic priorities are clear. We are committed to scaling up renewable energy initiatives to diversify our energy mix. In order to complement and maximize the generation capacity, we have plans to enhance the transmission and distribution



infrastructure, to improve service reliability and reduce system losses. Let me hasten to add that community engagement will be at the center of our operations to ensure our services meet the evolving needs of our customers.

Finally, I wish to extend my gratitude to the government of The Gambia, our development partners, our valued customers and most importantly, our employees, whose dedication, commitment and hard work remain the cornerstone of our success. To our customers and stakeholders, thank you for your trust and support as we continue this transformative journey.

Together, we are building a brighter and more sustainable future for The Gambia.



Managing Director

National Water and Electricity Company (NAWEC)



1.1 INCOME STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2022

	Notes	31-Dec-22 GMD'000	31-Dec-21 GMD'000
Income			
Revenue	8.2a	5,299,652	4,441,787
Other Operating Income	8.2b	170,211	56,325
Total Income		5,469,863	4,498,112
Cost of Sales			
Fuel and Lubricant Expenses	8.3a	(1,462,392)	(1,775,213)
Energy purchased from third parties	8.3b	(3,702,557)	(1,926,613)
Materials for Service Connections	8.3c	(168,140)	(151,206)
Other Direct Materials and Services	8.3d	(128,701)	(133,626)
External Transmission Expenses	8.3e	(44,119)	-
Total Cost of sales		(5,505,909)	(3,986,658)
Gross (loss)/profit		(36,046)	511,454
Other Operating Expense			
Employee Cost	8.4	(490,019)	(412,374)
Other Staff Cost	8.5	(86,045)	(113,450)
Other Staff Related Cost	8.6	(51,323)	(59,434)
Repairs and Maintenance Expenses	8.7	(106,369)	(53,422)
Administrative Expenses	8.8	(289,562)	(348,004)
Utility Cost	8.9	(138,733)	(110,761)
Total Other Operating expenses		(1,162,051)	(1,097,445)
Earnings before Interests, Tax, Depreciation and Amortization		(1,198,097)	(585,991)
Depreciation and Amortization	8.11	(664,769)	(373,240)
Impairment	8.20	(13,449)	-
Earnings before Interests and Tax		(1,876,315)	(959,230)
Interest Income		-	1,477
Interest Expense	8.10	(134,890)	(112,694)
Net Realized Foreign Exchange Loss		(256,533)	(10,639)
Net Unrealized Foreign Exchange Loss		(964,935)	(222,570)
Loss on disposal		-	-
Net Financial effect		(1,356,358)	(344,425)
Loss before Tax		(3,232,673)	(1,303,656)
Tax expense	8.1.10	(49,685)	-
Loss for the year		(3,282,358)	(1,303,656)
Tax expense	8.11	(49,685)	-
Profit/(loss) for the year		(3,227,529)	(1,303,656)



11. BALANCE SHEET FOR THE YEAR ENDED 31 DECEMBER 2022

		31-Dec-22 GMD'000	31-Dec-21 GMD'000
Assets			
Noncurrent assets			
Property, Plant and Equipment	8.11a	8,200,196	8,313,893
Intangible Assets	8.11b	477,358	-
Total Non-Current Assets		8,677,554	8,313,893
Current assets			
Inventories	8.12	530,202	602,725
Trade and other receivables	8.13	938,815	650,473
Cash and cash Equivalents	8.14	461,643	477,877
Total Current Assets		1,930,660	1,731,075
Total assets		10,608,214	10,044,968
Equity and liabilities			
Capital and reserves			
Share capital		2,714,357	2,714,357
Revaluation reserve		1,581,375	1,581,375
Retained Earnings		(6,353,299)	(3,258,771)
Total Equity		(2,057,567)	1,036,961
Non-Current Liabilities			
Long-term Borrowing	8.15	5,882,538	4,688,672
Deferred capital grants	8.16	1,340,915	901,535
Total Non-Current Liabilities		7,223,453	5,590,207
Current liabilities			
Short-term Borrowings	8.18	2,189,657	1,741,424
Trade and other payables	8.17	3,202,986	1,676,355
Tax Payable	8.19	49,685	-
Total Current Liabilities		5,442,328	3,417,779
Total Equity and Liabilities		10,608,214	10,044,968

These financial statements were approved by the Board of Directors on
 12 March 2023, and were signed on its behalf by:

..... Director

..... Director



2.0. ELECTRICITY BUSINESS UNIT

2.1. POWER GENERATION DIVISION

The 2022 Power Generation Department Annual Report highlights in detail the improvements made, and the challenges encountered as a department under the Electricity Business Unit throughout the year. The country's power situation has improved tremendously regarding availability and supply stability since the emergence of the OMVG. Long periods of blackouts and complete system failures have drastically reduced compared to previous years. This year witnessed the highest-ever recorded system peak load in the GBA at 80MW and the highest during the summer season at 90MW.

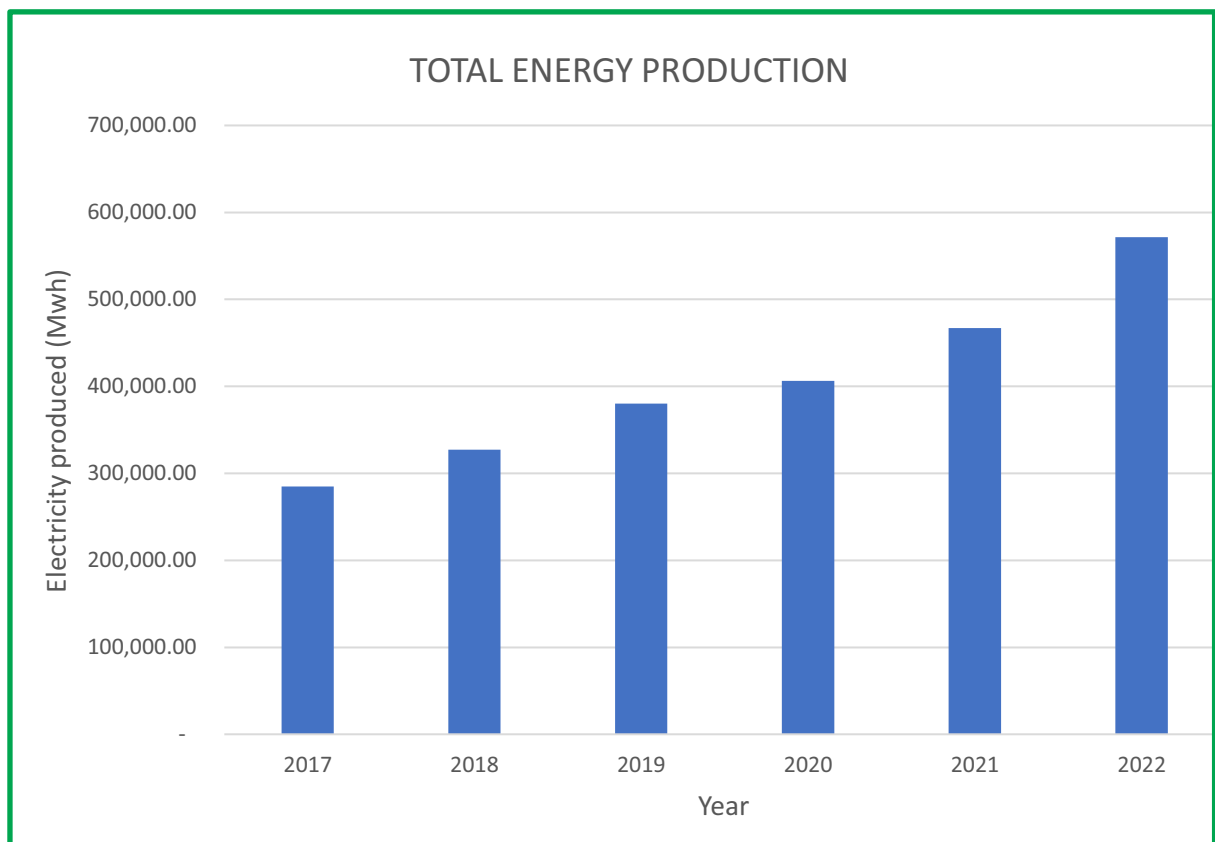


FIGURE 1 TOTAL ENERGY PRODUCED

Overall, year 2022 Electricity Production has increased significantly by **18.3%** mainly due to the OMVG interconnection of the Grid with a capacity of 30MW and the renewal of the KARPOWER PPA contract for another 2 year s. The general plant availability has improved to an average of **72%**, this was due to the completion of the Kotu G5 16,000hrs maintenance works, G7 rehabilitation works, and G8 Major overhaul works.

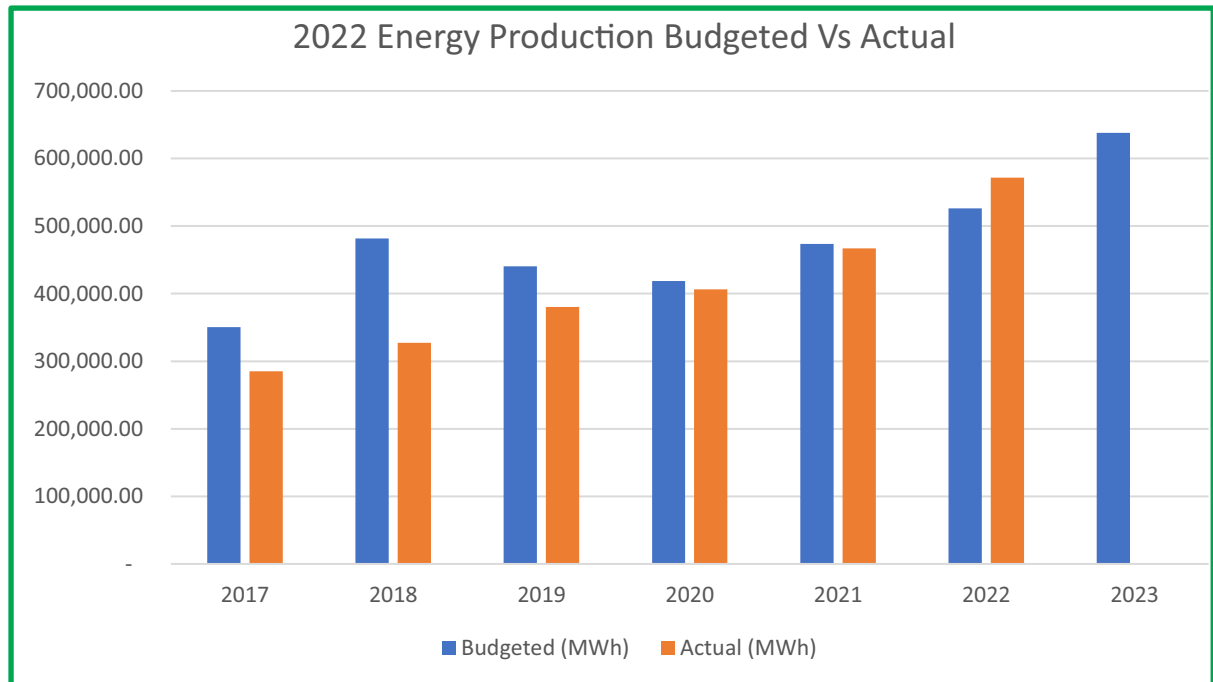
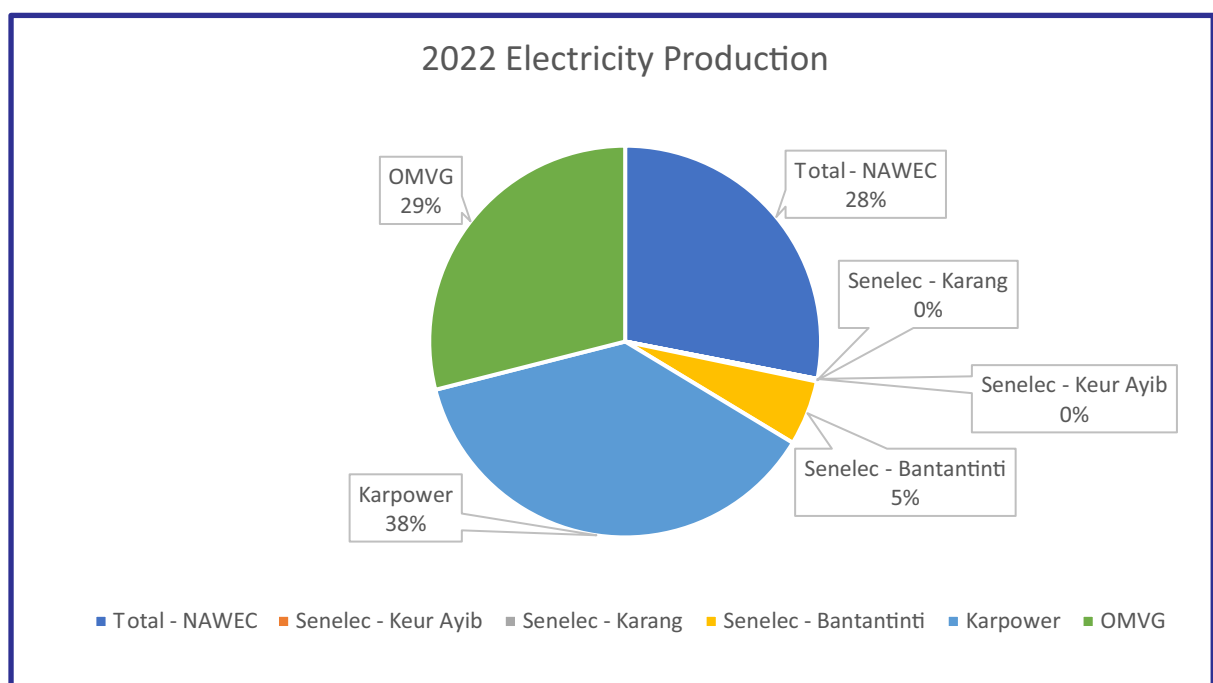


FIGURE 2 ENERGY PRODUCTION BUDGETED VS ACTUAL

However, NAWEC internal production has reduced immensely by **45.78%** with the advent of the interconnection of the Grid to OMVG. Brikama 1 Power Station together with both the Farafenni and Basse Power Stations in the provinces now operates in standby mode based on the least cost of electricity criteria allowing the most efficient engines to operate in sequential order.





2022 Total Composition Of Energy Produced

The total energy produced during 2022 is **571,627.54 MWh** as opposed to **467,103.30 MWh** in 2021. This resulted in a significant improvement in the availability and quality of power supply with lesser outages for most parts of the year. The main challenges to the desired quality of power supply were the low voltages and frequency fluctuations experienced in the network and at times affected the smooth operations of our generators.

2022 Monthly Production (MWh)

Month	NAWEC	SENELEC	OMVG	Karpower	Total
January	23,691.97	2,984.31	0	15,592.99	42,269.27
February	18,653.30	2,702.87	0	16,310.88	37,667.05
March	19,522.40	2,942.06	8360.866	18,494.59	49,319.92
April	11,551.51	3,485.19	12676.534	17,772.99	45,486.21
May	12,012.32	3,020.36	17292.805	14,619.87	46,945.36
June	11,050.13	2,727.55	17947.06	18,143.07	49,867.81
July	12,407.73	2,764.80	18411.41	18,084.95	51,668.89
August	10,043.38	2,304.85	18565.094	18,799.90	49,713.22
September	10,911.60	2,315.81	17061.179	18,001.45	48,290.04
October	11,205.47	2,645.61	19782.56	18,936.67	52,570.31
November	10,670.97	2,102.33	19289.871	18,915.99	50,979.17
December	8,632.80	2,007.85	16166.409	20,043.22	46,850.28
Total	160,353.58	32,003.60	165,553.79	213,716.57	571,627.54
Percentage	28.05%	5.60%	28.96%	37.39%	100.00%

TABLE 3 ELECTRICITY MONTH PRODUCTION

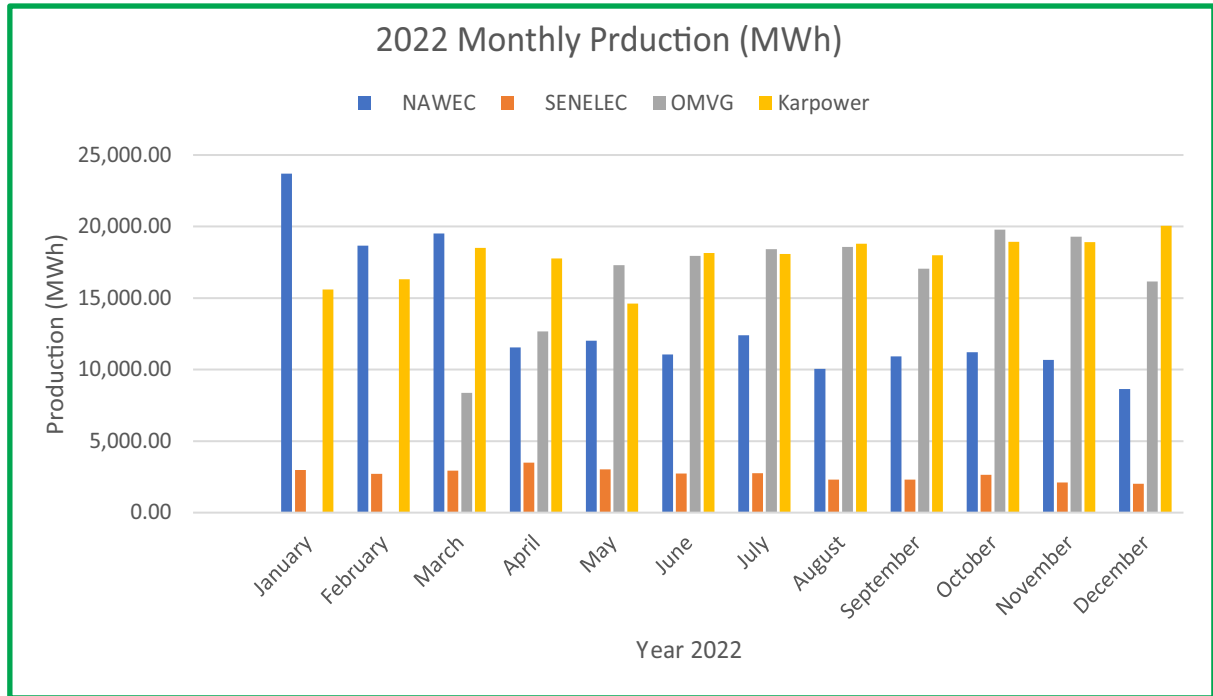


FIGURE 3 MONTHLY PRODUCTION

Kotu MWh and Oil

GEN 2022	Produced MWh	HFO (ltrs)	LFO (ltrs)	Lube Oil (ltrs)
Kotu	33,534.23	7,482,351.00	544,606.00	93,254.08
Brikama 1	17,628.28	4,286,906.89	414,226.90	56,027.60
Brikama 2	21,145.70	4,828,403.00	94,346.00	15,007.00
Brikama 3	88,036.80	19,104,341.90	235,770.00	23,140.00
TOTAL	160,345.01	35,702,002.79	1,288,948.90	187,428.68

TABLE 4 MW PRODUCED WITH LFO AND HFO CONSUMED

The general trend observed from the data collated from the quarterly reports indicates that the projected cost of production is on the rise. This is mainly because global oil prices remain relatively quite high for most of the first, second, and third quarters. The impact of the Covid 19 and the current Russian crisis also affected the global market prices of goods and services.



The aged engines in our fleet are also another contributing factor to the cost of production when compared to the more efficient engines such as Kotu G5, Wartsila, and MAN engines G1 and G2 in Brikama.

