

# Redefining Business



2017 | Sustainability Report









# Our Sustainable Footprints

## ABOUT THIS PUBLICATION

This is the Second Sustainability Report for Egbin Power PLC. The Data in this report covers the period of January, through December, 2017. Financial Information is given in U.S. dollars and Nigerian Naira. This report was prepared using the new Global Reporting Initiative (GRI) Standards, which is an upgrade of the GRI G4.1 Reporting Guidelines. The mission of the GRI is to promote international harmonization in the reporting of relevant and credible corporate economic, environmental and social performance information to enhance responsible decision making. The GRI has not verified the contents of this report, nor does it take a position on the reliability of information reported herein.

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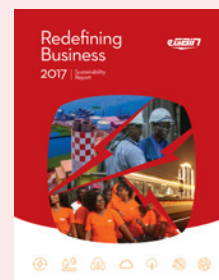
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**Kola Adesina**

Chairman, Board of Directors  
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# Board Chairman's Message

**W**e are pleased to unveil the 2017 Sustainability Report for Egbin Power Plc, with the theme “Redefining Business”. In the reporting year, we focused on redefining the business of power generation in Nigeria. As the largest privately-owned power generation company in Sub-Saharan Africa, we have decided to take the lead in this journey, sharing insights on the steps taken towards achieving the much-needed redefinition.



## Investments towards a Sustainable Future

Despite the liquidity challenges experienced throughout the sector in 2017, we can confidently say that Egbin raised the performance bar in the sector through continuing investments in human capital and infrastructure, resulting in an ongoing drive for sustainable performance and expansion. All through 2017, we remained committed to the project of lighting up Nigeria; which is what motivated our decision to acquire this asset in the first place; and we strongly believe that we will most certainly surpass our business and operational targets ultimately. It is also part of our vision to double the capacity of Egbin through our proposed Egbin Phase 2 project with an estimated capacity of up to 1,800MW. In addition, we intend to continue unit overhauls to ensure that we meet our existing power supply commitments to power off-takers.

Aside from Egbin Phase 2, concurrent plans are being made towards investment in an industrial park. It is envisaged that this will help boost the economy of our host and neighboring communities, through the creation of job opportunities and strategic infrastructural developments. These investments are all geared towards a sustainable future for Egbin Power Plc and the Nigeria economy at large.

## Economic Overview

In 2017, notwithstanding the challenges in the power sector, Nigeria experienced significant economic growth, with the Nigerian economy exiting the first recession that occurred in the last 25 years. The year also witnessed growth in Crude Oil prices. However, just like the previous reporting year, we experienced grid and gas constraints which affected our revenue in 2017. Nevertheless, we continued to strive towards achieving optimal operations and maintained our investments in human capital and infrastructure throughout the year.

It is no longer news that the environment for raising capital has progressively become more difficult since the privatization of the power assets in 2013. A combination of inconsistent regulations, costly

offshore loans, non-cost reflective tariff regime, high gas prices, poor collection efficiency and a number of other challenges have greatly discouraged the debt markets from injecting further capital into power projects. As a result of the huge arrears of unpaid receivables from power off-takers, Egbin Power Plc was unable to meet certain financial obligations during the reporting year. However, we worked closely with our partners and service providers to ensure that the outstanding debts which we incurred as a result of high levels of unpaid receivables did not affect our operations in the short-term.

In 2017, the Nigerian Bulk Electricity Trading Plc (NBET), with the support of the Federal Government of Nigeria, introduced a 701 Billion Naira Payment Assurance Scheme which guarantees the payment of 80% of all GENCO invoices for a period of time. Even though it only covers a percentage of current invoices, this scheme improved our cashflow in 2017. Another aspect of the scheme is that it also guarantees payment of 90% of gas invoices which is then deducted from the 80% paid for GENCO invoices. This helped to reduce gas invoice debts in 2017.

## Technical Services Strategy

The challenges in the sector are not only well known, but well documented. The reality is that the power sector is not properly aligned to deliver required service as desired. The sector is a value chain including all the players – gas suppliers, electricity generation, transmission and distribution companies. Therefore, it is necessary for all stakeholders to align properly in order to deliver electricity constantly to consumers.

In 2017, we decided to realign our technical services strategy with our technical partners. Also, as part of our human capital/capacity development strategy, we looked inwards to train our engineers in order to improve their technical capabilities. It is envisaged that this will benefit our organization in the long run, as the resultant improvements could already be seen during the reporting year.

## Outlook to the Future

We are willing and prepared to work with all sector stakeholders in developing and implementing a roadmap that will address how the sector will move forward from the debts owed to banks by the successor power companies. Also, as an organization, we remain committed to our plans to be more efficient in the future. We intend to achieve this by reducing the cost of operations, increasing investments in learning & development and improve availability, reliability as well as new off-takers. As mentioned in the previous reporting year, we have already begun exploring power generation supply through the “Light-UP Lagos” project with the Lagos State Government.

## Conclusion

Egbin Power Plc will continue to take all necessary steps to achieve business and operational sustainability. We will also continue to work closely with the government and other relevant stakeholders in order to improve the state of the power sector. The government alone cannot provide the required services; neither can it overhaul an entire sector on its own. But it is crucial that the government begins to address all the structural deficits that impede the sector if the privatization roadmap is to bring immense benefits to Nigeria and Africa as a whole. Notwithstanding the obvious challenges currently being experienced sector-wide, we are committed to the delivery of stable electricity in Nigeria and remain resolute in our efforts to redefine the power generation business.

Thank you.

**Kola Adesina**  
Chairman, Board of Directors  
Egbin Power PLC.





**Dallas M. Peavey Jr.**  
Chief Executive Officer  
Egbin Power PLC.

## CEO's Message

**T**he 2017 Sustainability Report for Egbin power Plc is the third edition in the series following the transition from a government-owned and managed the organization to one owned and operated by private investors since November 2013. This Report was prepared using the Global Reporting Initiative (GRI) Standards which promote international harmonization in the reporting of relevant and credible corporate economic, environmental and social performance information to enhance responsible decision - making.

Furthermore, the Sustainability Report provides insights into our corporate responsibility and stakeholder engagement

activities, as well as areas of achievements and existing/potential concerns regarding our business operations. In particular, the Report has sufficiently captured significant milestones and concerns, providing guidelines to the strategic initiatives that have been conceptualized and developed over the last four years since the takeover of the business operations. The rationale behind this is to ensure that we operate responsibly and sustainably despite the myriad of challenges associated with the transition from a government-managed enterprise to one that is led by private investors and stakeholders.

## Strategic Priorities

Our core strategic priorities are Health, Safety and Environmental Compliance, Regulatory Compliance, Employees and their Welfare, and Sustainable Quality Power Generation.

The welfare of our employees remained our number one priority in 2017. For Health, Safety and Environmental compliance as well as Regulatory compliance, we surpassed our targeted goals for 2017, as we were in full compliance without any recorded sanctions. Such an achievement indicates that the right steps were taken to ensure the sustainability and success of the Company. For Power Generation, our targets are based on Availability, Capacity, and Efficiency. Current Availability of our power plant is guaranteed at 85% but has achieved up to 92% of the installed 1320MW capacity.

Our significant challenges in 2017 included the liquidity crisis in the industry, ongoing gas constraints and limitations to evacuate generated power. These challenges affected the efficiency of the plant, and when there is less efficiency/availability or capacity, it will affect the successful attainment of return on investment.

Our strategic priority is to address the issues above both independently and collectively with the relevant stakeholders. These issues (illiquidity, gas constraint & evacuation) do not only affect our business but are also highly critical to the successful running of any power generation business like Egbin Power. Our strategic aim is to improve on these issues to achieve sustainability.

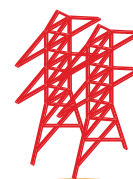
Part of our long-term goals is to develop alternative means of securing fuel supply and technological advancement within the plant so that we can then utilize those resources we have identified in the medium-term goals to bring about long-term success. Example of such a long-term project is the construction

of “Egbin Phase 2”. We have concrete plans to build an additional plant, which will double the capacity of the existing plant, utilizing less gas. It will be more efficient, more available as well as increased capacity. In meeting the Company’s goals, we will ensure that all internationally prescribed standards are adhered to, to secure the future of Egbin. Given the foregoing, it is pertinent we invest in Human Capital Empowerment to enable the company to actualize the much-needed technological advancement. As such, there will be continuing and evolving investment in human capital at Egbin Power Plc.

## Key Events, achievements, and failures during the 2017 calendar

In 2017, we continued to be constrained regarding gas supply and transmission which had a significant impact on our business operations. Also, the significant arrears of unpaid invoices for power sales continued to affect our ability to meet our core financial obligations in 2017. As a result, we were unable to achieve what we were expected to achieve based on our business projections.

Notwithstanding the foregoing, we were able to maintain availability in capacity despite all the operational and financial challenges. Also, a significant feat achieved in 2017 was the fact that international power sales from Egbin became recognized by the Federal Government and as a result, some payments were made to Egbin in



**92%**

**Max Availability Achieved**

**85%**

**Guaranteed Availability**



**Part of our long-term goals is to develop alternative means of securing fuel supply and technological advancement within the plant so that we can then utilize those resources we have identified in the medium-term goals to bring about long-term success**





The welfare of our employees remained our number one priority in 2017

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Despite the challenges in 2017, we were able to meet our operational targets as a result of the efforts of our competent personnel with the requisite experience



## Our General Management & Organizational Approach

### Environmental Consciousness

In 2017, all our business operations continued to be environmentally friendly, as the company has put in place several preventive measures to ensure a Zero Harm Compliance by preserving the local environment, and ensuring compliance with all Environmental Regulations and Policies.

### Corporate Social Responsibility (CSR)

All through 2017, we continued to promote and provide for our host and neighboring communities. We offered free and uninterrupted electricity power, drugs/medicine and treatment to local hospitals. We also offered boreholes, housing, infrastructure improvement, and scholarships. Each year, we provide up to 20 fully paid scholarships to exceptionally brilliant students and local area indigenes thereby enabling them to attend our schools.

### Financial Capacity

We have entered into various partnerships with credible financial institutions towards ensuring business sustainability. These partnerships helped us secure financial instruments to ensure that the required payment security and financing will be available to enable the plant to purchase gas, generate and evacuate the needed power to the National Grid.

### Gender Diversity

We continued the implementation of policies and initiatives which demonstrates that we are gender neutral, in the sense that there is no form of gender-based bias in any of our organizational decisions. As a reputable organization, we are more concerned about the value a person brings rather than gender. We have doubled the numbers of female staff working at Egbin in the last few years with female employees in technical, engineering and administrative departments doing just as well as their male counterpart. It is also important to note that females occupy the most strategic roles in Egbin Power Plc.

that regard. With the challenges experienced in 2017, we remain optimistic that our financial, transmission and gas supply challenges will significantly improve. We believe that these challenges can be surmounted through synergies between the industry stakeholders. To enable us to achieve this, we continuously engage all relevant stakeholders such as Transmission Company of Nigeria, Nigerian Bulk Electricity Trading Plc, Gas Suppliers and Distribution Companies, on a regular basis; as we need to effectively collaborate in achieving our overall goals and set objectives.

## Our commitment towards building a sustainable organization

In our progressive journey towards creating a sustainable organization, we have continued to evolve from a labour intensive organization to a capital, engineering, highly skilled workforce. Despite the challenges in 2017, we were able to meet our operational targets as a result of the efforts of our competent personnel with the requisite experience.

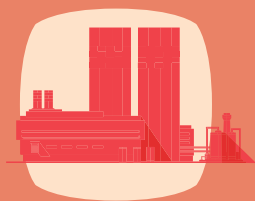
In 2017, we also commenced a knowledge sharing initiative, where the older and more experienced engineers conducted workshops to pass on the knowledge and skills acquired over the years to the younger engineers.

In addition to the above, we intend to continue significant overhauls to ensure that we keep power supply commitments under our Power Purchase Agreements.