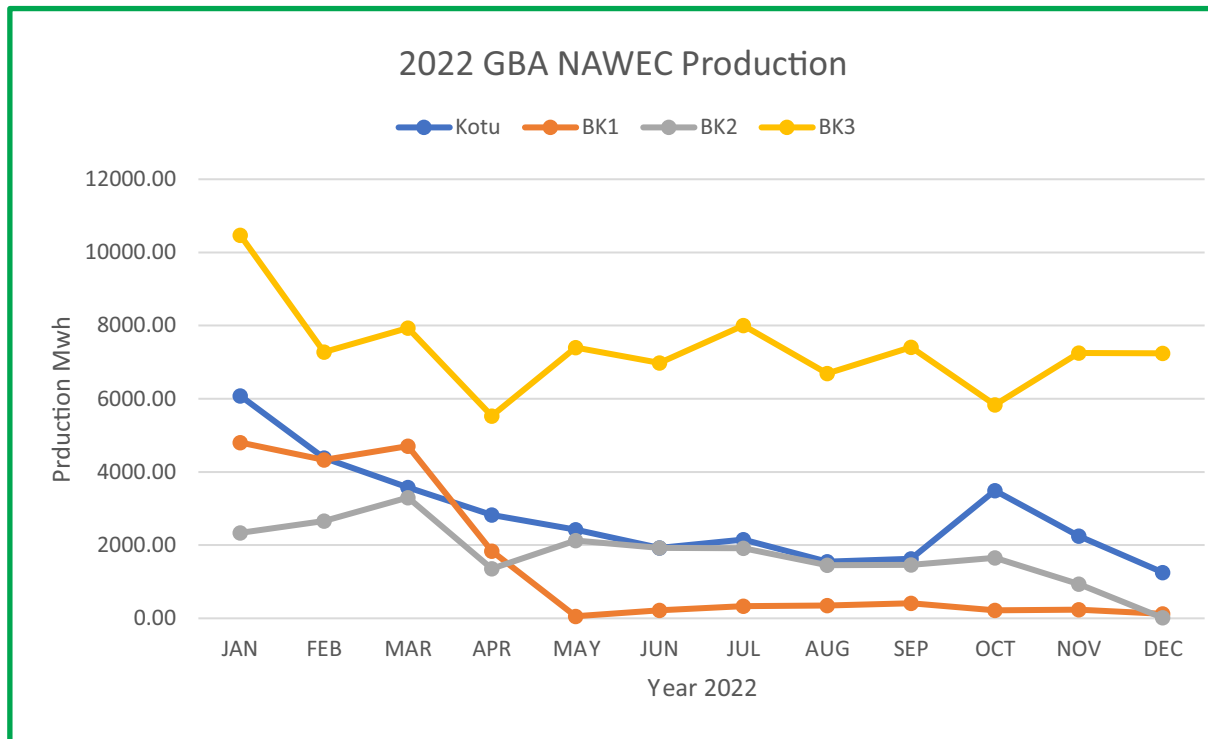


FIGURE 4 GBA ENERGY PRODUCED

As anticipated, the new and more efficient engines G1 and G2 of Brikama BKA3 show higher outstanding performance. A reduction in NAWEC production is reflected in the overall decrease in the consumption of HFO, LFO, Lube-oil and spare parts as compared to the year 2021. This is evident with the overall performance of the G1 and G2 engines in Brikama BKA3. They are by far the most efficient engines with Kotu G5 and the Wartsila engine.

Cost of Energy Produced

Power stations	Produced MWh	HFO (GMD)	LFO (GMD)	Lube Oil (GMD)	Spares (GMD)	Average Unit Cost (GMD/kWh)
Kotu	33,534	7,421,282	37,431,428	18,184,546	53,688,509	9.60
Brikama 1	17,628	130,778,315	26,327,865	10,925,382	3,394,358	13.06
Brikama 2	21,146	164,294,787	6,427,376	2,926,365	1,327,213	8.24
Brikama 3	88,037	660,576,505	16,602,298	4,512,300	766,256	7.82
TOTAL	160,345.01	963,070,889	86,788,966	36,548,593	59,176,336	9.68

TABLE 5 ENERGY COST



As noticed in the chart below, the average percentage of own consumption has increased from 3.5% in 2021 to 3.8% in 2022. This is the case because the total NAWEC production has significantly reduced.

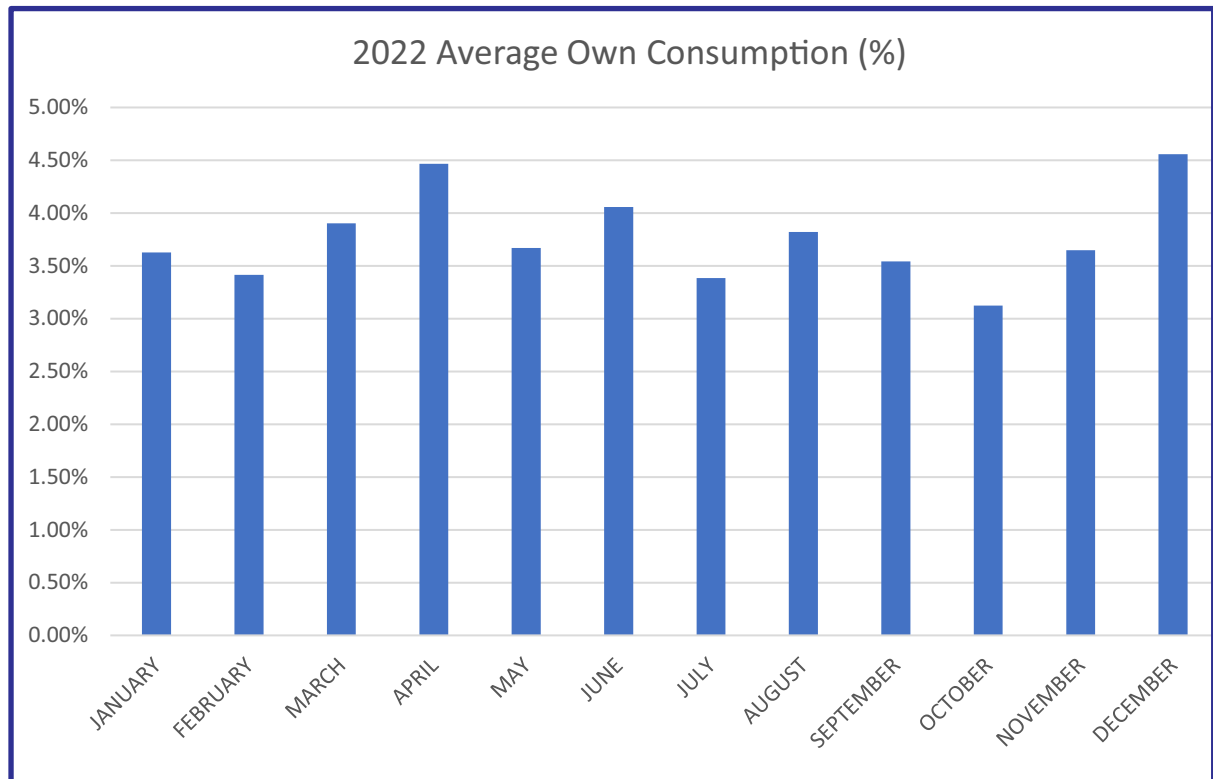


FIGURE 5 AVERAGE OWN CONSUMPTION

LFO consumption in BKA1 is high despite being on a Standby regime since the interconnection to the OMVG because of the lack of an efficient heating system or Auxiliary Boiler to heat up the HFO for possible interventions. However, an improvement in the cost of production is observed due to the recent optimal operations of the facility.

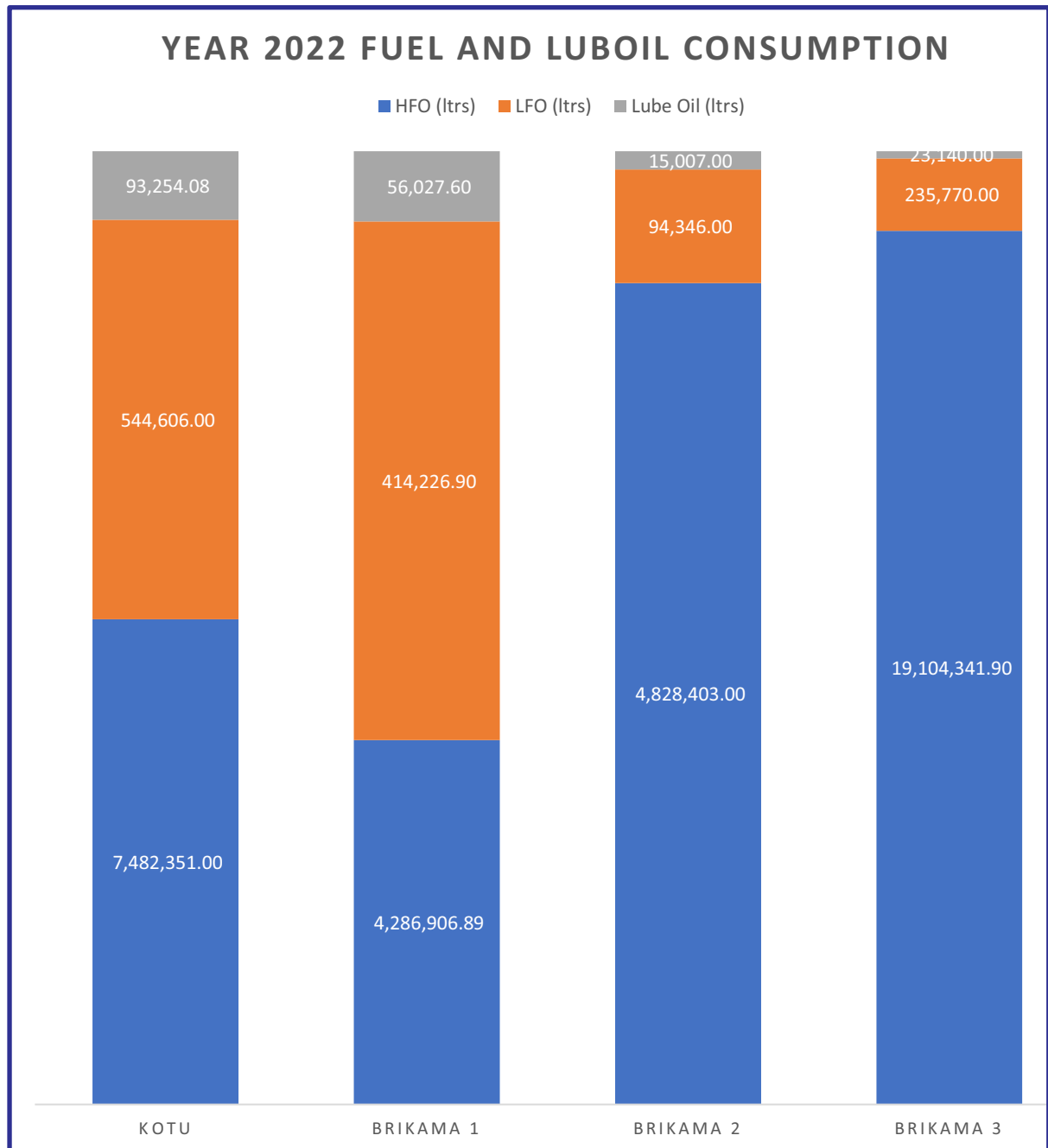


FIGURE 6 2022 FUEL AND OWN CONSUMPTION

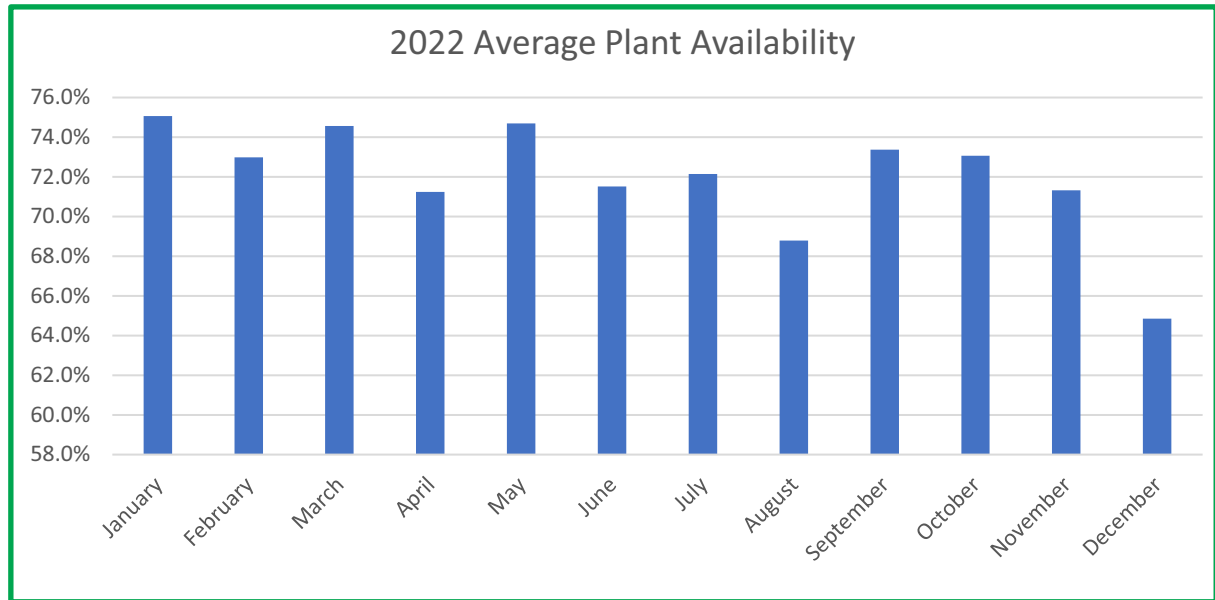
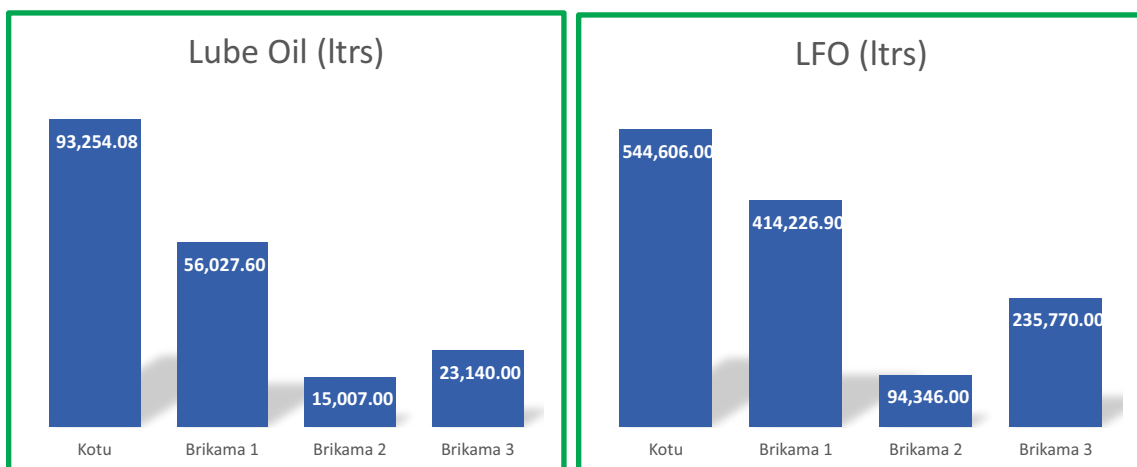


FIGURE 7 AVERAGE PLANT AVAILABILITY

OVERALL KARPOWER PRODUCED 37.39% OF THE TOTAL ENERGY IN 2022, WHEREAS NAWEC'S OWN PLANTS PRODUCED 28.05% DURING THE YEAR IN THE GBA AS SHOWN IN TABLE 6.

MONTH	NAWEC	SENELEC	OMVG	Karpower	Total
Percentage	28.05%	5.60%	28.96%	37.39%	100.00%

The production from NAWEC plants is as follows: Kotu Power Station (**KPS**) **20.91%**, Brikama I Power Station (**BPS I**) **11%**, Brikama II Power Station (**BPS II**) **13.19%** and Brikama III Power Station (**BPS III**) **54.9%** of the total NAWEC energy produced.



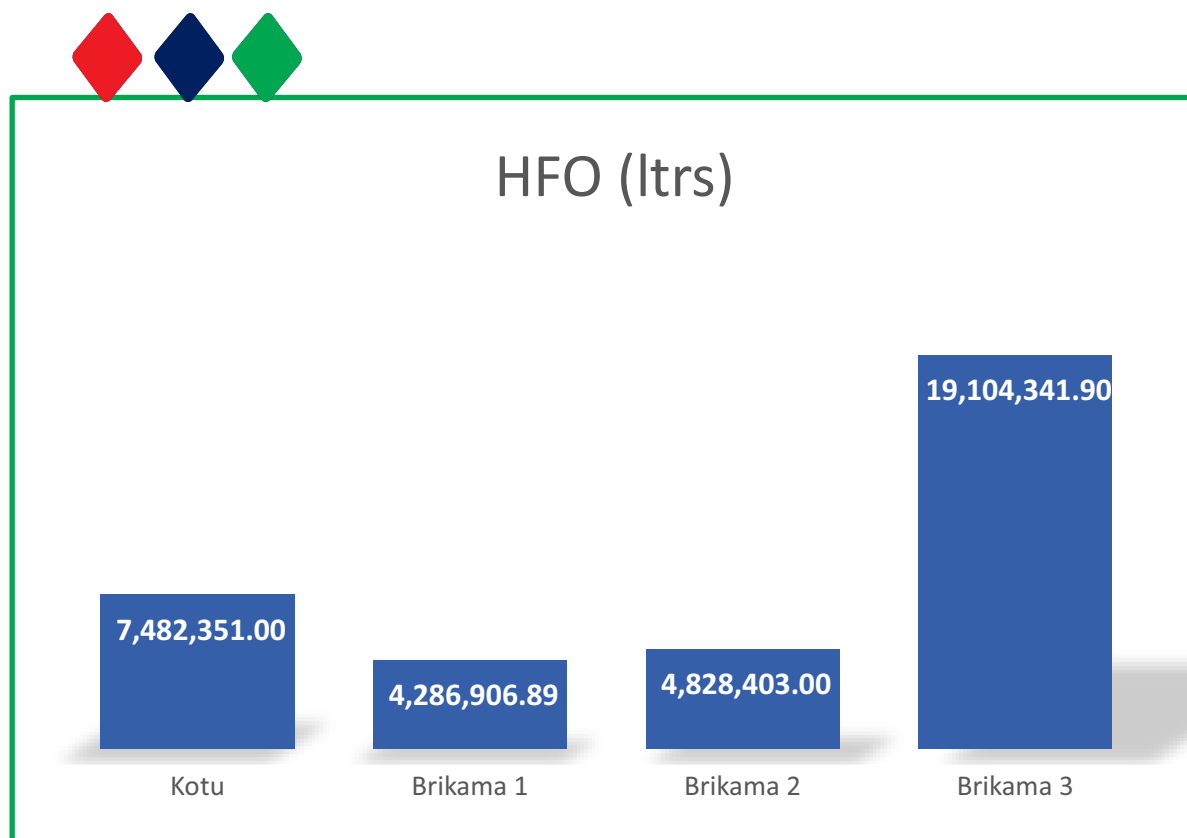


FIGURE 8 OIL CONSUMPTION

Overall, the general performance of G1 & G2 in BPS III is remarkable, and this is evident in the average lowest cost of production compared to the other fleet. This could be further improved by maintaining the average load factor at 80-90%

2.1.1 Kotu Power Station

The station comprises 4 powerhouses namely:

Kotu A; with three medium speed engines, G1, G3 and G4

Kotu B; with one 2-stroke slow-speed engine, G6

Kotu C; with one 2-stroke slow-speed engine, G5

Kotu D; with three medium speed engines, G7, G8 and G9

The table below gives the summaries of the DG sets at KPS and their status as of the Fourth Quarter 2022:



Gen No.	Installed Capacity (MW)	Available Capacity (MW)	Make	Engine Type	Fuel Type	Commissioning Date	Current Status
G1	3.0	0	Mirrrolless	K Major MK II	LFO	1981	Decommissioned
G3	3.4	0	Mirrrols	K Major MK III	HF O	1997	Decommissioned
G4	6.4	0	Deutz	BV 16M 640	HF O	2001	Not Operational
G5	12.2	11.1	Man B&W	7K60M C - S	HF O	2018	Operational
G6	6.5	0	Man B&W	8L42M C - S	HF O	1990	Not Operational
G7	6.4	5.5	Deutz	BV 16M 640	HF O	2001	Operational
G8	6.4	5.5	Deutz	BV 16M 640	HF O	2001/2017	Operational
G9	6.4	0	Deutz	BV 16M 640	HF O	2009	Decommissioned
TOTAL	53.7	33.1					

TABLE 7 STATUS OF DG SET IN KOTU



The Operational Statistics for the available DG sets at KPS for 2022 is noted below:

Generator No.	Hours Run (hrs)	Energy Produced (MWh)	LFO Consumption (ltrs)	HFO Consumption (ltrs)	OIL Consumption (ltrs)	% Energy Produced
G4	1,608.52	6,303.64	36,339.00	1,592,443.00	10,326.00	18%
G5	1,627.42	12,060.44	387,080.00	2,354,015.00	27,354.08	34%
G6	1,718.60	6,277.35	-	1,403,141.00	34,376.00	18%
G7	429.30	1,678.78	313,054.00	167,987.00	6,688.00	5%
G8	2,304.00	8,892.80	121,187.00	2,132,752.00	21,198.00	25%

TABLE 8 AVAILABLE DG SET IN KOTU

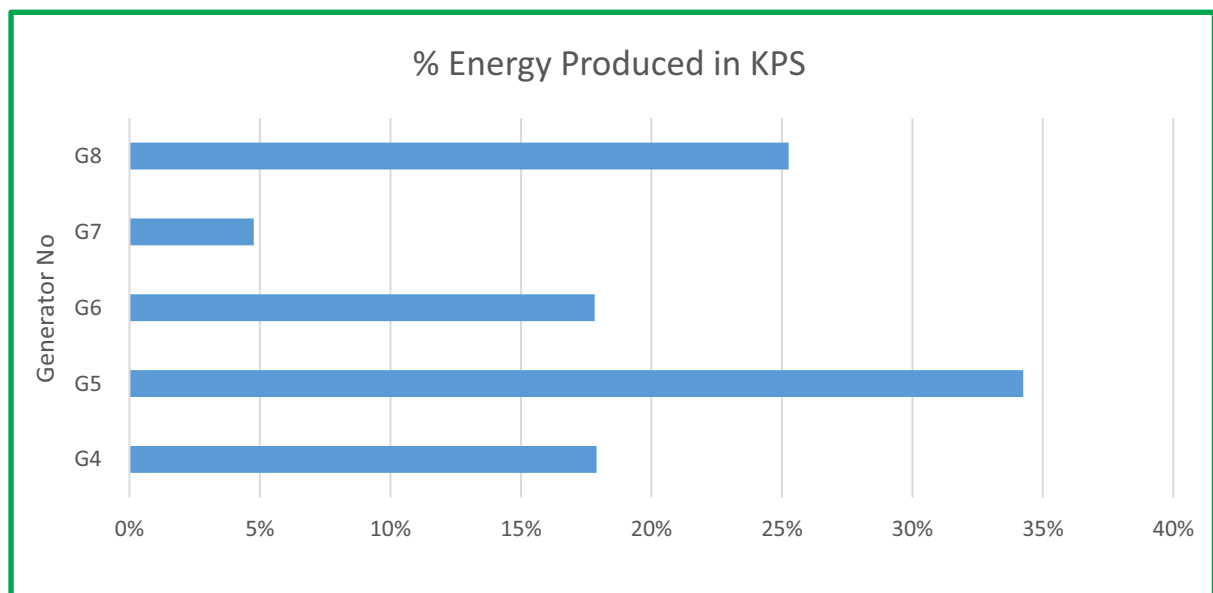


FIGURE 9 ENERGY PRODUCED IN KPS

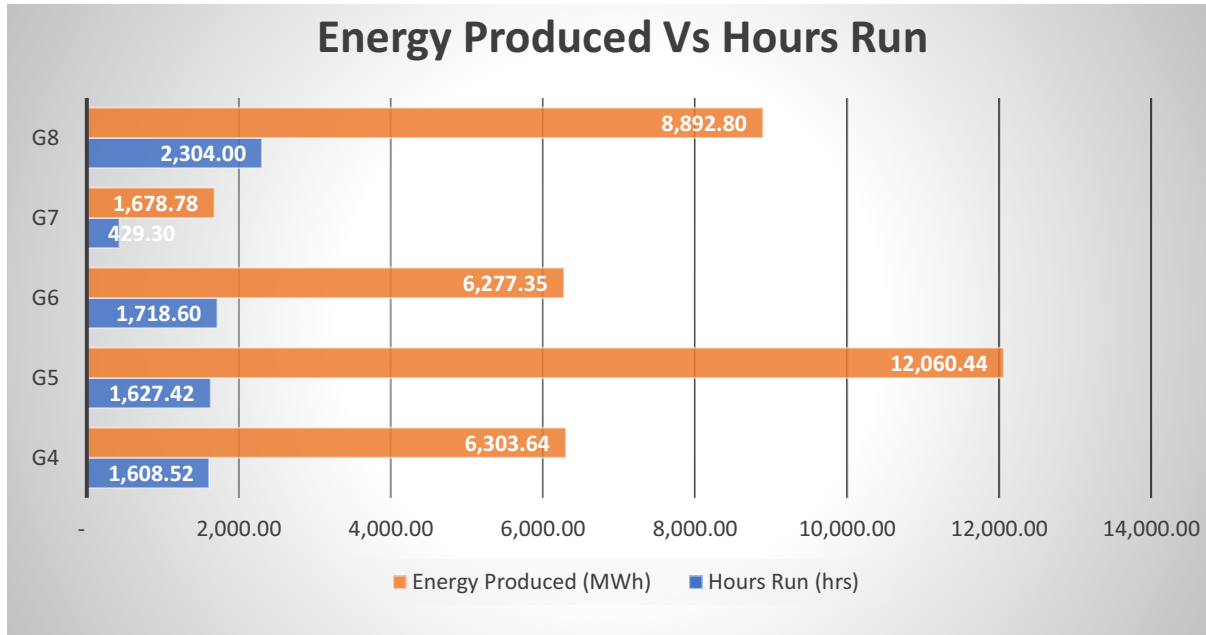


FIGURE 10 ENERGY PRODUCED VS HOURS RUN

2.1.2 Main Activities at KPS

G4 was overdue for 24000 hours of run maintenance since October 2021, but due to lack of maintenance spares the engine ran up to April where it developed first scuffing and later a crankshaft problem. This engine is currently grounded because the crankshaft pin has never been machined and as a result, the crankshaft pin has gone out of tolerance. G4's alternator has been transferred to G7.

G5 was struggling in the early months of the year, with a cam issue on cylinder number 6 [exhaust cam], and overdue for 16000hrs maintenance, which should have been done since November 2021, but due to lack of overhaul spares and the repaired cam, the engine was used up to 14th February 2022, when finally shut down because of the overdue maintenance, it ran for 2,000hrs on top of the designed schedule maintenance. The major overhaul maintenance started on the 13th of June 2022 and was recommissioned on the 24th of August 2022, with the Maintenance Report and Performance test results submitted. The engine had suffered an unfortunate fire incident before the first 2000hrs checks at the LV room, on the 17th of December 2022. Great efforts are made to rehabilitate the engine as quickly as possible.

G6 started at the beginning of the year, with a lot of unplanned maintenance [leakages, fuel and water, and even compression leakages].



2.1.3 Brikama I Power Station

Currently operating three (3) Deutz engines out of seven, G1, G3 and G7. This station as earlier mentioned is operated on a standby mode.

Gen No.	Installed Capacity (MW)	Available Capacity (MW)	Make	Engine Type	Fuel Type	Commissioning Date	Current Status
G1	6.4	5.5	Deutz	BV 16M 640	LFO	2006	Operational
G2	6.4	0	Deutz	BV 16M 640	HFO	2006	Not Operational
G3	6.4	5.5	Deutz	BV 16M 640	HFO	2006	Operational
G4	6.4	0	Deutz	BV 16M 640	HFO	2006	Not Operational
G5	6.4	0	Deutz	BV 16M 640	HFO	2013	Not Operational
G6	6.4	0	Deutz	BV 16M 640	HFO	2013	Not Operational
G7	6.4	5.5	Deutz	BV 16M 640	HFO	2018	Operational
TOTAL	44.8	16.5					

TABLE 9 OPERATIONAL STATUS



The Operational Statistics for the available DG sets at BPS for 2022 is noted below:

Generator No.	Hours Run (hrs)	Energy Produced (MWh)	LFO Consumption (ltrs)	HFO Consumption (ltrs)	OIL Consumption (ltrs)	% Energy Produced
G1	1,969.47	7,628.81	156,420.00	1,791,339.59	21,345.60	43%
G3	1,264.26	4,495.55	154,662.00	1,119,600.80	12,340.10	26%
G7	1,351.20	5,503.92	103,144.90	1,375,966.50	22,341.90	31%

TABLE 10 AVAILABLE DG SET IN BRIKAMA

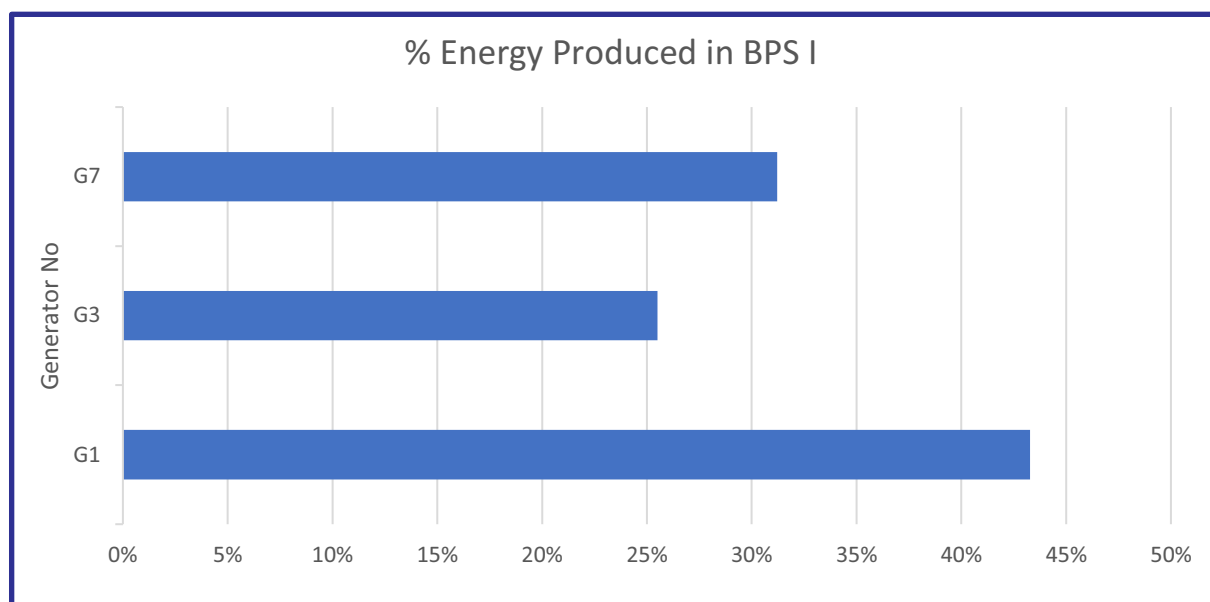


FIGURE 11 % ENERGY PRODUCED IN BPS I

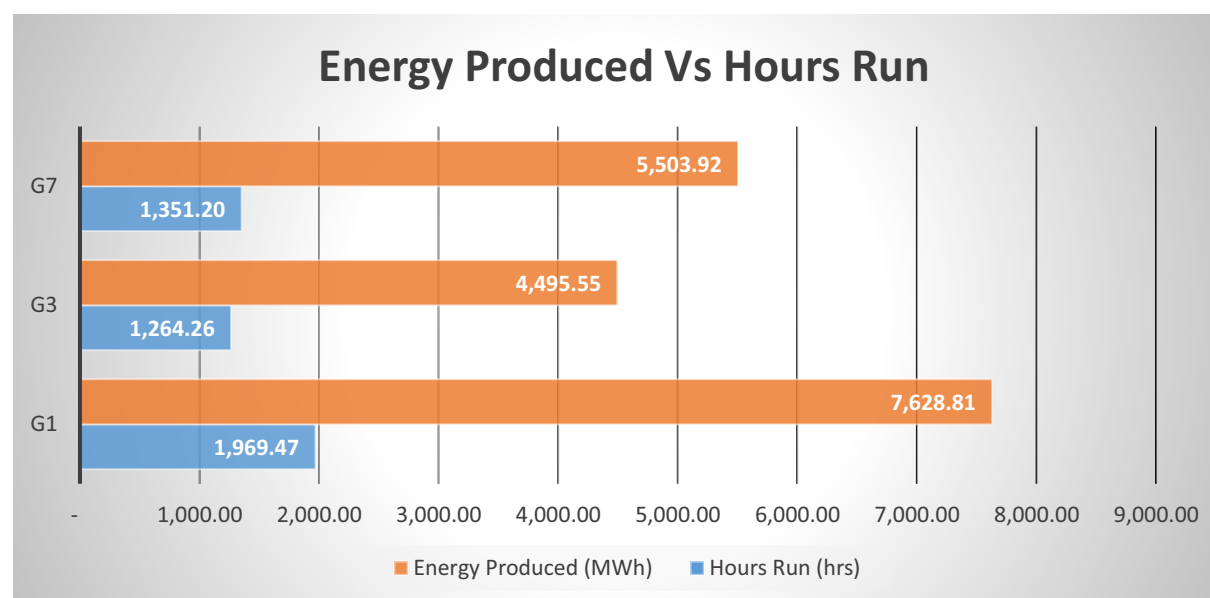


FIGURE 12 ENERGY PRODUCED VS HOURS RUN

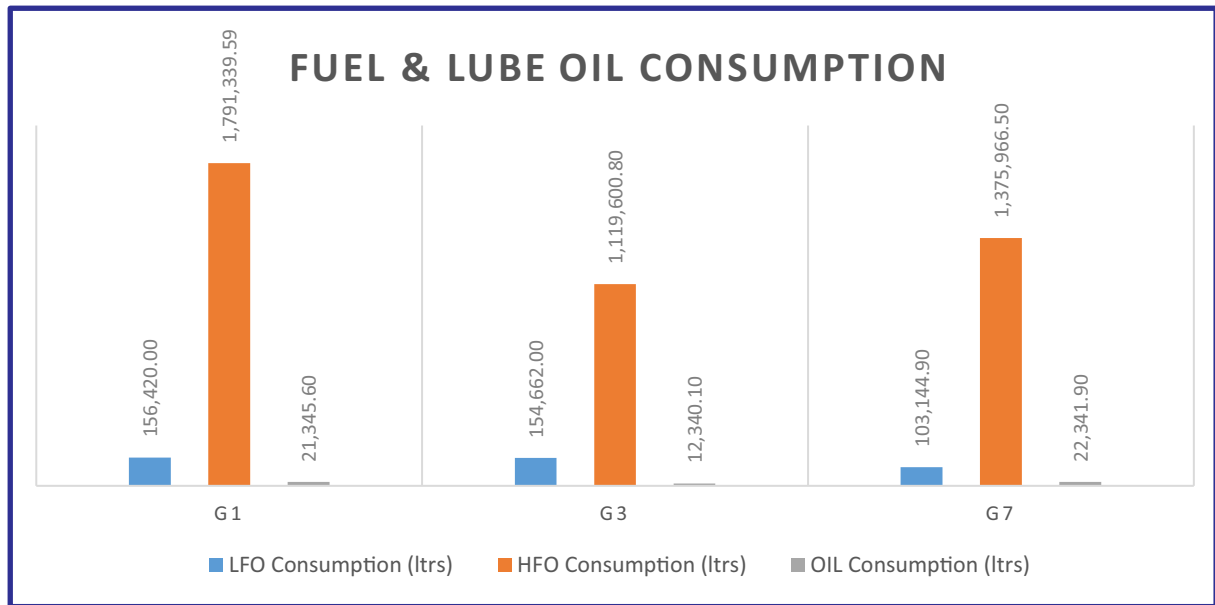


FIGURE 13 OIL CONSUMPTION

2.1.3 Main Activities at BPS I

G1 in February 2022 was due for its 3000hrs routine maintenance but was not conducted due to lack of necessary spare parts. This was because of the late interconnection with the OMVG which started in April as opposed to the approved maintenance plan that assumed the start of OMVG in January 2023. Thus, as a result, by the end of December 2022 it has covered **1969hrs** compared to budgeted **416hrs** for the year 2022.

At 3000hrs **G3** was due for maintenance. Lack of requested spare parts not provided, the engine was on to next routine maintenance at 6000hrs. Apart of the spare part not secured the inter-connection with the OMVG was also delay. This triggers the engine to be functional until OMVG started in April 2022. As a result, by the end of the year it has covered **1264hrs** compared to budgeted **432hrs** for the year 2022. Nonetheless preventive maintenance and intervention were made to keep the engine in safe operational order.

G7 6000hrs routine maintenance was carried out in February 2022 using the running spare parts while waiting for the order placed for G7 as a replacement of the station running spare parts. With this request of spares, only partial was delivered. We are yet to received the remaining spare parts. Faced with the same situation as G1 and G3, by the end of year G7 covered **1351hrs** compared to budgeted **416hrs** for the year 2022.