**Dallas M. Peavey Jr**  
**Chief Executive Officer**  
**Egbin Power PLC.**



# Egbin 2017 Year in Summary



## Total Assets

**N430**  
Billion



## Revenue

**N76.8** Billion  
\$234.33 Million



## Maximum Generating Capacity

**63.45%**



## Total Power Generated

**3.53** Million MWh





**Investment in  
Community Projects**

**N60** Million

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**Investment in State-of-The-Art Personal  
Protective Equipment (PPE)**

**N19** Million

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**Staff Strength**

**377**

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**Environmental Incidents & Oil Spill**

**0**



An aerial photograph of a large industrial facility, likely a power plant or refinery, situated along a river. The main building is a long, rectangular structure with a yellow roof and white walls. Two tall, cylindrical smokestacks with red and white checkered patterns are visible. The facility is surrounded by green grass and a river. A parking lot with several cars is located in the foreground. The word "Profile" is overlaid in white text on the left side of the image.

# Profile





Our Vision  
Our Mission  
Our Core Value System  
Egbin Corporate Governance  
Board of Directors  
Business Framework  
Executive Management



**W**est Africa's largest power generation station, Egbin Thermal Power Plant, was built by the Federal Government of Nigeria. The plant was commissioned in 1985, and it is located at the heart of a small town called Egbin in Ikorodu Local Government Area of Lagos State, Nigeria.

Egbin currently supplies about 20% of the electricity going to the National Grid, which is consumed by residential, commercial and industrial electricity consumers in Nigeria, thereby making Egbin the largest provider of electricity generated for consumption across Nigeria.

Following the Sahara Group's acquisition of 70% shares in Egbin Power Plc in 2013 through a special purpose vehicle - KEPCO Energy Resource Limited (KERL), Egbin Power Plc was handed over to KERL by the Federal Government of Nigeria through the Bureau of Public Enterprises. The asset has been professionally and optimally managed with international best practices since November 2013 till date.

Over the years, Egbin has continued to maintain its operation of 6 units of 220 MW Hitachi Gas Fired Steam Turbines, a GE gas turbine and an emergency diesel generator with installed capacities of 1320MW, 24MW and 1.5MW respectively. In line with our resolve to promote the United Nations Sustainable Development Goals, we remain committed to reducing the impact of our business activities on the host communities, as well as the promotion of inclusive growth and development in Nigeria.

We operate a closed cycle thermal system where we source for water from deep wells that are located about three kilometers from the facility. Considering the fact that water is critical to the sustainability of our business operations, we have made it a point of duty to ensure that we conserve the use of by drawing up only minimal quantities of water from the aquifers.

Pumps are used to pressurize the water to transport it to the water treatment plant where the groundwater is treated to become potable and fresh water. The fresh water is further treated in the demineralization plant where it goes through a series of resins in vessels including anion, cation, and mixed bed. The

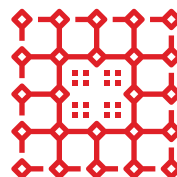
treated water which becomes demineralized water is pumped into the 705tons/hour steam generator, also known as a boiler.

The steam generator heats the demineralized water in a series of convoluted tubes to steam at the required temperature and pressure of 541oC and 12,500KPa respectively.

The steam in this condition is superheated and is conveyed to the steam turbine through lagged pipes. Accordingly, the steam turbine is divided into three - high pressure, intermediate pressure and low-pressure turbines, with all the turbines including the electrical generator on the same shaft coupled together at different points.

The expansion of the turbine, allows the steam to flow into the condenser where it is cooled by lagoon water to become condensate. This process starts power generation cycle where the condensate is pumped through a series of low and high-pressure heaters to increase the temperature of the feed water before it enters the boiler.

Using a state-of-the-art hydrogen plant, Egbin produces hydrogen from an electrolysis process. The hydrogen produced has high thermal conductivity required to absorb the heat generated when the electromotive force is induced in the electrical generator. Consequently, the high heat transfer from the generator windings ensures an efficient generator level of about 98%. This high efficiency at the generator enables Egbin to wheel out more power at the most cost-effective rate for a steam power plant.



# 20%

**Egbin Quota To The National Grid**





### Our Vision

To be the provider of choice where energy is consumed



### Our Mission

We transform through sustainable and reliable innovation in energy generation, connecting lives and positively impacting livelihoods.



## Our Core Value System

**E**gbin Power Plc is guided by values and principles which are not only required to engage better with the economy, society, and environment but are also needed to improve the dynamics of the power industry in Nigeria, where operations are in line with international best practice. Our values and principles are designed to ensure that the company achieves sustainable long-term success. We harness our core values from the acronym S.P.I.C.E.S, which distinguishes us and guides our activities. They are as follows:



## Egbin Corporate Governance

**The success of our company depends mainly on well-articulated corporate governance frameworks, policies, processes and procedures that engender transparency in all aspects of our electricity generation business.**

**T**he Institute of Directors, Nigeria defines corporate governance as the structure through which an organization is directed, controlled and held accountable. It establishes a framework of rights, responsibilities, procedures, and relationships amongst the various stakeholders of an organization, including its directors, managers, shareholders, regulators and other stakeholders.

Corporate governance is the principles and processes that guide the conduct of the affairs, business operations, ethics, norms and values, service delivery, and customer relations of Egbin Power Plc.

Globally, it is a well-known fact that the sustainability of any company comes about where organizations have put in place policies, processes, and procedures which will guarantee fairness, accountability, responsibility, transparency, and efficient risk management.

Following this, Egbin has established corporate

governance structures to enable the effective implementation of the company's strategies, policies, processes, and procedures. In Egbin Power Plc, it is a shared knowledge amongst the entire workforce - from the board of directors to the chief executive officer, senior management team and all employees, that the success of our company depends mainly on well-articulated corporate governance frameworks, policies, processes and procedures that engender transparency in all aspects of our electricity generation business.

Furthermore, in ensuring sustainable operational excellence in regulated power industry, the need to be transparent in our business operations to better engage our external stakeholders cannot be over-emphasized. The need for increased transparency necessitated the creation of internal control mechanisms to reduce business risks to the barest minimum, with the resolve to eliminate them in the near future.

## Board of Directors

As an economically, environmentally and socially responsible company ensuring compliance with the Board Charter, Egbin board of directors' responsibilities involve putting in place effective and efficient corporate governance, risk management, performance accountability, and MEMART adherence.

In the preceding reporting year, sound governance systems were formulated, instituted and reported in the 2015 sustainability report. In strengthening the corporate governance structure to enshrine our core value system, two highly experienced legal and compliance professionals were recruited to bolster board's drive to promote and sustain our business

principles, standards and norms stipulated in the company's corporate governance guidelines, code of ethics, business principles and human resource policy.

Underscoring the importance of corporate governance to Egbin Power Plc as a business, is the fact that the company's board of directors does not only formulate and approve the broad corporate governance framework, it is also deeply involved in the implementation of the instituted framework. The Board drives the implementation of the framework through its audit, risk, and governance committee; finance, investment and general-purpose committee; and technical and operations committees.



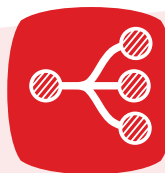
## Business Framework

At the heart of Egbin's power generation business setup are our customers - Nigerian Bulk Electricity Trading Plc and our bilateral customers. We have resolved to ensure that all our activities and business operations are focused on satisfying the consumers of the power that we generate. Despite myriad challenges in the electricity market, ranging from gas constraints to limited power transmission capacity of the national grid; illiquidity challenges; we continuously and progressively review the measures in place, targeted at surmounting the challenges and making the Nigerian power sector a strong, vibrant market.

In ensuring the sustainability of our power generation business, we have mapped out our organizational goals and strategies and set out implementation plans through policies, processes, and systems to enable the company to succeed in the current challenging business environment. Our approach to addressing the issues has two dimensions - independently and collectively. On our part, we have identified other sources of fuel supply whose fuel may be fired in our boilers to produce power. Liquefied natural gas is one of the fuels we are considering piping to our facility so that the dependence on the single gas line of the Nigerian Gas Company - our current gas supplier, may lessen. Cooperation with



Policies



Process



Systems

the players in the industry is another approach we are taking to help proffer solutions in the electricity market to the several challenges that hamper growth in the sector. We have charted ways by which we could render assistance to the Transmission Company of Nigeria to improve their ability to evacuate the power been generated. This assistance may be in the form of funding for maintenance projects or equipment upgrade.

The power industry in Nigeria is a firmly regulated sector that involves several players who work together to deliver electricity to the consumers at a cost-reflective tariff. Therefore, Egbin continues to play its part as a power generation company (GENCO) ensuring industry improvements, while complying with the Electric Power Sector Reform Act of 2005, regulatory guidelines, code of corporate governance and policy statements of the Federal

Ministry of Power, Works and Housing.

Our determination to carry out power generation using our core values (SPICES), which includes sustainability, has enabled Egbin to adopt the international best practice in all its areas of operations. Accordingly, we operate in compliance with the highest operation, maintenance and safety standards that are currently applied in any modern power station in the world. Although we recognize that we need to continuously perform expensive overhauls and innovation to stay competitive in the business of electricity production and delivery, we have set the ball rolling by instituting systems, policies, processes, and procedures that will manage the human capital and intellectual capacity required to secure the sustainability of Egbin power station.

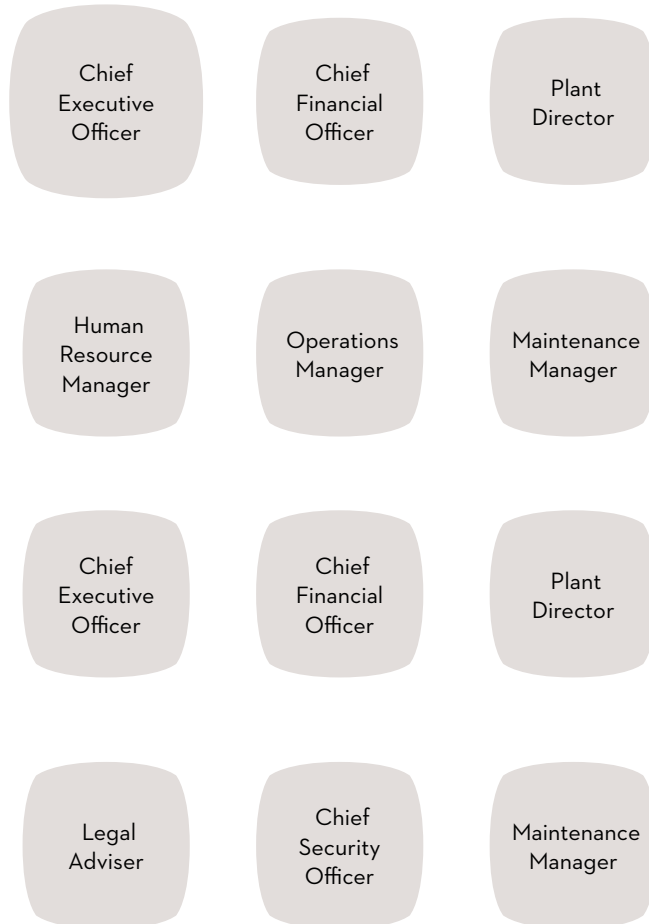
Sustainability of a power station cannot be achieved without the cooperation of the players in the industry and the stakeholders that ensure smooth operation. Wherefore, we understand the level of collaboration needed amongst industry players in all part of the value chain, to promote the growth and development of the electricity sector. This has made our company take necessary steps to work more with the Transmission Company of Nigeria to assure more power evacuation and better engage with the Nigerian Bulk Electricity Trading Company, as well as our vendors and suppliers to create a sustainable supply chain management system.



**In ensuring the sustainability of our power generation business, we have mapped out our organizational goals and strategies and set out implementation plans through policies, processes, and systems to enable the company to succeed in the current challenging business environment.**

## Executive-Management

The corporate goals and objectives which are components of the broad organizational strategy laid out by the board of directors are championed by a dynamic team of professionals who are committed to implementing the corporate strategy as well as manage the technical and business support staff to effectively and efficiently utilize financial, material and human resources.