2.1.4 Brikama II Power Station

This is a single engine station housing the Wartsila-produced W20V32 engine

Gen No.	Installed Capacity (MW)	Available Capacity (MW)	Make	Engine Type	Fuel Type	Commissioning Date	Current Status
G1	8.9	8.5	Wartsila	W20V32	HFO	2011/2018	Operational
TOTAL	8.9	8.5					

TABLE 11 INSTALL CAPACITY IN BRIKAMA II

The Operational Statistics for each of the DG set at BPS II for 2022 is noted below:

Generator No.	Hours Run (hrs)	Energy Produced (MWh)	LFO Consumption (ltrs)	HFO Consumption (ltrs)	OIL Consumption (ltrs)	% Energy Produced
G1	3,226	21,145.70	94,346	4,828,403	15,007.00	-

TABLE 12 OPERATIONAL STATUS IN BRIKAMA II

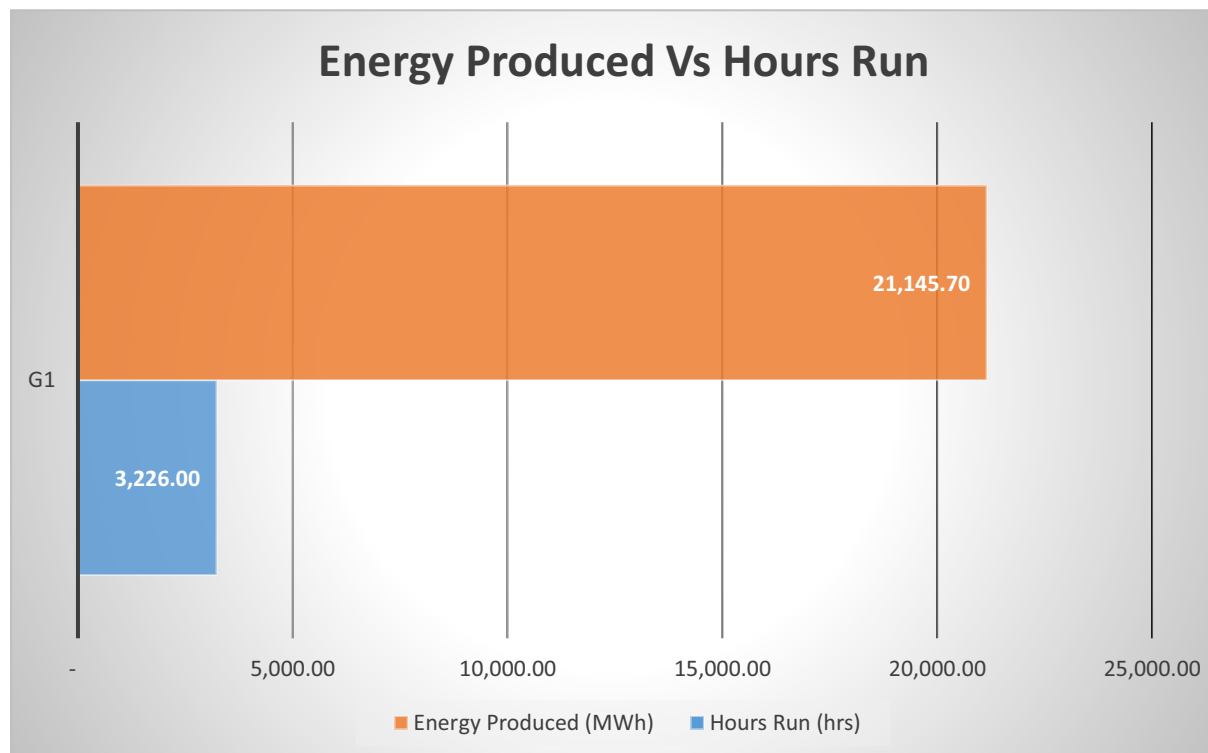


FIGURE 14 ENERGY PRODUCED VS HOURS RUN IN BPS II

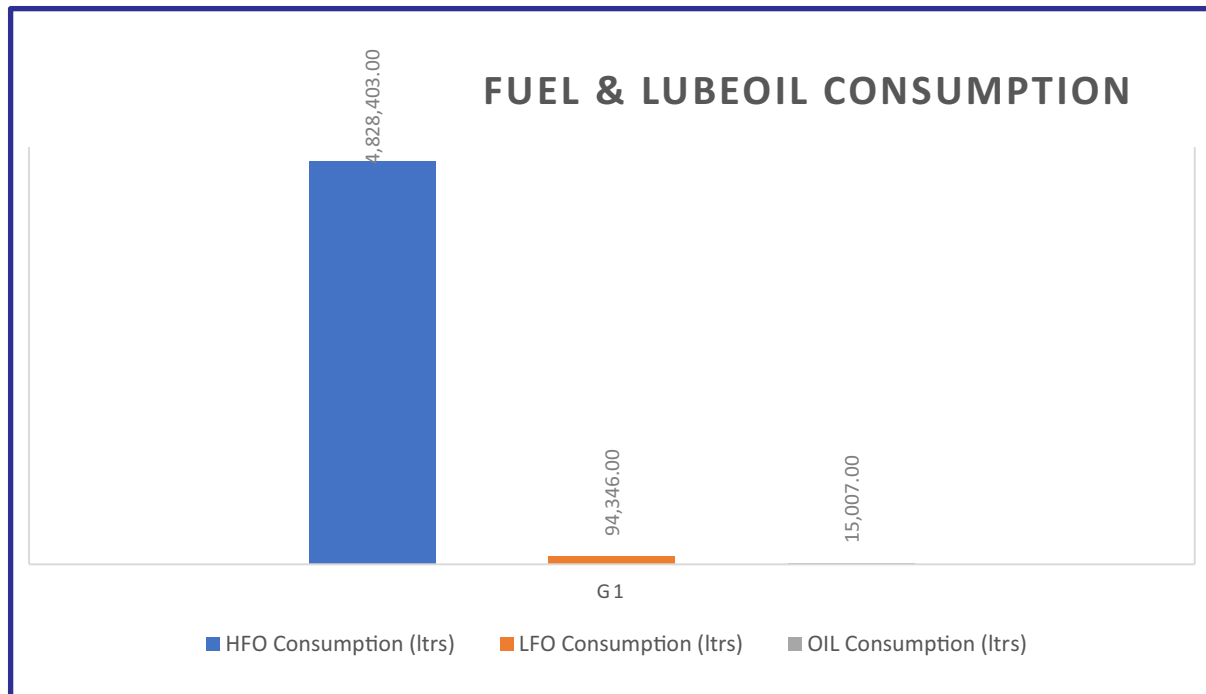


FIGURE 15 OIL CONSUMPTION BPS II

2.1.5 Main Activities at BPS II

The Wartsila engine (G1) was operational for most of the year 2022. At 19,000 hours maintenance was performed successfully. The air intake filter sprockets broke resulting in the collapse of the curtains of the filter element. All efforts were made to repair or modify the broken sprocket but to no avail. The charge air filter was finally included in the 20,000-hour maintenance spare parts of the engine. The operation of the engine was also curtailed because of the broken filter. The 20,000 hours of maintenance spare parts finally arrived at the end of the fourth quarter. The maintenance was started on the 13th of December and was supposed to take 3 weeks. This, however, is still pending due to the yet-to-be-concluded clearing of the air intake filter from the ports.

The engine entered 2022 with an operating hour of 27,487. When the load demand is high, the engine is usually operated in parallel with the Karpower ship and normally shuts down when there is a low system load.

In the first quarter of 2022, the engine operated in parallel with the Karpower engine until the advent of the OMVG Senelec power purchase agreement. The operating pattern changed in April from baseload to mainly peak load operation or as a back-in emergency. The operating patterns continue through the third quarter.



2.1.6 Brikama III Power Station

The power station comprises two MAN engines G1 and G2 namely: It was known formally as the Brikama II Expansion Project (BPEP II) with the commissioning and handing over of the power station completed in October 2020.

Gen No.	Installed Capacity (MW)	Available Capacity (MW)	Make	Engine Type	Fuel Type	Commissioning Date	Current Status
G1	9.4	9.2	MAN	9L51/60	HFO	2020	Operational
G2	9.4	9.2	MAN	9L51/60	HFO	2020	Operational
TOTAL	18.8	18.4					

TABLE 13 AVAILABLE STATUS OF BRIKAMA III

THE OPERATIONAL STATISTICS FOR EACH OF THE DG SET AT BPS III FOR 2022 IS NOTED BELOW:

Generator No.	Hours Run (hrs)	Energy Produced (MWh)	LFO Consumption (ltrs)	HFO Consumption (ltrs)	OIL Consumption (ltrs)	% Energy Produced
G1	5,418	41,026.20	151,697	9,066,214.75	17,440.00	47%
G2	6,091	47,010.60	84,073	10,038,127.14	5,700.00	53%

TABLE 14 OPERATIONAL STATUS OF BRIKAMA III

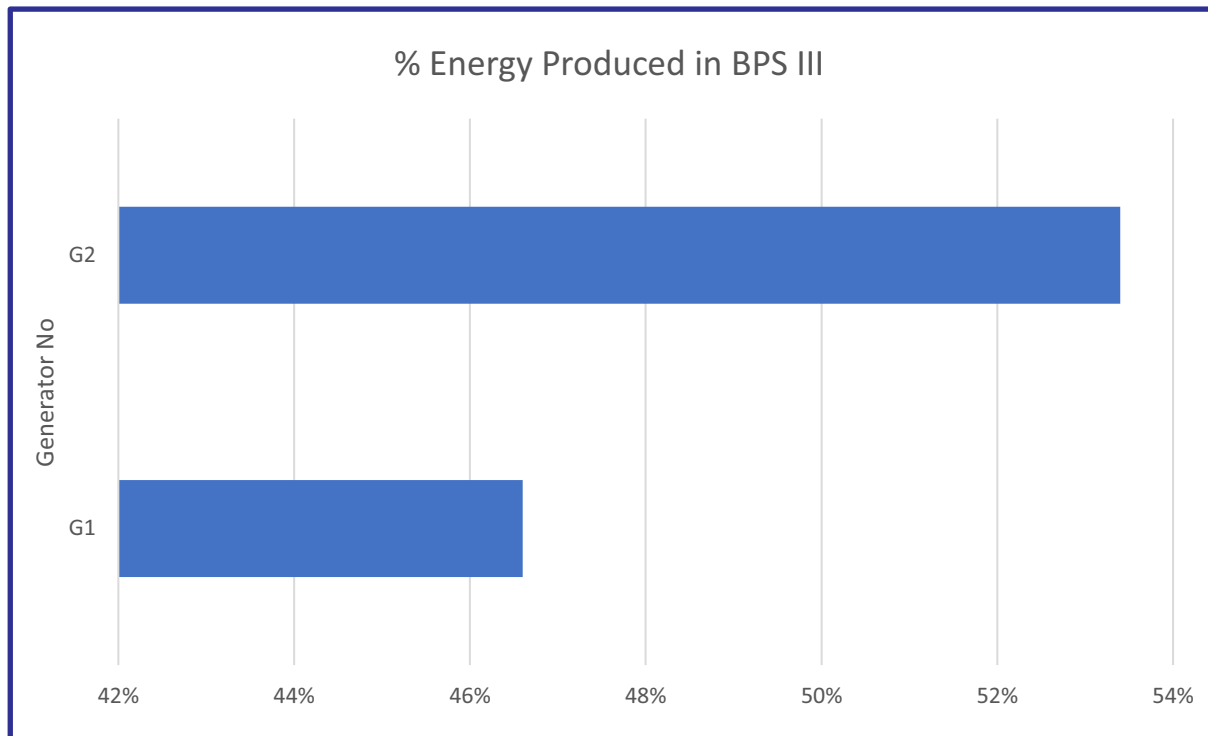


FIGURE 16 % OF ENERGY PRODUCED IN BPS III

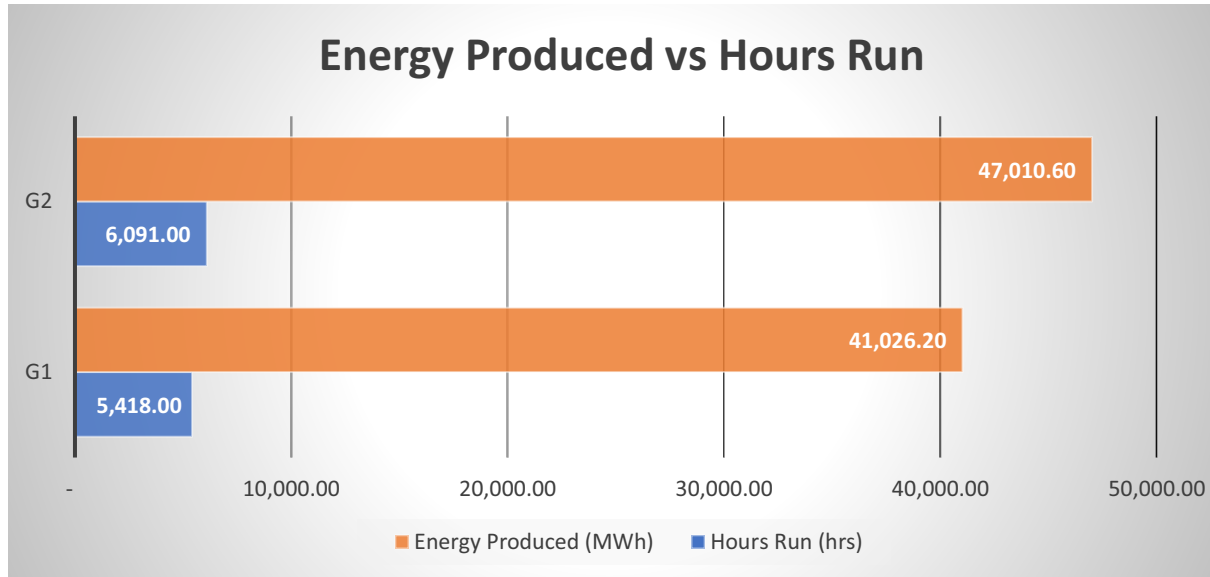


FIGURE 17 ENERGY PRODUCED VS HOURS RUN BPS III

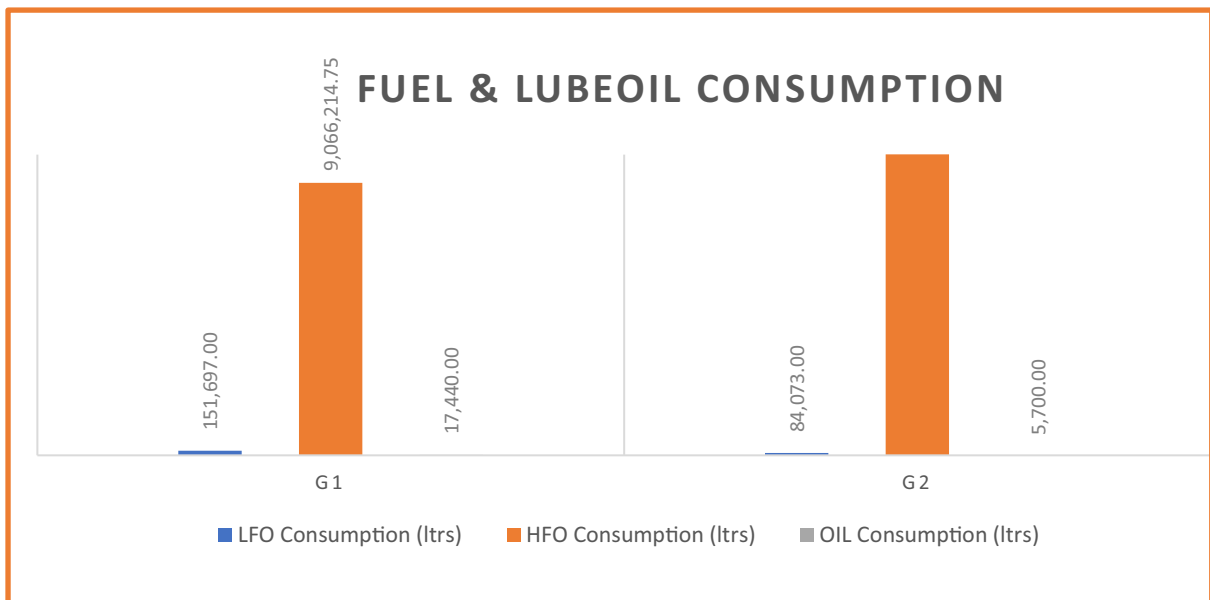


FIGURE 18 OIL CONSUMPTION IN BPS III

2.1.7 Main Activities at BPS III

G1 in the last quarter of 2021 was quite a challenge with fuel-related problems. Gradually the situation improved with the intervention of a service engineer and was operational for most of 2023. Occasionally with the advent of OMVG, the engine was intermittently swapped with G2 for normal operations as Karpower and OMVG were predominantly the base load engines. G1 was due for 12000hrs maintenance but due to late delivery of spares, it was eventually done and completed in January 2023.

G3, a similar situation to G1 faced serious fuel-related problems during the last quarter of 2022 but resolved as we approached the start of 2023. Operational for most of the year, however,



went down due to a problem with the engine controller sometime in June/ July. The 12000hrs maintenance was just recently concluded in January 2023 when the engine just completed its 12000 running hours.

Special Services Unit

The Special Service Unit is a unit within the Generation Department tasked to maintain and operate a key small-scale and medium-scale fleet of generators that were installed at key government departments.

Currently under the portfolio of the unit are.

1. **Statehouse, the residence of the President**, a Genset of capacity 2275KV A,
2. **Edward Francis Small Teaching Hospital**, a Genset of capacity 1200KVA,
3. **Vice President residences**, a Genset of capacity 395KV A,
4. **Mankamang Kunda, Private residence of the President**, a Genset of capacity 550KV A.
5. **Statehouse mobile Gensets** of capacities 125KVA, 300KVA, and 250KVA respectively.
6. Other Government Ministries and Public hospitals etc

No major overhauls were recorded in 2022, but a series of corrective maintenance interventions were conducted within.

GERMP SOLAR PROJECT

23MWp Solar Photovoltaic Plant- Jambur: This is the first of its kind to be introduced to the NAWEC's generation fleet. This project is for the design, Supply, Installation, Operation, and Maintenance, of a Solar PV Plant with a Battery Energy Storage System. Project Component 1 is one of the projects sponsored under the GERMP Project and co-financed by the World Bank and European Investment Bank.

This component is geared towards the goal of providing additional reliable, affordable, and sustainable generation capacity to the population of the Greater Banjul Area. It will involve the Construction of a 20 MWp Solar Photovoltaic Plant in Jambur, including an 8 MWh Battery Energy Storage System, plus 3 years of Operations & Maintenance. The project duration is currently in progress with construction works to be completed in November 2023.



Challenges To The Department:

As a result of the advent of the OMVG, it could be noticed that most of the engines are on standby mode. The most efficient engines are usually operated alongside Karpower and OMVG. Occasionally, our other fleets on reserve are required to come on board in emergencies. These resulted in high LFO consumptions due to poor optimal operations in switching in and out of these standby engines. BPS II, the Wartsila engine, has also been affected as it is generally underutilized with an average daily operation of seven (7) hours. Although the power station has an auxiliary boiler installed this mode of operation has an overall significant effect on the energy cost production. With the current project of extending the 225kV line to Jabang, the situation could greatly improve and allow both BPS II and III to operate as baseloads.

Another major environmental challenges that generation is facing especially Brikama power stations are: Increase the rate of wears and tears of the moving parts of the engines.

Exposing our staffs to health respiratory risk and contaminating our fuel, oil and blockage of the air intake flitters. All these are due to the TIGER cement factory. located to the power station.

Regular training programs or refreshment training are required for our staff on the job to better improve their productivity. Capacity building in staff has increased but nonetheless, there's still great work to further improve on.

Special or expert training is also needed for maintaining and servicing our most valued and costly equipment namely turbochargers, governors, separators, switch gears, re-coiling of motors, coils, etc.

Internet Communication is still an overall challenge now more than ever because of the migration to the IMS. Most of our processes must be done online with access to limited laptops and computers. This is hindering our efficiency as a utility.

Procurement of spare parts and equipment has greatly improved, however final delivery or logistics in ensuring that we receive the procured parts is still unresolved. Most times, our spares are delayed for long periods at the ports of entry namely the Banjul Sea port and airport.

Capital maintenance is also required in some of our facilities with buildings, equipment eg punctured cooling tables, leaking steam pipes, etc.

Management and curtailment of the sludge overflows most especially during the heavy rains.



Improvement in the above-mentioned areas of concern will yield specific desired results that can be measured through our key performance indicators. Most of the critical challenges we had over the years have been resolved but with greater dialogue and cooperation from the sister departments and with the continued support and commitment of Management, we hope to improve further on the gained achievements:

2.2. Transmission And Distribution

The Transmission and Distribution Department entered the year 2022 with great commitment and dedication to building and improving on the gains registered during the previous year. The department's aim was for greater system stability and enhanced operations. To achieve these, key areas within the network were identified for intervention and scheduled for implementation. However, our planned activities were negatively impacted due to the untimely availability of materials, equipment and mobility constraints. The following were the achievements registered during the year under review.

1. Loss Reduction

As part of our drive to provide quality electricity supply and mitigate our technical losses, the department continued to concentrate its activities in this area. Great progress was registered in the following sub-areas:

- I. Creation of New Secondary Substation: During the year under review, the following off-loadings were done: Off-loading of BB3, OY2 and NYS to BB4; Offloading of BS3 and SAL2 to BS4; Off-loading of SV3 and SNT to SV4; Off-loading of FGP, NYS and OYP to FGP2
- II. Load Balancing: The department continued to have a dedicated load balancing team that endeavour to balance substations with serious load imbalances. This has continued to impact positively by providing greater system stability, curbing losses emanating from low voltage and avoiding outages due to fuse blow and other network related issues.
- III. System Voltage Improvement: The division also embarked on the adjustment of the transformer tap positions of most substations, retightening of jumpers and replacement of corroded line taps within the network. These were geared for enhanced system voltage flow.

2. Low Voltage (LV) Network Rehabilitation and Re-conductoring:



The Substations identified for replacement of defective wooden poles were (BSS, BH9, BSB 2, Brufut 1 & 2, Tanji and Brikama Misera). Most of the identified defective wooden poles couldn't be replaced due to inadequate material resources and other logistical challenges. LV rehabilitation and re-conductoring was done in key areas within the GBA and WCR.