A photograph of a male worker in profile, facing left. He is wearing a white hard hat with a red logo, safety glasses, and yellow earplugs. He is wearing a white work shirt with a dark checkered collar and a logo on the chest. He is operating industrial machinery, with his hands on a control panel. The background shows large industrial tanks and pipes. A solid red vertical bar is on the left side of the image.

# Plant Operations & Maintenance





In-House Maintenance Successes/Status of Technical Services Agreement with KEPCO  
Business Approach  
International Operating Standards  
Sustainable Development Goals  
Commitment to Compliance Obligations

**O**ne of our business objectives is to remain the preferred energy supplier of choice. Therefore, to achieve this objective, we have put in place a robust Operations and Maintenance (O&M) mechanism. As with previous years since the transition to a privately-held entity, the company maintained an unwavering focus on ensuring the continued entrenchment of global best practices in its O&M activities. This was strategically done, to adopt more cost-effective asset preservation methods by leveraging on the in-house technical capabilities of our human capital; as well as the development of more proactive plant maintenance and operating philosophy, designed to reduce avoidable equipment downtime.

As a thermal steam plant, the production of high-quality steam safely and efficiently is a critical component of the power generation process. Tasked with ensuring this business objective is achieved within pre-defined operational parameters is the boiler maintenance team. Achieving this typically involves ensuring the availability of the boiler and the associated auxiliary equipment required for steam production by carrying out a broad range of activities across the maintenance activities in line with Original Equipment Manufacturer (OEM) requirements.

Central to the company's core values (S.P.I.C.E.S) is Safety. Safety is paramount to the company for optimum output and preservation of all resources for business sustainability. Failure to preserve the health of employees, environment, and equipment would inevitably affect the long-term viability of the business. There are also far-reaching effects of poor machine operating conditions on the environment. Hence, ensuring a safe and healthy work environment is the key to the long-term sustainability of our power generation business.

In compliance with the company's organizational policy on ensuring workplace safety, the boiler section like all other

O&M departments within the company continued, in 2017 reporting year, with the system of conducting daily toolbox/safety briefings as prerequisites before carrying out any maintenance activity in the plant facility. The daily toolbox meetings are usually conducted with a comprehensive risk and hazard elimination methodology in mind. This approach ensures that all potential safety hazards or risks associated with carrying out any maintenance activity is eliminated and where this is not practicable, appropriate and established mitigation techniques are utilized, such as precautionary actions on site, hazardous materials handling and proper use of Personal Protective Equipment (PPE). These toolbox meetings are decidedly interactive, ensuring that all team members can contribute and any individual concerns that exist are openly discussed and addressed for the benefit of all. With this sort of significant activity, the risk of shutting down the turbines due to injury, fatal accident or damaging costly equipment is significantly reduced. Also, any unsafe acts that could have led to accidents in this high-risk environment are substantially dealt with.

Significant progress was made in 2017 regarding the enforcement of safety policies and regulations; particularly around the testing of confined spaces to ensure a conducive environment for maintenance personnel and use of appropriate permits and PPE's. Previously, due to several constraints such as awareness level, testing equipment availability and compliance, specific tests were not carried out duly when confined spaces were exposed for

entry by the maintenance crew. However, in the reporting year, we recorded a robust level of enforcement regarding safety guidelines and regulations by the company's HSE department and O&M departments, which resulted in improved workplace safety and zero lost time due to injuries or other forms of accidents.

In the 2017 reporting year, the Maintenance Planning Unit implemented Maintenance Planning Guidelines for the Operations and Maintenance Departments, to create more comprehensive maintenance schedules and increase the synergy between various units working on maintenance tasks that required cross-functional participation from several maintenance departments. The adoption of this approach has led to the reduction of equipment downtime as a result of maintenance activities. In quantitative terms, the entire generating facility recorded a 45% reduction in unscheduled breakdowns, due to reactivation of routine maintenance activities on the unit and auxiliary equipment. Also, in 2017, the Company's management approved and implemented a lateral movement of Three (3) experienced technical personnel into the Maintenance Planning Unit which further strengthened the department.

In 2016, the company introduced the Computerized Maintenance Management System (CMMS) which was aimed at synchronizing all aspects of maintenance and defining the roles and responsibilities of the various units towards achieving smooth coordination, reduced downtime, proper planning of tools and materials requirements, effective communication with

# 45%

## Achieved Reduction in Unscheduled Breakdown

Due to reactivation of routine maintenance activities on the unit and auxiliary equipment







Impact on Sustainability  
Development Goal



Develop quality,  
reliable, sustainable and  
resilient infrastructure,  
to support economic  
development



plant operators, and accurate job tracking and reporting. Although successes were recorded in the tracking and reporting of maintenance activities, the deployment of the CMMS was largely restricted to certain spheres of the operations and maintenance spectrum. With a successful understudy and resolution of teething challenges experienced with the deployment of the CMMS, there is a plan for the Maintenance Planning Unit to effect the full functionality of the CMMS, to ensure seamless Maintenance and Operational interactions, reduce down times, and increasing power generating capacity. A critical component of this expanded drive would be to incorporate the logistics component of O&M process chain to ensure critical allied matters like determining re-order levels and stock requirements are factored into the maintenance management and planning process.

In ensuring every generating unit does not encounter unnecessary breakdowns and reduced efficiency, routine maintenance activities were carried out, with varying frequencies depending on the equipment under maintenance. It could be daily, weekly, monthly, yearly, etc. These activities are generally broadly classified by the maintenance planning unit into planned maintenance activities which are activities that are scheduled and planned for before a unit or equipment is shut-down. Unplanned maintenance activities, on the other hand, are activities prompted because of a breakdown of equipment on a unit or its support auxiliaries. They are further divided into priorities depending on the urgency of the job. It is a continuing target of the unit to reduce the occurrences of unplanned maintenance activities by the adoption of a re-invigorated preventive maintenance approach.

In line with internationally accepted best practice and as part of our long-term maintenance planning approach to ensuring the longevity of plant equipment, the maintenance planning unit schedules comprehensive maintenance inspections for the six generating units on an annual basis. This is usually scheduled at the commencement of each year to ensure optimum operation of the units.



**In line with internationally accepted best practice and as part of our long-term maintenance planning approach to ensuring the longevity of plant equipment, the maintenance planning unit schedules comprehensive maintenance inspections for the six generating units on an annual basis.**

It is important to note that this maintenance philosophy also complies with the contractual requirement according to Schedule 12 of the existing power purchase agreement between Egbina and Nigerian Bulk Electricity Trading Company (NBET) that mandates scheduled outage periods through the year for each of the generating units to undergo maintenance activities.

Due to prevailing economic conditions, planned overhauls did not take place in the 2017 reporting year.



## In-House Maintenance Successes/Status of Technical Services Agreement with KEPCO

**I**n the previous reporting year, we reported that there was a realignment of the technical partnership with the Korea Electric Power Corporation (KEPCO). This realignment meant that the operations and maintenance departments within the company assumed custodial responsibility for maintenance activities hitherto handled by KEPCO. This resulted in the creation of considerable opportunities for our engineers and technicians to exhibit technical and managerial competency following three years of technical and managerial development by our technical partners.

In the 2017 reporting year, the company continued

to leverage upon available in-house technical expertise and resources adequately to ensure the plant and its auxiliary equipment were operational in line with scheduled maintenance programmes. In 2016, a significant challenge faced was the forced shutdown of a unit due to boiler tube failures. Learning from that experience, a more comprehensive inspection process was put in place to ensure that such occurrences were limited to scheduled maintenance plans only. Also, the company sponsored the training of technicians on Tungsten Inert Gas welding, a specialist knowledge requirement for boiler tube maintenance.

**In the 2017 reporting year, the company continued to reap the benefits of this strategic investment in building specialist capacity of its human capital, as it eliminated the dependence on contractors for routine boiler tube repair activities. In addition to this, in 2017, the company also recorded some maintenance successes driven by its O&M team. Some include:**

1

### Rehabilitation of Advanced Camp Water Treatment Plant

The advanced camp water treatment plant produces potable water for residents in advanced camp area of Egbin Power Station and some parts of the housing colony. The advanced camp water treatment plant was in dire need of rehabilitation as pumps, lines, valves, and storage tanks all had defects that reduced the efficiency of the water treatment plant. During this period, some areas of the housing colony experienced a shortage in treated water supply. Upon the rehabilitation project approval, all defective parts were identified, removed and replaced with an upgraded part. The other plant parts were thoroughly cleaned and some coated with anti-rust paint. The rehabilitation project was successfully completed, and the plant was commissioned.

#### Impact on Sustainability Development Goal



**Ensure access for staff to adequate, safe and affordable housing and basic services**

2

### Drilling and development of new deep-water wells

Deepwater wells are the primary source of water to the station through pumps and lines for onward treatment and use in both the plant and housing colony. Due to the age and extended usage resulting in its dryness or collapse, the development of new wells was required to maintain the initial design requirement of the plant. Upon approval, Boiler Maintenance personnel in conjunction with vendors designed, drilled, developed and commissioned new wells. Since its commissioning, the new wells have been performing as required.

3

### In-house replacement of Unit 2 Boiler Electric Relief Valve (ERV) Isolating valve

As the name denotes, ERV isolating valve isolates the ERV for maintenance or control purposes. The isolating valve became defective as a result of steam leakage from the bonnet. This leakage eroded parts of the valve body and bonnet rendering them unusable. Following this discovery, it was recommended for replacement with a readily available spare in the store. In line with the maintenance guideline, a program for its replacement was drawn and implemented. This project was a huge milestone as it was wholly done for the first time in-house by a combined team of our Boiler and Workshop personnel. After its completion, the valve was commissioned and confirmed to be suitable

5

### Repair/Reinstallation of Unit 2 Cold Reheat Line

The Cold Reheat line supplies exhaust steam from the high-pressure turbine to the re-heater for reheating purposes. In line with its design and operation, the cold reheat line may be subjected to unusually high pressure and water hammer which could lead to excessive vibration and further collapse of the line from its supporting structures. In the early days of January 2017, this unusual experience occurred, and its damage had huge impacts on its supporting structure and further leading to the unit's shutdown. Boiler personnel with the help of Workshop personnel spares and fabrication of rods were required. The project was successfully completed by mostly in-house personnel in record time and at minimal cost, sprang into action putting in extra hours to restore the line to its design position. Due to its chain damage on the snubbers and hangers, a lot of

6

### In-house replacement of Unit 2 Boiler Electric Relief Valve (ERV) Isolating valve

The freshwater tank is a water storage tank for the onward supply of fresh water to the demineralization plant and for fire-fighting. During the routine sampling and testing of the water from the fresh water tank, a high particle level was discovered leading to further inspection of the tank. As a result of the inspection, it was discovered that the tank's internal structures were damaged and some heavily corroded pipes required replacement. Our Boiler personnel in conjunction with external vendors opened cleaned the internal parts and replaced damaged ones with new parts. This project was completed successfully and the tank restored to its design function; marking another significant milestone as this was the first time a project of this magnitude was completed successfully under our supervision and confirmed to be suitable

4

### Installation of refurbished ST- 3 Forced Draft Fan (FDF) A motor bearing

During a routine equipment condition monitoring, the excessive vibration was discovered on ST- 3 FDF A motor load side bearing. This led to its shutdown and further limitation of the unit to a maximum of 50% MCR. To restore the unit back to its full capacity, prompt actions were taken to disassemble the fan and motor to access and remove the damaged bearing. The damaged bearing was then refurbished by an external vendor and returned for re-installation. With the help of our Turbine department personnel, Boiler department was able to install, align and assemble all fan and motor parts according to design and within the agreed timeline. This was a significant milestone as a project like this had never been handled without the assistance of external experts. The FDF was tested and commissioned for use, and its performance was as good as new.



## Other New Developments

With the arrival of our rehabilitated/re-engineered generator transformer that had hitherto been undergoing repairs for 26 months, run-up activities began in the last quarter of 2017 on ST-1 that had been shut down throughout the 2016 reporting year. It is expected to resume grid duty in 2018.