3. System Profiling:

The department embarked on an entire system profiling. The data collection of all the secondary substations peak load profile was an important exercise as key network data information such as substation transformer load capacity, circuits' loadings and phase imbalances were established. Due to vehicle constraint, only about 50% of the secondary substation data was collected. The exercise revealed key areas that needed urgent intervention, such as the need to upgrade the overloaded transformer substations of SVT, PN11, AMT, SFF, WLG etc and earthing improvement on some of the substations. It also revealed that some of these overloaded transformers like WLG, AV2, etc are without circuit breakers.

4. Network Reconfiguration:

Following the commissioning of the new Brikama OMVG and Brikama Dispatch Center which resulted in the centralization a reconfiguration of the 33kV network, these were geared for enhanced system operations and stability. The division also embarked on its normal annual system control, maintenance, and cleaning exercise of the entire infrastructure. Most of the primary stations, 33kV and 11kV lines were shut down to carry out the required maintenance. These activities normally require outages and in some instances the shutdown of some of the power plants. The activities normally embarked upon to improve system stability and reduce associated network energy losses are as follows:

- The inspection, cleaning and replacement of corrosive bolts and defective glass insulators.
- The inspection and cleaning of the 33kV and 11KV cubicles as shown on Fig 1.
- The cleaning and physical inspections of the U/G cable terminations, CTs, VTs, Capacitor Banks and DC system as shown in Fig 2
- The recycling of the Power Transformers oil
- MV/LV trimming Fig 1: Inspection and Cleaning of 33 / 11 KV cubicles .



During the year under review, the division also engaged on the following activities and its comparison to the previous years highlighted.

➤ The MV/LV network within the GBA and WCR were extended and rehabilitated:

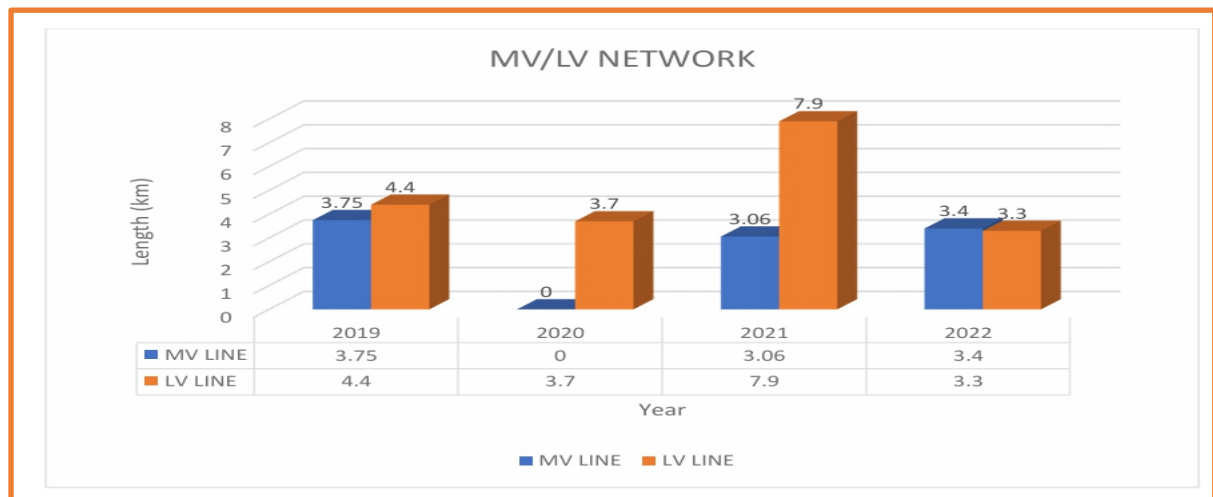


FIGURE 19 MV/ LV NETWORK

As seen, there were MV line extensions due to the network expansion/offloading of the substations which slightly increased by 11.1%. This is due to the expansion/off-loading of the substations to the existing network. The LV line extension can be seen decreasing by 58% compared to the previous year. The department also concentrated on rehabilitation and maintenance of the LV network.



➤ The manufactured concrete poles for replacements and extensions as compared to previous years:

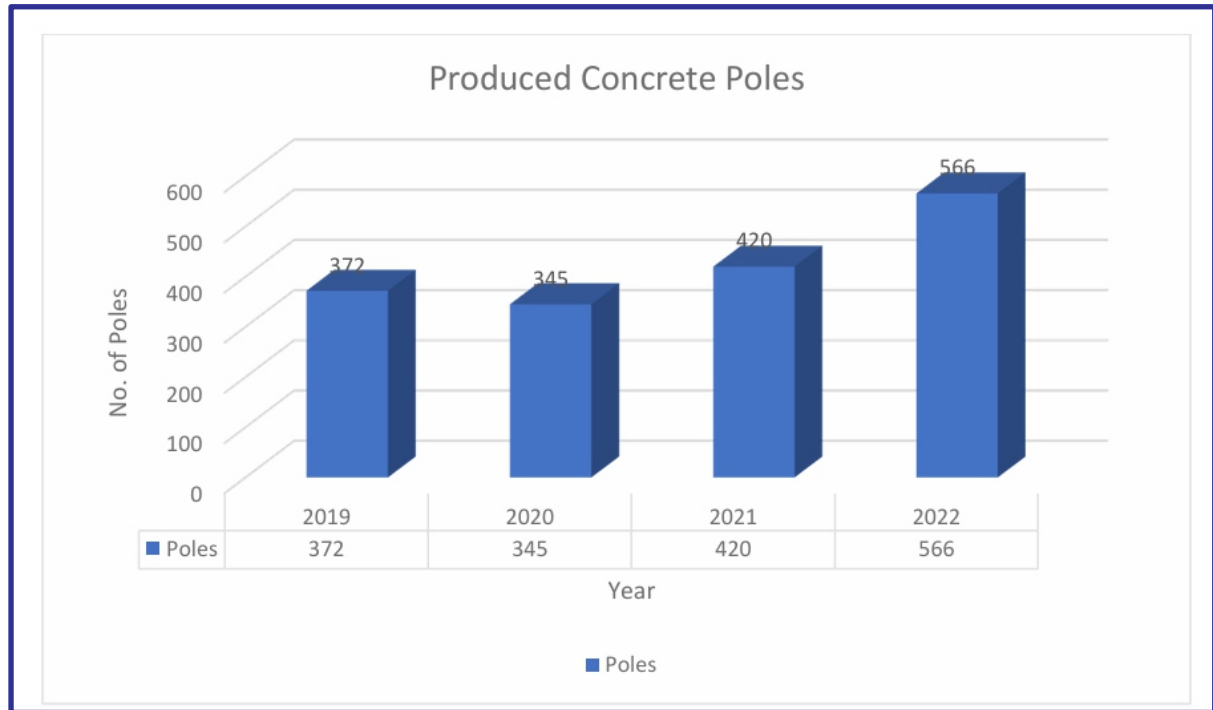


FIGURE 20 POLES PRODUCED

The pole production increased by 35% compared to the previous year, this was due to the availability of materials.

➤ The number of installed meters for new customers compared to the previous years:

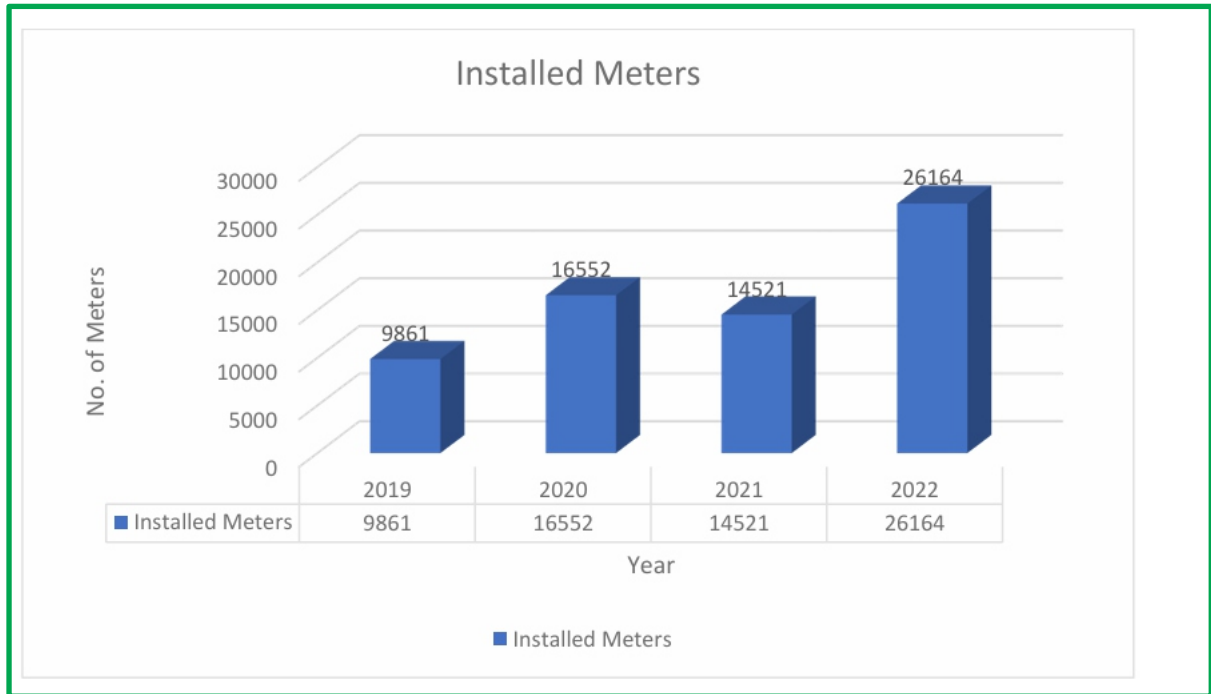


FIGURE 21 iNSTALL METERS

The installation of new service connections has increased by 45% compared to the previous year. This was due to the availability of meters and service connection materials from projects like the GERMP, which supplied 30,000 single-phase meters.

The graph below shows the outages in 2022. LV load shedding was done from January to May but upon augmenting the generation capacity coupled with an effective annual maintenance program, L V load shedding was suspended.

As a result of these achievements, coupled with effective maintenance, and an increase in the generating capacity, losses associated with MV forced/involuntary outages decreased by 32% from 13875.89 MWH to 9439.096 MWH. 21% (1940.92 MWH) of the MV outages was as a result of load shedding.

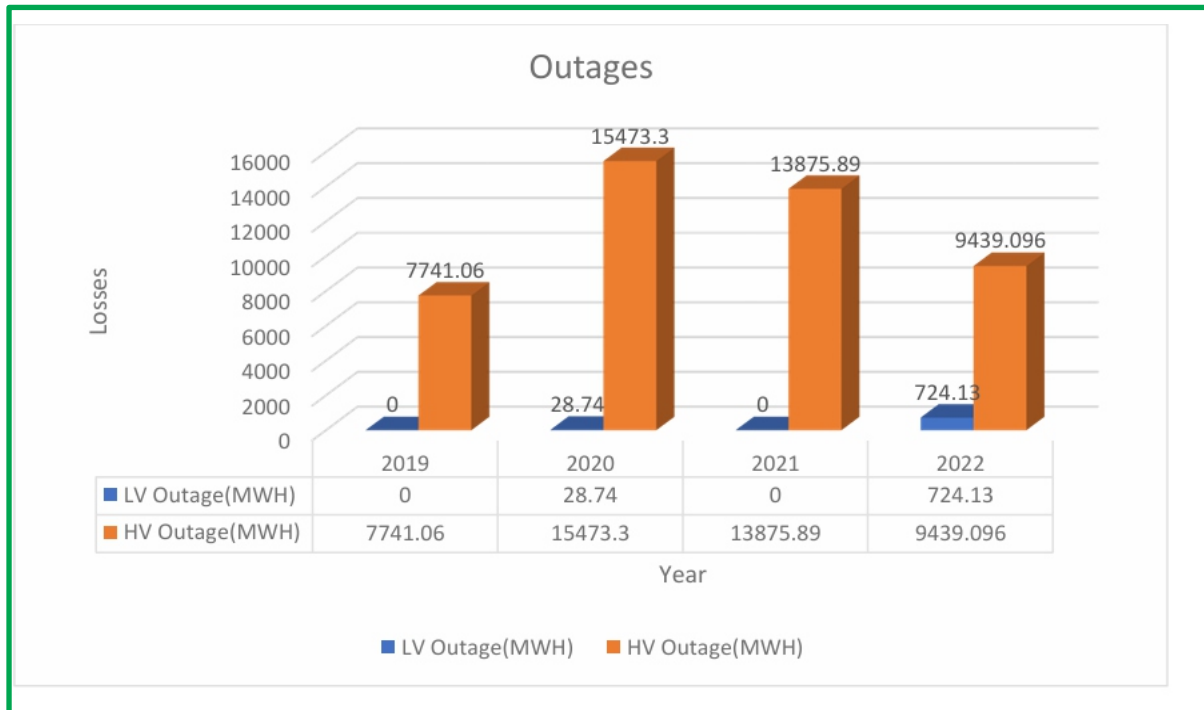


FIGURE 22 LV/ HV OUTAGE MWH

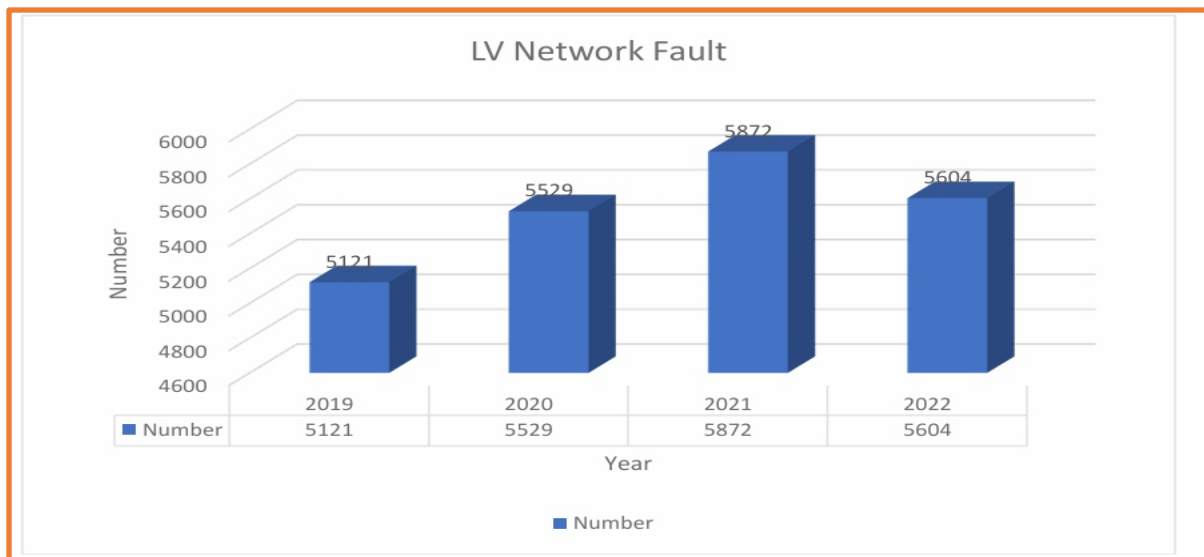


FIGURE 23 LV NETWORK FAUKTS

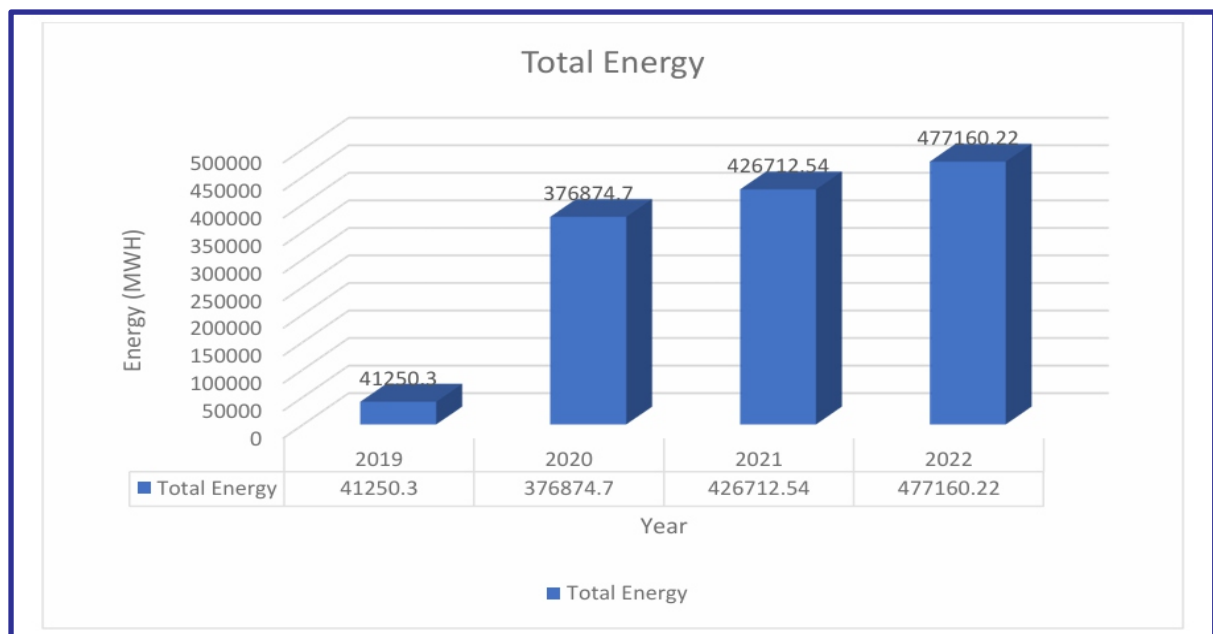
The low voltage faults also decreased by 5% from 5872 to 5604. These are shown above. This was due to the timely execution of the necessary preventive maintenance schedule.

The table below summarized the energy dispatched for distribution:



Feeders	Energy Dispatched (MWH)
Feeder 1 Kotu Dispatch	33521.12
Feeder 2 Kotu Dispatch	17975.212
Feeder 3 Kotu Dispatch	33264.21
Feeder 4 Kotu Dispatch	27995.923
Feeder 5 Kotu Dispatch	16488.13 ¹
Mile 2	37335.00
Mile 5	20201.00
Wellingara	48200.00
Medina	25558.19 ¹
Bijilo	74318.9
Buffer Zone	42971.5
Medina 2	16022.5 (May-Dec)
Jabang	14371.6 (June-Dec)
BPS F1	12575.65 ¹
BPS F2	7612.04 ¹
Gunjur	32918.47
Kanilai (WCR)	13187.98
Mandinari	2642.79 ¹
TOTAL	477160.22

Table 15 feeders and energy dispatch



As seen above, the energy dispatched during this period increased by 11.8% from 426712.54 MWH to 477160.22 MWH. This was due to network expansion and imported energy from SENELEC through OMVG. 5. Constraints: With all these achievements, the division continued to encounter serious challenges in the following areas.



- The need for specialized training and tools on the operations and maintenance of the T&D infrastructure.
- The lack of redundancy in our transmission system.
- The lack of materials to carry out effective upgrading and maintenance within the T&D system.
- Inadequate mobility and aging fleet hampering work productivity.
- Wear and tear on the secondary substations due to excessive load shedding over the years.

6. Summary:

The activities embarked on, continued to positively impact in the following areas:

- Improved system infrastructure.
- Technical losses tend to be impacted as it is on a downward trend.



3.0 WATER AND SEWERAGE BUSINESS UNIT (WSBU)



3.1 INTRODUCTION

The WSBU is responsible for ensuring that its customers have access to clean, reliable potable water and sewerage services.

3.2 HUMAN RESOURCE ACTIVITIES

Training

Training was provided in several areas namely:

1. ***Fundamentals of Wastewater Treatment***—This is a 15-week online training on wastewater treatment. One staff member participated in this training.
2. ***Potable Water treatment*** - 15-week online training on wastewater treatment. 1 staff was participated in this training.
3. ***Project Management***—Seven staff members attended a five-day training on Effective Project Management with key Milestones.
4. ***Asset Management*** — two senior staff members attended a one-week training course on the Fundamentals of Asset Management.
5. ***Health and Safety*** - 136 Staff attended the in-house Health and Safety training organized by the Water and Sewerage Business Unit with the remaining staff to be trained in 2023.