Due to a vibration fault on the turbines, our ST-3 was shut down in June 2017. Together with a combined team of in-house engineers and external contractors, restoration work commenced on it in December 2017 and it is expected to be available for grid duty in 2018.

## Sustaining Operational Performance

The input fluid used to drive the turbine is water which has undergone the demineralization process, and that has been heated to superheated steam with energy. It goes through a closed cycle, changing the thermodynamic phase from steam to condensate to feed water. Therefore, 100% of the working fluid is recycled back into the system for continuous power generation; although, due to inefficiencies in the system and other losses, there is a negligible deviation from 100% that cannot be accounted for. For steam power generation, Natural Gas is used in the boilers to generate the heat required in the furnace to heat up demineralized water and produce the superheated steam which is used to drive the turbines for generation.

At Egbin, for steam generation, the boilers are designed to be powered by two sources of fuel for combustion: Natural Gas; and High Pour Fuel Oil otherwise known as HPFO. In order to conduct a Black start, the Emergency Diesel Generator and the

Gas Turbine Generator are powered by diesel, for start-up, while it is powered by Natural Gas during normal operation. Diesel is used in the black start equipment to power the unit auxiliaries during the loss of national grid supply and also for ancillary services. As part of efforts to ensure continued serviceability of the alternate oil firing option of the generating units, Low Pour Fuel Oil (LPFO) was successfully used as input fuel to run ST-6 from the 14th of November to 16th of November 2017. A percentage of energy output is usually consumed by the auxiliary equipment such as pump motors etc. to keep a unit operating or to conserve it during shut down.

As a closed cycle system, the steam used to power the turbines is recycled back to water using condenser cooling. The steam is cooled with water pumped from the lagoon through a tube & shell cooling heat exchanger to absorb the latent heat of vaporization of turbine exhausted steam and condense the steam to condensate. There were no new initiatives made in the 2017 reporting year to reduce energy requirements because the planned overhauls were unable to take place due to economic challenges. The overhauls are now expected to resume fully in 2018.

Attaining fuel supply sustainability is key to ensuring that Egbin remains the provider of choice wherever energy is consumed. In the 2016 reporting year, due to the unpredictability of gas supply, the company successfully rehabilitated the entire HFO unloading bay since most associated equipment due to non-use had deteriorated significantly. In light of this, the Heavy Fuel Oil (HFO) unloading bay in the Egbin facility which is an essential part of the power plant consisting of pumps, valves, and lines required to evacuate and transfer HFO from the supply vessels to the storage tanks was restored to its original functions.



### Impact on Sustainability Development Goal



Ensure access to affordable and clean energy for all

## Business Approach

### International Operating Standards

**A**t Egbin Power Plc, we are committed to ensuring that international best practices are applied in all areas of our operations to guarantee the sustainability of our business. To achieve this, our Quality Health Safety Security Environment (QHSSSE), Plant Operations, Equipment Maintenance, and Asset Management systems, have been designed to be consistent with international operating procedures and practices. Our quest to operate a sustainable business has propelled us to adopt and implement international operating standards which have now become our corporate culture and way of life. In promoting international standards in power generation. Building upon our enviable performance in 2016, we achieved again in the 2017 reporting year, the remarkable safety performance of zero fatality rate, extremely low emissions which were well within internationally acceptable limits; increased safety awareness and training, increased investment in employee healthcare, etc.

To reduce the energy wasted at different points and terminals of the Egbin Power Station, as well as ensuring our business sustainability, Egbin Power Plc utilized globally accepted operating procedures and practices to achieve efficiency in energy performance. We continued in our efforts to improve our energy performance because we leveraged on international best practices to identify energy saving opportunities that could be introduced to maintain and improve our energy management system, thus increasing our energy efficiency throughout the reporting year of 2017. The overall efficiency in 2017 based on the output/input method of calculation was 29.79%.



# 27%

#### Energy Efficiency Levels in 2017

An increase in energy efficiency, from the previous year, based on the output/input method of calculation



### Sustainable Development Goals

As a company, we have adopted the 17 Sustainable Development Goals (SDG's) of the United Nations as essential tools for attaining sustainability. The United Nations Sustainable Development Goals Fund (SDG-F) in New York inaugurated the Private Sector Advisory Group (PSAG) made up of 13 private sector organizations from across the world in April 2015 to support the SDG-F in developing sustainable solutions to identified global problems. Notably, the Sahara Group is a member of the SDGF's advisory board and also one of the arrowheads of the PSAG in Nigeria. As a sustainability-driven organization, the project is critical to Egbin Power Plc. In the reporting year, we continued to promote the objectives of the PSAG through our various Personal and Corporate Social Responsibility initiatives.

## Improved Asset Management

In the 2017 reporting year, the company continued to build upon the restructured asset management system that began in 2016, as part of a company-wide effort to strengthen management capabilities, improve strategic utilization of management resources and establish systems to support efficient operations. As a result, there has been an ongoing strategic implementation of structured business processes and models for asset reliability and integrity required to achieve long-term sustainability.

As an organization, we believe that our people are the most valuable asset. Therefore, our priority is the creation of an environment where our people can positively impact on reliability and asset integrity, improved team behaviour towards error reduction. During the reporting year of 2017, our maintenance task delivery system was further optimized with the introduction of the maintenance planning guidelines for operations and maintenance departments by the Maintenance Planning Unit, which is saddled with the responsibility of developing the details of the maintenance processes/ techniques, coordinating the optimization of asset maintenance and inspection strategy using relevant records and data. The use of benchmarks, Key Performance Indicators, and other quantitative metrics to drive performance development and improvement continued in the 2017 reporting year.