FIGURE 24 TRAINING IMAGES

In addition, and for the first time, all workers in Sewerage were made to get a complete medical checkup and required vaccines.

3.3 COMMERCIAL ACTIVITIES

- Auditing of approximately 6878 customer meters across 13 communities
- Approximately 1342 meters were replaced.
- Asset Management: A water hydraulic model was developed for the Kaur Water supply system. The results from the model have been used to develop a concept note to seek funding for further improvements within this system.



The Water and Sewerage Business Unit commenced developing GIS layers of its network in Google maps starting with the Banjul area.



FIGURE 25 GIS IMAGES

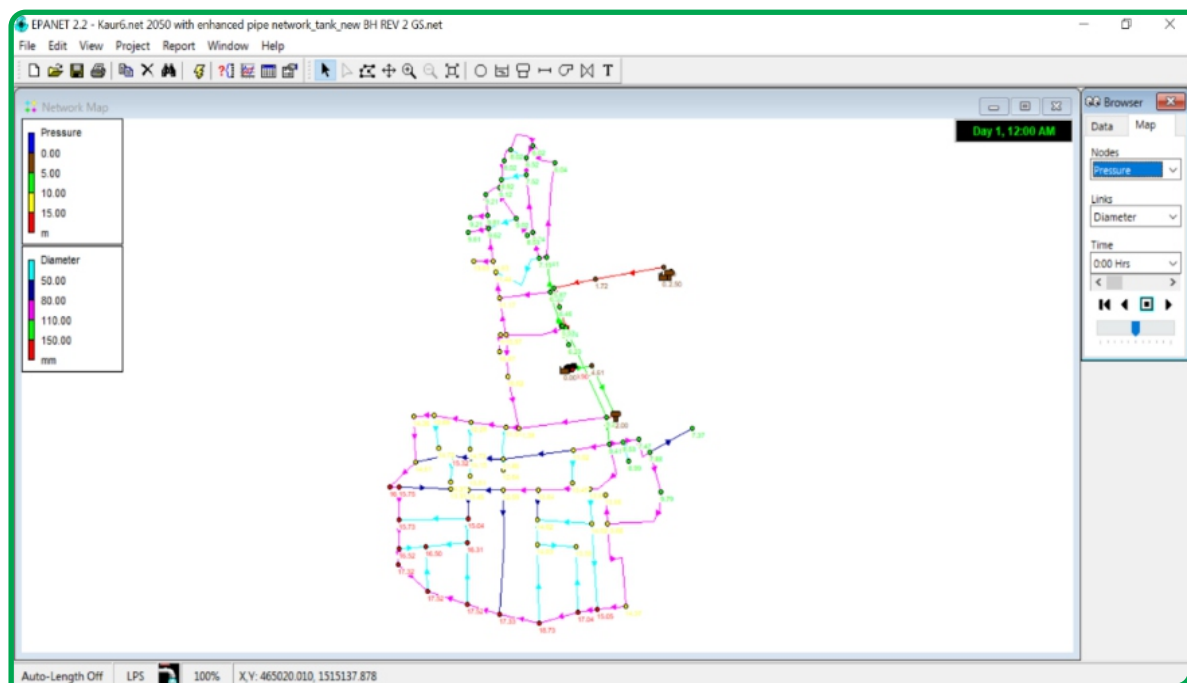


FIGURE IMAGE EXTRACTED FROM GIS

Water conservation Campaign: Saving water is as vital as saving one's life, so a water conservation campaign was launched in October 2021. The team visited schools to embark on this campaign, one of which was The Gambia High School.



In 2022 billboards were installed along the streets of Senegambia, Serekunda, Tippa Garage Street. Flyers were also distributed and posted in several offices,



FIGURE 26 POSTER

3.3 WATER SUPPLY

Based on the functional meters at the boreholes, approximately 30,870,883 m³ of water was abstracted from the boreholes at the GBA facilities, while 678,237 m³ was abstracted from the boreholes within the provinces.

It must be noted that not all meters are operational, and this will indeed underestimate the actual figures.

Connections to the water and sewerage systems- In 2022, there were a total of **5,097** water supply service connections across the areas served by NAWEC. The distribution based on region is illustrated in the figure below. The connections were executed under the Customer Service Directorate.

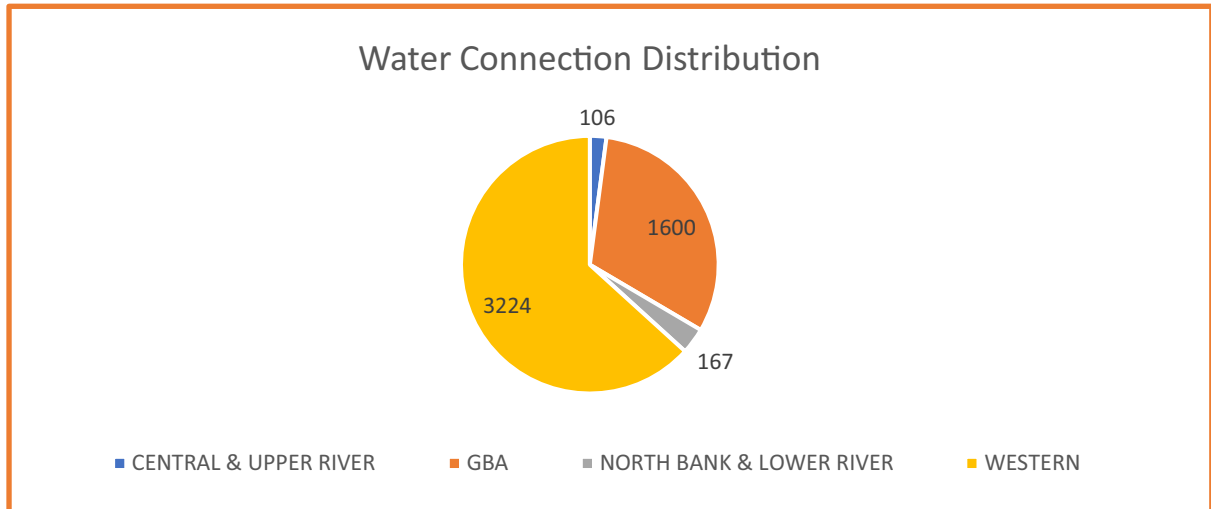


FIGURE 27 WATER CONNECTION DISTRIBUTION

In 2022 there were no new connections in the sewerage network.

Paid Main Extensions- In 2022, a total of 21 paid water supply main extensions were completed, with approximately 7964m of pipe installed. The figure below shows the distribution of installed pipe based on pipe diameter.

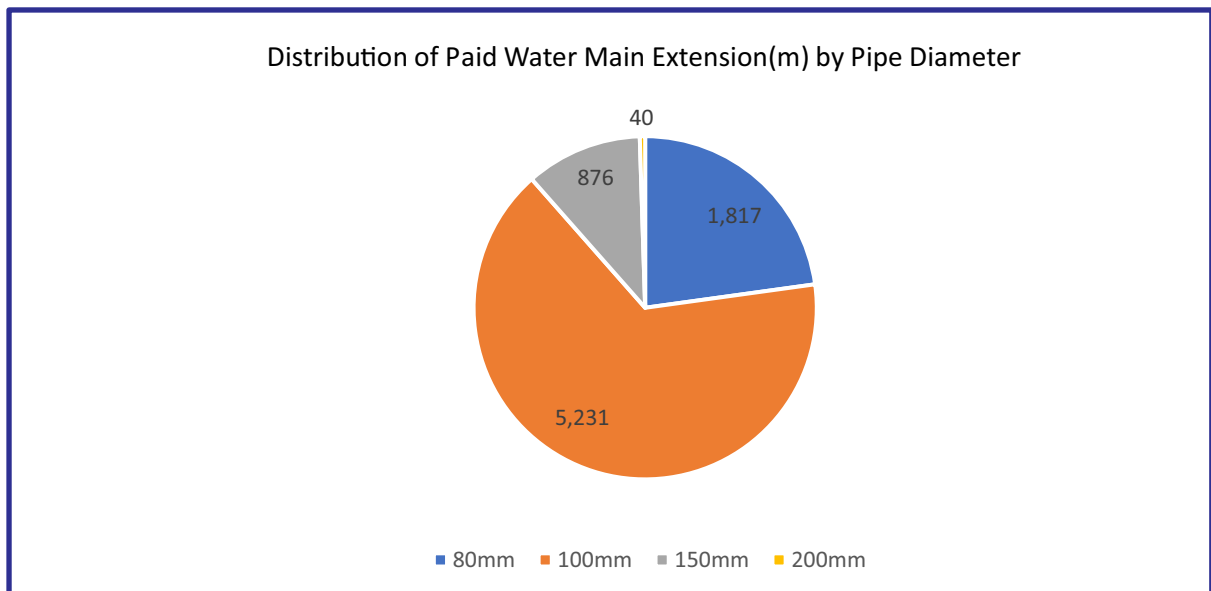


FIGURE 28 DISTRIBUTION OF PAID MAINS

Leaks repaired on mains- Based on the data collected, we attended approximately 4881 burst/leak pipes within the network during the 2022 period. 82% of these were within the GBA while 18% were within the provinces. The figure below shows the distribution of leaks/bursts where these defects occurred based on network classification.

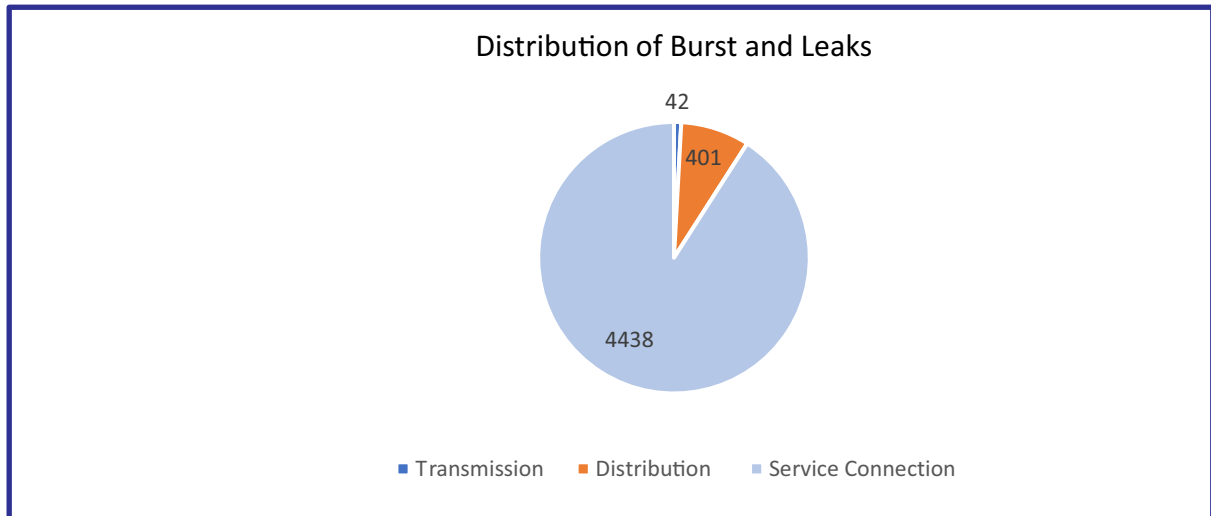


FIGURE 29 NUMBER OF BURST PIPES

Pictures showing repaired burst/leaking pipes



FIGURE 30 REPAIRED PIPE

3.4 MAINTENANCE AND REPAIRS

During the 2022 reporting period, failures occurred at a number of boreholes and treatment facilities both within the GBA and Provincial areas. These failures ranged from collapse of boreholes to failures with the electro-mechanical systems.



To some extent some of these failures were repaired and/or new assets installed (for example the Installation of transfer pumps at the Brikama treatment plant and motors at Mile 2 pumping station). Works were also carried out on some leaking tanks in both the GBA and provinces



FIGURE 31 IMPROVEMENT PROJECT

3.5 IN HOUSE IMPROVEMENT PROJECTS

3.5.1 WELLINGARA WATER SUPPLY SYSTEM IMPROVEMENT WORKS

The works carried out involved extending the mains by 630m to link existing connections to provide better hydraulics within the network.



FIGURE 32 LAYING PIPES



3.5.2 KAUR JANNEH KUNDA WATER SUPPLY EXTENSION

This work started in 2021 and was finally completed in 2022 which include the 2.5-kilometer distribution network was built to improve and give easy access to customers in Kaur. The pressure test and disinfection of the newly installed distribution network are shown in the image below.



FIGURE 33 WORKS

3.5.3 DIVERSION OF BH E13

Borehole E13 was diverted from serving the Brikama treatment plant to serve the Gunjur Plant. This decision was taken previously to mitigate the issues of poor quality of the water supply from Gunjur. The poor quality was a result of iron caused by the natural geology of the area.



3.5.4 COMMISSIONING OF JAMBUR WATER SUPPLY TREATMENT PLANT AND STORAGE

Jambur treatment plant was commissioned during the reporting period to boost water supply to Jambur and the surrounding.



Diversion of water from NASA borehole to supplement the Airport.



3.5.5 EQUIPPING OF BOREHOLES

In 2022 we embarked on equipping three boreholes which were drilled in 2021. Two of the three boreholes were put into operation at the end of 2022 with the remaining borehole awaiting electrification.



FIGURE 34 EQUIPPING BOREHOLES

3.5.6 IMPROVEMENTS AT TREATMENT PLANTS AND OTHER FACILITIES

During the reporting period, several improvement works were carried out at some of the facilities, for example, Kaur and Juffureh, where new operation buildings were constructed to house the control panels and standby generator.



FIGURE 35 KAUR FACILITIES

3.6 SEWERAGE

During the year under review, approximately 1577 sewer blockages were cleared across the Banjul and Kotu systems. The pictures below show workers during a clearing exercise.



FIGURE 36 SEWERAGE WORK

3.6.1 IN-HOUSE IMPROVEMENT WORKS

The majority of the improvement works related to the sewerage area were carried out on the Kotu Sewerage system. Works carried out included:

- Desludging of pond 1 and re-construction of the concrete apron.



In addition to improvement works at the Kotu treatment plant, there was also rehabilitation work at the 4-pump stations within the network. At the pumping station, all the pumps were changed, and the control panels were rebuilt. Some manholes were also reconstructed

3.7 MAJOR PROJECTS

The externally funded projects continued to progress namely:

1. WASIB Project– The contract for the Consulting firm was signed in October 2022
2. OIC – Finalization of the drilling of the 13 production boreholes and 3 observatory boreholes Information for the borehole was later used to progress the preliminary designs for the associated transmissions, and the treatment plant was progressed.
3. World Bank – work progress on several projects mainly within the procurement areas mainly for services for consulting firms



4.0 CUSTOMER SERVICE DIRECTORATE

4.1 OVERVIEW OF THE CUSTOMER SERVICES DEPARTMENT

The Customer Service Directorate provides the interface between customers and NAWEC. This includes surveying for service connections, billing and revenue collection among others. By nature of its mandate, the activities cover mainly Monthly Billing, Credit Control, Meter Reading, Prepayment Services, Customer Relations, and Loss Control.

4.2 MAJOR PERFORMANCE HIGHLIGHTS FOR 2022

In line with the NAWEC's Strategic *Pillar 3* (Turning the organization towards the customer)

“A modern electricity utility has to be driven by its customer needs and expectations. To achieve this a major change will have to happen in attitude, customer processes, customer interactions and customer communications.”

As a directorate, GCSD has been bent on understanding customer expectations over the past year and ensuring we build our processes around this. The following key parameters serve as our guiding pillars:

- **Make processes customer focussed:** As we move towards the customer, we try to listen to the customers and ensure the process we employ looks at what best suits our clients
- **Start at the beginning:** Our front office staff across the branches and all field workers are today subjected to periodic training and meetings with the key agenda of handling customer service issues and ensuring that their experiences with our primary contacts are memorable ones
- **Treat customer complaints as an opportunity:** Over the years, we continuously work with all supervisors and managers to appreciate all customer complaints as opportunities rather than mere complaints for resolution. This mindset change is embedded in the training programs that we already kick-started in 2022 and intend to pursue continuously
- **Understand customer expectations:** As we strive to put our services around the client, we must strive to understand our clients' expectations. With today's world closer and closer, our customer expectations cannot be underestimated



- **Exploit the use of technology:** In our service delivery today, we are determined to ensure that we optimally exploit the opportunity technology brings addition, 2022 witnessed the directorate's launching to remotely process vending for companies, government institutions and several individuals without our clients having to move out of the comfort of their offices, homes or business stations. This is a major source of satisfaction in our service delivery to a good number of our corporate clients, who had to physically come to our branches and queue for tokens before now.
- **Revenue Collection and Protection:** In the past, the company lost significant revenue to gaps in our collection processes especially the acceptance of cheques. Several companies, government agencies and individuals were allowed to present cheques and immediately give value for their money on electricity tokens only for such cheques to be returned at a later date by the banks as bounced cheques. This exposed the company to several losses. A task force was established to pursue these returned cheques. Although about 70% successful recovery was achieved, the company is still chasing some of the companies while some, especially those whose businesses are closed or whose returned cheques cannot be linked to any account, will unlikely be ever recovered.
- ❖ **Create a great working environment and make Customer Services a desirable place to work:** in addition to the branch rehabilitation works completed in some areas and soon to kick start in other areas, the directorate continues to work closely with the Corporate Service Department to improve the working conditions of our staff throughout the country. Following the tour of the GCSD to all the branches, especially those worse off in the provinces, staff issues such as lack of chairs, water dispensers, toilet facilities and cleaners have been a top priority. Already branches like Fatoto, a one-time eye-sore branch have been transformed significantly to provide the customers and the staff with a decent working environment
- ❖ **Training:** In addition to several in-house training for all categories of staff, the department also organised external pieces of training for 51 staff in customer service modules, 5 on introduction to electrical installation and 5 on plumbing. 4 branch managers were also trained in leadership and governance. This is to develop the capacities of all our customer



service facing staff and to ensure our service delivery team is customer service oriented. As the department is large, we were unable to train all the staff in 2022 due to budget constraints, but the coming year will see the continuation of such pieces of training to those who did not benefit in 2022

Measuring customer experience: In 2022, several engagements have been concluded with the Senior Managers to lay the foundation for a rigorous use of KPI's to drive performance and improve customer service: This has been the subject of several meetings and all inductions. The following indicators, for instance, will be employed to measure our customer experience as we can only improve customer service when we can measure it

- **New connections:** The time it takes to connect all new services for both water and electricity
- **Meter reading quality:** Through meter reading audits and random sample reading by supervisors across all the regions
- **Turnaround Time:** The time it takes our cahiers to vend for examples
- **Faults response:** Such issues as response time to fix issues reported to our cash power technicians
- **Complaints resolution:** The time it takes for all complaints advanced by the clients to be resolved

The above inexhaustive indicators are measurable points identified and to be embedded in our performance appraisal dashboard for all categories of staff

In a nutshell, 2022 has been a very busy year for the directorate with several successes registered so far with the following important milestone activities already ongoing at different stages:

Customer Perception Survey: **Achieved**

DEVELOPMENT OF A STANDARD OPERATIONAL MANUAL

This is also awarded to a consultant in 2022 but will be completed in 2023- **Advanced stage**



DATA COLLECTION: This exercise has already kick-started in Banjul. This is because Banjul is the only place where pole numbering is completed. **Ongoing can only collect data where pole numbers are fully completed by T&D**

Customer Charter: The department further develops a detailed Customer Charter to renew our promise to our customers and effectively manage their expectations in line with our aims, objectives, and values. This document serves both as a reminder and a source of motivation to the staff on our commitments to the customers and will instil consistency and much-needed transparency in our operations. All of these will boost public confidence and improve overall service delivery. **Achieved**

Complaint process:

Achieved.- To be incorporated into the Department's operational manual under development.

Health and safety policy:

Achieved- to be incorporated in the new health and safety policy for NAWEC in general by the Senior Health and Safety Manager

Our Wildly Important Goals (WIGs): The Group Customer Service Directorate is focused on achieving these 12 WIGs for the period under review.

Replacement Of Postpaid Meters: Complete the replacement of all Postpaid Domestic Electricity meters across the country with prepared meters

Replace all 7-digit meters: Replace all 7-digit meters to allow full integration, compatibility and interoperability with our current utility software application (i.e., OUC) which further allows 3rd Party V ending to ease pressure on our already stretched cash offices

90 % Achieved - procurement issues

Leverage the digital offerings: Leverage the digital offerings of our IT platforms, pioneer and implement remote self-services for customers to include automated bill distributions to clients, sending payment receipts/ electricity tokens directly to clients' email addresses

Partially achieved will be fully achieved after the data collection exercise.

Implement the regionalization of our operations



Implement the regionalization of our operations through the recruitment of Senior Regional Managers, Managers and all critical staff components for each region to achieve decentralization and move the company to the customers

Year	2023	2023	2024	2025	2026	2027	
Target Numbers	454	454	455	455	455	455	455

TABLE 16

Oversee the rehabilitation nationwide: Oversee the rehabilitation of our already ramshackle branches and cash offices across the country, starting from the GBA to provide a conducive working and transaction environment for our staff and esteemed customers respectively (see appendix for current status of some of our branches)

LONDON CORNER BRANCH



FIGURE 37 LONDON CORNER NEW OFFICE

LONDON CORNER BRANCH INTERIOR VIEW

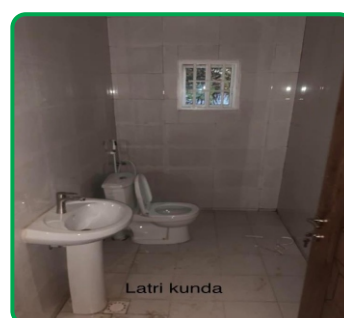


FIGURE 38 BAKAU NEW OUTLOOK



FIGURE 38 BAKAU NEW OUTLOOK

5.1 PROJECTS AND PLANNING DEPARTMENT

The Projects and Planning Department plays a crucial role in overseeing various aspects of project management, strategic planning, and the execution of initiatives. The Electricity Planning Unit deployed a team of surveyors on several occasions nationwide. The aim is to survey all villages across the country to prepare drawings and related Bills of Quantity.

5.2 NAWEC PROJECTS STATUS

1.0	ELECTRICITY EXPANSION PROJECT IN GBA AND KIANG		
1.1	Project title		Electricity Expansion and Rehabilitation Project in the GBA and KIANG
1.2	Funding	Amount	Loan of US \$22.5 million
		Institution	EXIM Bank of India From Government of India
1.3	Scope of Works		The project envisages the expansion of the GBA 33kV Network from Kalagi to Kwinella with “T-offs” at Sankandi to Keneba and at Kwinella to Tendaba. Eighty (80) communities will be covered by the project in GBA, WCR and LRR. Scope: 2x5MVA, 33/11Kv Primary Substations, 350 km of 33kV Line, 125 km of 11 kV Line, over 900 km of LV Line and 80 Distribution Transformers for 80 Communities.
1.4	Implementation	Period	
		Status	Completed 28 th November 2020
		Challenge	Manufacture of project material has been challenging especially the 10,000 poles wherein the first vendor’s poles failed the Indian Type Test and a new vendor had to be contracted to start manufacturing all



			over again. This caused a delay in shipping. COVID-19 also introduced some delays in the execution works.
1.5	Progress Status		UPDATE: The Project under the Electricity Expansion is on the verge of completion. Commercial operations are ongoing as applications for meters and meter fixing is on-going in Kiang and GBA. The second phase is envisaged to further electrify more areas in Kiang and the GBA.
2.0	Asbestos Replacement and Water Expansion Project in GBA		
2.1	Project title		Asbestos Replacement and Water Network Expansion Project in GBA
2.2	Funding	Amount	Loan of US \$22.5 million
		Institution	EXIM Bank of India From Government of India
2.3	Scope of Works		76 km of Asbestos to be replaced in GBA and Rural Areas, 8 new Boreholes and Reservoir, 2 Elevated Tanks including Transmission and Distribution Network.
2.4	Implementation	Period	
		Status	All major works completed including distribution, production and replacement of Asbestos however, installation of sensors in the borehole is pending and submission of as-built drawing.



2.5	Progress Status		UPDATE: Commercialization operation has started.
3.0	BRIKAMA (II) 20MW POWER SUPPLY PROJECT (IDB)		
3.1	Project title		Brikama Power Supply Project - 20MW Phase II
3.2	Funding	Amount	US\$24 million,
		Institution	Islamic Development Bank (IDB)
3.3	Scope of Works		The original design of Brikama Power Supply Project was for 30MW, but due to funding constraint, it had to be implemented in Phases. With Phase I (10MW) completed in July 2011, the objective of the project is to increase NAWEC Power Generation capacity from Brikama with the remaining 2x10MW as Phase II.
3.4	Implemen- tation	Period	18 Months From “Kick-off” date on 4 th July, 2017
		Status	Delays due to sanction of the main contractor by the US Department of Treasury. Payments were temporarily suspended until the 2 nd party of the Consortium contractors agreed to take full responsibility for the completion of works. This was concluded in December 2019 with additional of 8 months of time extension for completion of the project.
		Challenge	During the rains it is difficult for works to carry on due to rainwater intrusion The completion was further delayed by the Covid-19 pandemic.
3.5	Progress Status		UPDATE: The project was completed, commissioned and handed over to NAWEC for commercial operation on 24 October 2020 and is now used as a baseload. The Defect Liability Period of 12



			months from 24th October 2020 is still on and the plant still operating satisfactorily as well. • The Defect Liability Period is supposed to end on the 24th of October 2021, but due to outstanding defect liability-related issues, the Final Acceptance Certificate is yet to be issued to EPC Contractor to mark the end of DLP. • The additional scope of works to build the New Dispatch Center in Brikama was approved by IsDB through Addendum No 2 to EPC Contract. This was approved on the 4th March 2021 for a construction period of 12 months and works are in good progress. The expected completion date is March 2022 after which a defect liability period of 12 months shall commence ending in March 2023.
4.0	NA WEC/Senelec Energy Exchange Project		
4.1	Project title		NA WEC/Senelec Energy Exchange Project
4.2	Funding	Amount	Independent Power Producer: Unit cost - CFAF 92/Unit
		Institution	NA WEC/Senelec : Kick-off – Farafenni Aug, 2017, Barra-April 2018
4.3	Scope of Works		▪ NA WEC and Senelec agree to trade energy depending on whoever has excess. ▪ Currently NA WEC is receiving about 3 MW from Senelec at Farafenni and Barra which could be increased to 10 MW. ▪ Connection to Basse Grid at Diabugu Batapa is not possible due to Senelec's insufficient generation capacity in this area at the moment.
4.4		Period	N/A



	Implemen tation	Status	The interconnection is ongoing with a capacity of 6MW as agreed for both connection points.
		Challenge	No major Challenge
4.5	Progress Status		UPDATE: The is supplying continuously with a support base from our own generation set in Farafenni station.
5.0	KARPOWER Independent Power Producer		
5.1	Project title		KARPOWER Independent Power Producer
5.2	Funding	Amount	Variable
		Institution	NA WEC/KARPOWER
5.3	Scope of Works		The project consist of: Generation of 30 MW into NAWEC GBA Grid.
5.4	Implemen tation	Period	24 Months: Kick-off May, 2018
		Status	Project In Operation
		Challenge	Powership anchor position is not harbored from winds and this is creating problems as winds cause the ship to shift position resulting to transmission wire to snap and cut creating severe blackouts
5.5	Progress Status		UPDATE: Project progressing satisfactorily

6.0	
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	OIC WATER AND SANITATION NETWORKS REHABILITATION PROJECT		
6.1	Project title		Water and Sanitation Networks Rehabilitation Project. In The OIC concentrated Area.
6.2	Funding	Amount	US\$22.5 Million
		Institution	Saudi Fund for Development (SFD)
6.3	Scope of Works		• Drilling of new Water production boreholes with all required operational accessories to meet the water demand • Construction of a medium voltage Power line (11KV) for the operation of the boreholes. • Installation of a SCADA system for the remote control of the system. • Construction of water treatment plant with all required equipment and accessories. • Construction of raw transmission lines from the Boreholes to the treatment plant. • Construction and laying of clear water transmission lines from the treatment plant to the demand centers and Elevated tank sites. • Construction of high-level water tanks. • Expansion of the water distribution network within the GBA.



			Provision of materials, equipment, Tools and Spares for the O and M
6.4	Implementation	Period	Construction Works to last 14 Months: Expected project completion is April 2022.
		Status	In progress
		Challenge	
6.5	Progress Status		Update: Project in Progress

7.0		OIC ELECTRICITY PROJECT	
7.1	Project title		EXPANSION AND REHABILITATION OF THE POWER TRANSMISSION AND DISTRIBUTION IN GBA PROJECT
7.2	Funding	Amount	US\$10 Million
		Institution	Project is funded by Saudi Fund for Development (SFD)
7.3	Scope of Works		a) To help improve the power transmission and Augmentation of Bijilo Substation.



		<i>b)</i> Augmentation of Mile2 Substation <i>c)</i> New Banjulinding Substation <i>d)</i> New Banjulinding Customer Service Centre <i>e)</i> 33kV OHTL LI-LO for New Banjulinding Substation <i>f)</i> 11kV OHTL from New Banjulinding Substation <i>g)</i> 11kV UG Cables from New Banjulinding Substation <i>h)</i> 11kV OHTL from Kotu Tank Substation <i>i)</i> Replacement of Ring Main Units <i>j)</i> Replacement of Faulty Cable Section at the Airport <i>i.</i> Network Enhancement <i>a)</i> Upgrading of Seventeen (17) number. 11/0.4kV Overloaded Secondary Substations <i>b)</i> Upgrading of Four (04) number. 33/0.4kV Overloaded Secondary Substations <i>c)</i> Offloading & Expansion of 11/0.4kV Secondary Substations at Thirty-Four (34) number locations <i>d)</i> Offloading & Expansion of 33/0.4kV Secondary Substations at Eighteen (18) number locations
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			e) Installation/Replacement of 11kV Load Break Switches at Seven (07) number locations f) Replacement of 1000kVA transformer with 2000kVA Transformer and associated replacement of LV Switchgear at the Airport.
7.4	Implementation	Period	18 months from signing of the contract.
		Status	In progress
		Challenge	Delays in the approvals due Covid-19
7.5	Progress Status		Update: - No Objection for the final tender document received - The tender document launched for the recruitment for the works contractor.

8..0		GERMP	
8.1	Project title		Gambia Electricity Restoration and Modernization Project
8.2	Funding	Amount	US\$ 164Million
		Institution	The total project cost is approximately \$164million, co-financed \$84million IDA, approximately \$62 million equivalent EIB (EURO 54 million), approximately \$17 million equivalent EU (EURO 15 million).



8.3	Scope of Works		The Development Objectives (Dos) are to (i) improve the operational performance of the Project Implementing Entity; and (ii) improve the capacity of the Project Implementing Entity to dispatch variable renewable electricity
8.4	Implementation	Period	5 years
		Status	Ongoing
		Challenges	RAP compensation in GBA (land compensation)
8.5	Progress Status		Implementation ongoing
9.0		GAMBIA ELECTRICITY ACCESS PROJECT (GEAP)	
9.1	Project title		GAMBIA ELECTRICITY ACCESS PROJECT (GEAP)
9.2	Funding	Amount	US\$ 17Million
		Institution	
9.3	Scope of Works		Component 1: Expansion of electricity distribution infrastructure (114 communities) Procurement not yet started, awaiting for the recruitment of Owner's Engineer.



			Component 2: Consultancy services for electrical works supervision and PIU costs: Component 3: Project Management cost and Capacity Building.
9.4	Implementation	Period	4 years
		Status	Effective: March 2020
		Challenges	
9.5	Progress Status		Bidding ongoing for Component A – Design, Supply and Installation of Distribution Network - 128 communities

10.0	ECOWAS REGIONAL ELECTRICITY ACCESS PROJECT		
10.1	Project title		ECOWAS REGIONAL ELECTRICITY ACCESS PROJECT
10.2	Funding	Amount	\$225m; Gambia - \$66m (Grant)
		Institution	



10.3	Scope of Works	The Project Development Objective of ECOREAP is to increase grid electricity access in the Republic of The Gambia, Guinea Bissau and Mali. Component 1: Design, supply and installation of electricity distribution infrastructure: Contract signed; Contractor have mobilized. • Component 2: Supervision of the Construction and technical advisory. Owner's Engineer - ongoing • Component 3: Project Coordination and technical assistance PIU cost- consultant fees, safeguard instruments, capacity building and so on.	
10.4	Implementation	Period	Duration is 5 years
		Status	Effective: : June 2019 and disbursement has started
		Challenges	
10.5	Progress Status	Contract for Component 1 signed in June 2021	

11.0	WATER SUPPLY AND SANITATION PROJECT
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11.1	Project title		Water Supply and Sanitation in the Greater Banjul Area (WASIB)
11.2	Funding	Amount	Grant of 16.5 million euros, agreement signed in 21 st January 2020
		Institution	Agence de française de développement (AFD)
11.3	Scope of Works		This Project Comprise Three Components Short Term Component - Emergency Works Medium Term Component – Production, Transmission And Distribution Investments Long Term Component – Investment Planning
11.4	Implementation	Period	This project is expected to last for 36 months
		Status	Expression of interest (EOI) are received from 15 consultancy firms, were 6 has been shortlisted for the final stage and send to AFD for no objection. The on-granting agreement already between the Ministry of Finance and Economic Affairs and National Water and Electricity Company Limited (NAWEC) .
		Challenges	



11.5	Progress Status	Submission date for Consultancy recruitment is 23 rd of November 2021.
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12.0	<u>Kotu Power Generation Expansion Project</u>		
12.1	Project title	<u>Kotu Power Generation Expansion Project 11.1MW</u>	
12.2	Funding	Amount	22.32 Million USD
		Institution	BADEA, OFID and GOG
12.3	Scope of Works	➤ Study, Engineering Design, Supply, Installation and Commissioning of 11.1 MWe, 2-Stroke, Slow-Speed HFO Fired Diesel Generator. ➤ Procurement/supply of Spare Parts for up to 16 000 hours of Operation.	
12.4	Implementation	Period	Expected Life: - 25 - 30 years
		Status	<i>Project commissioned since August 2018 followed by 12 months of Defect Liability Period ended August 2019.</i>



		Challenges	No major challenges since commissioned.
12.5	Progress Status		Has been on Commercial operation since commissioned

13.0	The NAMA project		
13.1	Project title		The NAMA project
13.2	Funding	Amount	Independent Power Producer: 10 million US dollar
		Institution	NAMA FACILITY
13.3	Scope of Works		The project consist of two solar plants (6.0MW in Farafenni and 4.5MW in Basse). Provide reliable renewable energy to 144,500 people in North Bank Region and Upper River Region. 2. Reduction of fossil fuel importation by 3,964,941 litres annually; 3. Build the capacity of at least 5 members of NAWEC's staff on how to develop and implement Power Purchase Agreement (PPA) with an Independent Power Producer (IPP); 4. Provide reliable Renewable Energy (RE) supply to the beneficiaries to support businesses, electricity dependent vocational skill and other livelihoods. 5. Improve air quality by reducing pollution during the operations of fossil fuel powered generate
13.4	Implementation	Period	18 months
		Status	Project In progress
		Challenge	Land encouragement
13.5	Progress Status		UPDATE: Tender evaluated and Contractor visited the site.

TABLE 17 PROJECT STATUS



6.1 HUMAN RESOURCES AND ADMINISTRATION

The Human Resource Department plays a fundamental role in supporting NAWEC's businesses by ensuring that its growth and development are aligned to standard operational procedures. Over the past year, the focus of HR has been on driving the ongoing restructuring of the company and ensuring that there are checks and balance through government's performance contract and the roll out of our own Performance Management System. The HR Department focused on specified key performance indicators to drive change, enhance productivity, streamline the IMS system and reinforce the manpower needs of various directorates as approved by the board. The implementation of the department's business plan aligned with the HR related KPIs supports the organization's comprehensive changes with its services.

6.2 THE IMS

One of the key deliverables and enablers of the reform project was the implementation of the Information Management System (IMS). The year under review witnessed an accelerated improvement in the IMS system through a close-knit collaboration with the contracting body (INDRA). Important training was conducted as well as other process re-engineering activities.

For the HR component, validations and adjustments were done on the payroll and other sub-modules on the ERP. Meanwhile, HR continues to work with INDRA on the different modules for perfection. Adjustments were successfully done on the following modules on the ERP:

- Organization Management
- Employee/Worker Administration
- Leave Management
- Timesheet / Overtime
- Recruitment
- Performance Appraisal
- Training and Development
- Payroll
- Employee Self Service Portal
- Travel and Expense Management



Staff continue to acquaint themselves with the online platform to do the following

- Maintain personal information (including pay slip)
- Take online questionnaires
- Enter and approve leave
- Manage travel and expenses, procurement, and approval limit
- Create, submit and approve the timesheet
- Submit and track loan applications, time sheet

6.3 MANPOWER DETAILS/STAFF TURN OVER

#	Directorate	Staff #
1	Group Managing Director	12
2	Electricity Business Unit	702
3	Water and Sewerage Business Unit	255
4	Group Customer Services	486
5	Group Corporate Services	419
6	Group Finance	48
7	Group Projects and Planning	24
8	Group Internal Audit	19
9	Group Human Resources	19
	TOTAL	1984

TABLE 18 MAN POWER

The 2022 staff figures represent a slight increment from the previous year mainly due to the need for the implementation of the various group and business unit structures.

The data is represented based on the organizational structure.



6.4 HUMAN RESOURCE DEVELOPMENT

With the new Senior HR Development Manager, TNA for 2022 has been updated and implemented. The HR Development Division rolled out training programs identified for the year, in compliance with procurement guidelines.

The focus was to support the reforms with the requisite capacity-building and skills enhancement drives with both on-the-job and off-the-job training. Greater emphasis was placed on the hands-on skills of the technical units as well as the soft skills required to deliver business performance. The reforms brought with them additional needs for capacity building to meet the needs and aspirations of the new organization.

About Twenty Million Dalasis were spent on training and development during the said period. 64 staff continued with their various programs of study supported by the company, with more than 85% of them coming from the technical areas of Engineering. Most of these staff secured various governmental and multilateral scholarships both within and outside the country. The programs range from Diploma to master's degrees in various fields. 433 staff benefited from training (419 - short term and 14 long term pieces of training).

6.5 STAFF WELFARE

Staff welfare continues to play an integral part within the HR portfolio, with a continuous quest to improve the conditions of service for staff. The period under review continues to look into the conditions of staff and identify areas of improvement thus enhancing staff motivation and improving their living conditions.

6.6 EMPLOYEE RELATIONS

The Department successfully handled all disciplinary matters forwarded from various Departments. Cases range from insubordination, fuel theft, fraud, and some other misdemeanors. The resultant decisions range from terminations, warnings, interdictions etc.

The Disciplinary Committee remained vibrant and responsive to the disciplinary and grievance-handling needs of the organization. The Committee relies heavily on legal advice to inform their decisions, with a view to ensuring due and diligent process. Accused staff are given a fair and transparent hearing, with their rights adequately protected.



6.7 OTHER IMPORTANT ACTIVITIES

- Launching of the Gender Policy
- Review of the Training Needs Analysis
- Various administrative actions involving staff movements sanctioned by the restructuring
- Induction of new staff
- Exit interviews for leaving

7.0 INTERNAL AUDIT

7.1 EXECUTIVE SUMMARY 2022 INTERNAL AUDIT REPORT

This report summarizes key findings from internal audit activities related to Inventory Management, Cash controls and Property, Plant and Equipment, Staff audit, Risk assessment

Inventory Count: Mid-year and year-end inventory counts were conducted at various store locations, culminating in the final audit report submitted to management. While the Kanifing store #1 verification is nearing completion, audits at other departmental stores have been finalized. A key concern identified was the poor condition of some stores and the presence of unrecorded materials, requiring management attention. The audit also noted that cleaning and toiletry items are no longer managed by the cleaning supervisor and that inventory at commercial stores is insignificant.

Cash Management and Controls Review: A nationwide review of cash management and controls at NAWEC revenue offices and branches has been completed. The primary issue identified was delayed banking at several revenue offices, specifically Mandinaba, Sibanor, Lamin, Brufut, Sanyang, and Gunjur. Reports detailing these findings have been issued to Customer Service and other stakeholders. While arrangements are in place with Bloom Bank, Ecobank, and Afri Money for daily and weekly collections, regular monitoring by Customer Service is ongoing to address the identified banking delays.



Plant Property and Equipment Audit: An audit of fixed asset management and controls, encompassing verification of existence, ownership, and valuation of various assets (motor vehicles, motorbikes, laptops, office equipment, land, transformers, power plants, etc.), has been completed. Fieldwork has been concluded, with an exit meeting planned for 2023.

Regarding scrap materials, an evaluation report has been submitted to the GPPA (Gambia Public Procurement Authority) and a response received. A committee is reviewing the response for finalization and implementation, also scheduled for 2023.

7.2 KEY ISSUES

- **Cash Handling and Banking:** Significant weaknesses exist in cash handling procedures, including delays in banking, lack of segregation of duties (cashiers also performing supervisory roles), and discrepancies between system entries and actual deposits. These issues create substantial opportunities for fraud and misappropriation of funds.
- **Operational Inefficiencies:** Several offices experience system issues (e.g., network problems, software glitches), leading to service disruptions, long queues, and potential customer dissatisfaction. Lack of staff training on systems further exacerbates these issues. Some offices are also operating in unsuitable conditions (e.g., leaky roofs, shared safes, closed offices).
- **Security Vulnerabilities:** Multiple locations lack adequate security measures, including faulty or missing burglar proofing, lack of security personnel, and revenue offices located in insecure areas. These vulnerabilities expose the company to theft and unauthorized access.
- **Oversight and Reporting:** Evidence of regular review, supervision, and monitoring of transactions by Senior Regional Managers is lacking. Similarly, periodic reports from branch supervisors to management are not consistently produced. This lack of oversight hinders the timely detection of irregularities and potential fraud.



- **Organizational Structure:** While some functions have been regionalized, other crucial commercial/service-related operations have not. This inconsistency leads to delays in addressing customer requests.
- **Progress of Risk Assessments:** While the Internal Audit has made progress in conducting risk assessments across several directorates and business units (Customer Services, Corporate Services, Water Business Unit, Internal Audit, Electricity Business Unit), assessments for the Finance Directorate, Projects & Planning, and Human Resources and Administration are either delayed or pending due to disagreements on approach or lack of response.
- **Audit Program Development and Execution:** The Internal Audit has successfully developed and rolled out audit programs for Electricity Generation, Transmission, and Distribution, and Credit Control. The Credit Control audit has been completed, with the report shared and the exit meeting conducted. The Electricity audit is ongoing.
- **Unseen Staff:** The audit has identified staff members who could not be physically verified. This raises concerns about their employment status and the validity of salary payments.
- **Long-Term Sick Leave/Absence:** Several staff members have been absent from work for extended periods due to illness or other reasons, some without proper notification to Human Resources. Despite their absence, salaries were paid.
- **Unauthorized Travel:** Some staff members were found to have traveled without the knowledge or authorization of the Human Resources department yet continued to receive salary payments.

Management Responses:

Management has provided responses to each observation and has indicated that corrective actions are either underway or planned. The Board, Senior Management, should monitor the implementation of these actions closely to ensure their effectiveness and address any remaining outstanding issues. A follow-up audit will be conducted to validate the implemented changes and assess their impact on the overall control environment.



7.3 IMPLEMENTATION STATUS OF AUDIT RECOMMENDATIONS

A review of the implementation status of previously issued audit recommendations reveals the following key issues:

- **Overall Progress:** While some progress has been made in implementing audit recommendations, several remain outstanding or are only partially implemented. This slow pace of implementation poses ongoing risks to the organization and hinders the achievement of desired control improvements. A detailed breakdown of the implementation status by recommendation was issued to the auditee, management and the Audit committee.
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- **Key Areas of Concern:** Specifically, implementation is lagging in the following key areas: cash handling procedures, IT security controls, contract management. These areas represent significant vulnerabilities and require immediate attention.
- **Reasons for Delays:** The primary reasons for implementation delays include: lack of resources, competing priorities, unclear responsibility assignment.
- **Impact of Non-Implementation:** The continued non-implementation of certain recommendations has the following potential impacts: increased risk of fraud, operational inefficiencies, non-compliance with regulations.
- **Communication and Follow-up:** Communication and follow-up on the implementation status need improvement. There is a need for more regular reporting from auditees on their progress.
- **Next Steps:** To address these issues, the following actions are recommended: establish clear deadlines for outstanding recommendations, assign responsibility for implementation, allocate necessary resources, implement a system for tracking and reporting progress.

In summary, while some progress has been made, the overall implementation status of audit recommendations requires significant improvement. Senior management should prioritize addressing the identified key areas of concern, understand the reasons for delays, and strengthen communication and follow-up mechanisms to ensure timely and effective implementation.



7.4 PROJECT MANAGEMENT AND INTERNAL CONTROL REVIEWS (GERMP, ECOREAP, GEAP)

This report summarizes key issues identified during internal audit reviews of GERMP, ECOREAP, and GEAP projects, covering Q1-Q4 2022. These issues relate to financial management, procurement, and compliance, and require immediate attention to ensure project success and mitigate potential risks.

GERMP:

- **Untraceable PAPs:** Significant Project Affected Persons (PAPs) remain untraced, and their compensation funds (D2,412,670.00) are held in an Ecobank account, incurring bank charges that are depleting the funds. While the PIU has been trying to locate these PAPs since 2019, the ongoing charges further reduce the funds available and represent a loss to the project.
- **SGS HFO Quality Test Deviations:** Deviations in Sulphur content and Calorific Value were observed in HFO quality tests. High Sulphur content poses risks to engines, requiring increased maintenance and lube oil consumption. Furthermore, fuel testing is not performed frequently enough. A significant portion (40%) of the contracted HFO remains undelivered.

GEAP:

- **Financial Reporting Issues:**
 - Direct payments from 2021 were incorrectly reported in Q1 2022, distorting financial reporting.
 - The reported closing cash balance was the unreconciled bank balance, not the reconciled balance, potentially misrepresenting the actual cash position.
- **Withholding Tax:** There is no evidence that withholding tax has been collected from contractors, a potential violation of the Income and Sales Tax Act, exposing the project to penalties and legal action.

ECOREAP:



- **Unreconciled Bank Reconciliation Items:** Unreconciled items, including a long-outstanding income tax payment discrepancy dating back to May 2022, exist in December 2022 bank reconciliation. These require immediate investigation and resolution to ensure accurate financial reporting.
- **Designated Account Discrepancy:** A discrepancy of \$1,239 exists between the total of the designated account listing and the cumulative balance reported in the financials.
- **Discrepancy in Uses of Funds:** A significant difference of \$1,795,180.97 was noted between the cumulative disbursement total as per the uses of funds and the balance reported in the reconciliation of disbursement. This difference, along with other smaller discrepancies, requires clarification and correction.

OVERALL CONCLUSION AND OPINION:

Overall, the audit identified several significant financial management and compliance issues across the revenue office, projects and operations. These issues raise concerns about the accuracy of financial reporting, the effectiveness of internal controls, and the project's adherence to regulations and contractual obligations. The Board and Senior Management should prioritize addressing these issues to mitigate financial and reputational risks and ensure the successful completion of the projects. As a result, the overall audit Opinion on the control Environment is

UNSATISFACTORY RATING:

Overall, the audit revealed significant operational, security, and control deficiencies that necessitate prompt corrective action. These weaknesses not only increase the risk of financial loss but also negatively impact on customer service and the company's reputation

CHALLENGES FACING INTERNAL AUDIT

- The key issues include the non-implementation of Internal Audit recommendations.
- In addition, staffing is also a challenge faced by the Assurance and Consulting Unit. Currently only four (4) staff remaining in the Assurance Unit and the majority are in the risk and Forensic Unit. Two (2) staff have left the Assurance unit and are yet to be replaced.



We are considering realigning the staff again among the two units to have equal number of staff based on the new restructuring.

- We are yet to also recruit for the Senior Internal audit Manager positions. This was re-advertised, and short list of staff was submitted to GHRD for interview.
- Lack of audit software to help in the review of internal controls, risk management and governance.
- Lack of sufficient and trained qualified accountant in the Internal Audit unit.
- Lack of technical staff in the Internal audit unit.
- We need the cooperation of all the business unit to support this process to enable us to complete the update of the Enterprise risk register.

8.0. CORPORATE SERVICES DIRECTORATE ACTIVITY REPORT

8.1. INTRODUCTION

The Corporate Services Directorate was established to provide support in terms of advice and assistance to staff in the other Business Units so that they can perform their work more efficiently. The Directorate interfaces with both internal and external stakeholders to improve functional and operational efficiency. The establishment of the Corporate Service Directorate is centered on two main principles.

1. Centralization of all support activities that cut across core departments and
2. Clustering of support activities that are related under a single unit and hence separation of distinct functions that do not require the same skills and competencies.

Therefore, the establishment of the Corporate Service Directorate eliminates duplication of tasks across the core departments in NAWEC, enabling core departments to focus on core activities and hence ensuring the optimal utilization of manpower resources. As such the Corporate Service Directorate ascertains consistency in the quality-of-service delivery across NAWEC. Corporate Service Directorate functions are cut across the following departments:

1. Facilities, Transport and Security Department
2. Information and Technology (IT) Department



3. Health and Safety and Environment Department
4. Procurement and Material Management Department
5. Legal Department
6. Communication and PR Department

The 2022 Activity Report of the Corporate Services Directorate reflects a year of significant progress, challenges, and opportunities. As the cornerstone of our organization, the Directorate spearheaded strategic initiatives and operational advancements aimed at enhancing efficiency and service delivery.

In addition to the successful bedding of the IMS Boka system by our Information and Technology Department, the Transport and Facilities Department also made a significant strike in 2022 to modernize and improve both our facilities and the transport fleet. However, challenges like the lack of senior management in health and safety and communication underscore areas that need attention and recruitment efforts. The support from Azorom, particularly in reviewing the health, safety and environmental practices and procedures in NAWEC, reviewing NAWEC's transportation system, and developing a communication strategy all exemplify collaborative efforts to overcome obstacles and drive positive change. Looking ahead, we remain committed to addressing challenges head-on and leveraging opportunities to further elevate NAWEC's service excellence and stakeholder satisfaction.

Corporate Service

Procurement And Material Management Department:

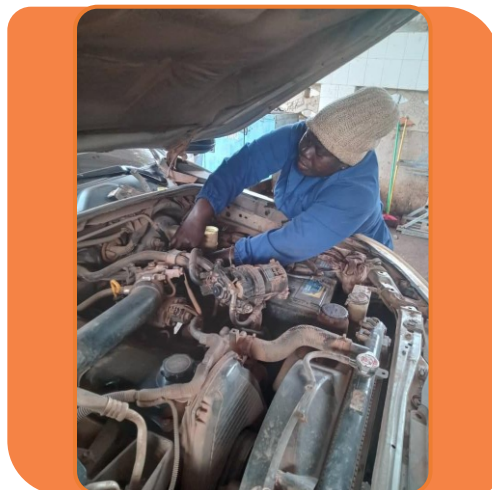
The Procurement Department continues to play a critical role in sourcing and acquiring the resources needed for our organization's daily operations. The Procurement Department is comprised nine (9) employees. They are led by the Senior Manager who reports to the Director of Corporate Services and supervises three procurement managers. The managers, in turn, have officials and supervisors reporting to them. The main responsibilities of the Unit consist of procedural and technical guidance to all Directorates, reporting, reviewing whether there are sufficient funds for procurement requisitions, and carrying out other procurement duties that must be specified in the procurement regulations or internal regulations.

Mid-2022, there has been a shift in the approach of the Procurement Department, and technical specialists from the Electricity Business Unit (EBU) have been integrated into the Department to



serve as Procurement Manager for EBU. One new procurement manager was hired to handle procurement duties for the Water and Sewerage Business Unit (WBU)

Facilities, Transport and Security Department:



Our Facilities and Transport department is responsible for maintaining a functional and safe working environment, as well as managing the logistics of materials and personnel. Several building rehabilitations were executed in 2022 which significantly resolved office space constraints. Our aggressive reactive maintenance program saw the successful implementation of more than 30 facilities/building improvement works, improving occupational health and safety compliance across NAWEC to the highest standard. A key area of improvement and focus was on the correction of structural subsidence issues, roofing and ceiling works, and electrical and sanitary fittings.

Our Facilities team (working closely with the Department of Lands, Physical Planning and Ministry of Local Government) were also able to secure 14 borehole sites for the OIC project and 10 new borehole sites for the WASIP Project. Paper works for these sites are at advance stage at the Ministry of Lands.

NAWEC has a small but strategically important Transport fleet (with 103 vehicles in total in 2022 including both light and heavy vehicles) because all NAWEC operation evolves around the availability of transport. In 2022, the transport Unit focused on both regularization and modernization of the transport fleet. Our first ever transport policy was developed and approved by the Board of Directors and became a policy document guiding the usage of the transport fleet. In addition, the unit was structured with a clear organogram and work commenced on the



development of transport systems including the development of a dedicated fleet management system and vehicle fuel management system using NAWEC's newly developed Information Management System (IMS). Our in-house garage was also structured and equipped with new tools in August 2022. In September 2022, Azorom also conducted a study on NAWEC's transportation system which produced a report with several useful recommendations. Our main challenge in Transport is that our vehicles are continuously subjected to commandeering by the Vehicle Control Unit of Office of The President. A total number of 25 vehicles were subjected to this in 2022 and some of our vehicles remained with the vehicle control unit for months at the expense of the delivery of our much-needed service. This, in addition to our limited number of vehicles, significantly disrupt our service delivery to minimize water and electricity outages.

INFORMATION AND TECHNOLOGY (IT) DEPARTMENT:

Information and Technology department continues to function as the cornerstone of our organizational machinery. While continuously maintaining our IMS system which is indispensable, the Information Technology Department made several other gains in 2022 including:

- Improvement in operational efficiency by adding additional features to Dynamics in collaboration with the Indra team, enabling users to request fuel through the system. This provides total visibility to fuel usage by vehicle and real-time management information.
- Network Enhancement - Executed network extension in various company locations using wireless, copper, and fiber cables, replacing faulty network components to ensure seamless business operations.
- Successfully completed the first phase of the cash office rehabilitation project, including fibre termination handled by our IT Team. The rehabilitated cash offices were London Corner, Latrikunda, Bakau and Serekunda. In addition, new cash offices were also provided with the required computers and network devices for operational readiness.
- Providing complete support for Microplex Billing Printer and conducting routine monthly maintenance and necessary component replacements. This was all done by external contractor costing huge amount of money.
- Active Directory Management: Registered all new staff in the Active Directory, allocating profiles based on authorization documents and providing network access.



- Collaborated with software and system teams to resolve G5 and WARTSILA engine software issues, ensuring their restoration and functionality.
- Smart Water Meter Project: Collaborating with GCSD and WBU on implementing a Smart water meter project, focusing on data collection and network setup.
- Improve performance efficiency by developing SharePoint sites for every department within NAWEC and the creation of custom Power BI reports in OUC UAT.
- Active assistance and support for users in utilizing software applications effectively.

Legal Department

The Legal Department consists of three staff focusing mainly on regulations and safeguarding our organization's interests, ensuring compliance with regulations, and mitigating legal risks. Five top services provided by our Legal department are as follows:

1. Legal advisory services in the form of an accurate and comprehensive legal opinion to management and departments in NAWEC.
2. Legal compliance monitoring with regulatory and statutory obligations, providing regular updates and recommendations.
3. Litigation management by representing and managing NAWEC's interests in legal proceedings. While external or retained counsel handles court appearances, the Legal Unit provides all relevant documentation, briefs, and processes to support litigation.
4. Contract review and drafting to ensure compliance with applicable laws and organizational policies.
5. Board Governance Support by providing legal advice and documentation support for board meetings, resolutions, and compliance matters.

Communication And Public Relations

Our Communication and Public Relations Department provides strategic communication efforts that prioritize transparency, proactive outreach, and consistent stakeholder engagement, reinforcing NAWEC's commitment to reliability and professionalism. As usual, 2022 was another interactive year for this department. The Bantaba Show (a community outreach program on the Electricity Access Project) was introduced in 2022 and this brought a face-to-face meeting between our communication experts and communities all over the country (6 communities in GBA and all



the rural community chiefs and village Heads). Regular radio programs within the GBA were also extended to all the rural radio stations in 2022.

However, the absence of a Senior Manager for Communication in 2022 continues to underscore a gap in NAWEC's ability to effectively manage internal and external communication channels. This challenge hampers the organization's efforts to maintain its brand reputation, build strong stakeholder relationships, and disseminate crucial information

Health, Safety, And Environment (hse) :

The well-being of our employees, the safety of our operations, and our commitment to environmental sustainability are of utmost importance and priority. As a result of this, the directorate was supported by Azrom in January 2022 which conducted a review of NAWEC's Health and Safety and Environmental Management practices and made recommendations for the development of a functioning Health, Safety, and Environment management system across NAWEC by:

1. Assisting with the development of the new Group Health Safety and Environment Department and supporting the new Head of the Department develop the role and the HSE agenda
2. Designing institutions across NAWEC that reflect immediate needs for radically improved Health and Safety infrastructure and planned responses to Environmental responsibilities
3. Carrying out a "root and branch" review of NAWEC's health and safety policies, practices and infrastructure (across the EBU including Generation and T&D, the WSBUS, and the SS), and develop a set of proposals for change for adoption and implementation reflecting best practice and international standards.

This was followed by the recruitment of a competent Senior Manager for Health, Safety and Environment in October 2022.

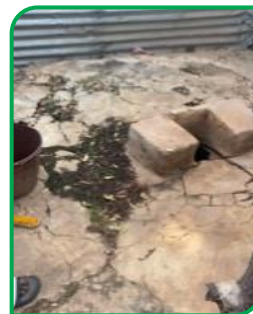
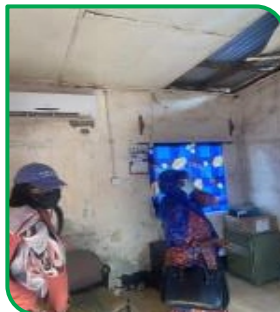
These two major developments in this department will pave the way for the development of a comprehensive HSE system for NAWEC in 2023.

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APPENDIX

FATOTO REVENUE OFFICE BEFORE AND AFTER



BANJUL REVENUE OFFICE BEFORE AND AFTER





LONDON CORNER BRANCH



LONDON CORNER BRANCH INTERIOR VIEW





LATRIKUNDA BRANCH BEFORE AND AFTER



BAKAU BRANCH BEFORE AND AFTER





SEREKUNDA BRANCH BEFORE AND AFTER





SEREKUNDA BRANCH INTERIOR VIEW



Build a new regional Branch in URR and CRR

1 DAY RETREAT OF 200 STAFF ON BUISNESS STRATEGY at the Tamala Beach hotel





**51 STAFF FROM THE DEPARTMENT TRAINED ON CUSTOMER SERVICES
AT BJM CONSULTING FIRM IN BRUFUT.**





5 PLUMBERS TRAINING HELD AT GAMBIA TECHNICAL TRAINING INSTITUTE (GTTI)



5 ELECTRICIANS TRAINING ON ELECTRICAL INSTALLATION AT GTTI





4 GCS MANAGERS PART OF LEADERSHIP & GOVERNANCE TRAINING