## Commitment to Compliance Obligations

Egbin Power Plc has continued to lead by example in the Nigerian Electricity Supply Industry. We pride ourselves in knowing that we do not fall short on obligations owed to external bodies/ organizations that govern our business activities. This enduring commitment is consistently demonstrated through the regular and early filing of our financial statements with Nigeria Electricity Regulatory Commission (NERC), as well as the prompt filing of both employee and employer contributions. Our track record has been proven over time with no recent record of penalties or fines paid due to non-compliance with laid down procedures. To ensure business sustainability, the directors, management and employees of Egbin Power Plc., continue to be committed to the laws, internal corporate rules and regulations that govern our business op-



erations. To further show our commitment to our compliance obligations, the board of directors of Egbin has approved the development of a Corporate Compliance Manual, which will serve the purpose of driving the efficient implementation of our business operations based on laid down compliance procedures.







● Economic Material Aspects
 ● Environmental Material Aspects
 ● Social Material Aspects





# Economic Sustainability





Business Sustainability  
Economic Performance  
Organisational Supply Chain  
Supply Chain Management  
Plant Availability & Reliability  
Financial Status  
Investment & Expenditure

## Business Sustainability

**E**gbin Power Plc.'s capital structure remained unchanged from 2016, with Sahara Group through a Special Purpose Vehicle (KEPCO Energy Resources Limited) owning 70% of shareholding, Bureau of Public Enterprises (BPE) with 24%, and Ministry of Finance Incorporated holding the remaining 6%.

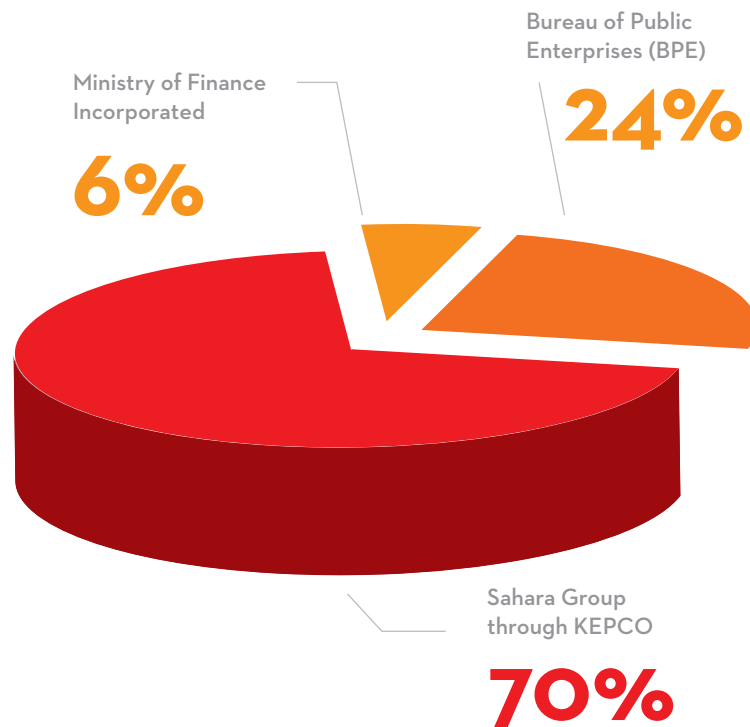
## Economic Performance

In 2017, the Nigerian economy existed its first recession in the past 25 years, the year witnessed growth in Crude Oil prices from the budgeted benchmark of about \$38/barrel in 2016, to an average of above \$50 in 2017. In addition to the increase in oil prices, well-managed unrest and the bombing of pipeline installations and other government assets in the oil-rich Niger-Delta region resulted in positive Gross Domestic Product growth in the second quarter. The combined impact of the improved enabling environment in Oil producing areas and the increase in oil prices led to the stability of Naira to the Dollar at an average of N305/\$ in 2017.

These socio-political issues mentioned above did not immediately make 2017 a good year for most companies operating in Nigeria, and Egbin Power Plc was no different because we were affected by industry-specific issues such as grid and gas constraints. During the reporting year, Egbin Power Plc recorded a total generation of 3.5 million MWh (down from 4.4 million MWh in 2016). In the early parts of the trading period, gas was not available for production due to the insecurity in the Niger-Delta. Egbin managed an average of 317MW between January and April 2017 as compared with 440MW recorded as the average figure for the subsequent months in the year.

The year recorded a decrease in revenue of about 2% settling at around N76.7 billion (\$234.33m) in 2016, down

## Egbin's Capital Structure



from the revenue figures of N78.2bn (\$302.75) recorded in 2016. The reduction in earnings was due to the decrease in generation as a result of grid and gas constraints in the earlier part of the year. The translation of Egbin's financials to USD (\$) was based on NIFEX rate (Nigeria Interbank Foreign Exchange rate at an average of N327/\$) in 2017 compared to 2016 that was translated using CBN rate (an average of 305/\$) thus the variance in USD performance in 2016 & 2017.

The stability of the CBN exchange rate at an average of N305/\$, directly translated to the increase in the value of invoices sent out as bills to customers. An exchange rate gain (Net) of about N1.58 billion that came from the revaluation of our dollar-denominated obligations for Operation and Maintenance (O&M) expenses and procurement of major spares and equipment using the NIFEX rate against N400 per Dollar projected for 2017.

In 2017, the cost of sales also decreased by 11% closing at about N79.44 billion. The decrease in cost of sales was a significant contributor to the reduced loss

before tax figure of about N1.9 billion. This was a significant improvement from the N19.8 billion loss we recorded in 2016. By the end of 2017, total assets had increased to N430 billion, 8% increase from the figure recorded in 2016. This increase can be attributed mainly to the increase in receivables from off-takers of electricity from N76.94 billion in 2016 to 109.23 billion in 2017. Due to the enormous receivables, Egbin Power Plc. has been unable to meet certain financial obligations. We have worked closely with our partners to ensure that the outstanding debts resulting from high levels of receivables do not jeopardize our sustainability in the short-term.



**The stability of the CBN exchange rate at an average of N305/\$, directly translated to the increase in the value of invoices sent out as bills to customers**

## Power Generating Figures

**3.53**  
Million MWh



### Total Generation in 2017

Down from 4.4 Million MWh due to insecurity in the Niger-Delta



**N76.7** Billion  
(\$234.33 Million)



### Revenue Generated

Down from 4.4 Million MWh due to insecurity in the Niger-Delta

**N430**  
Billion

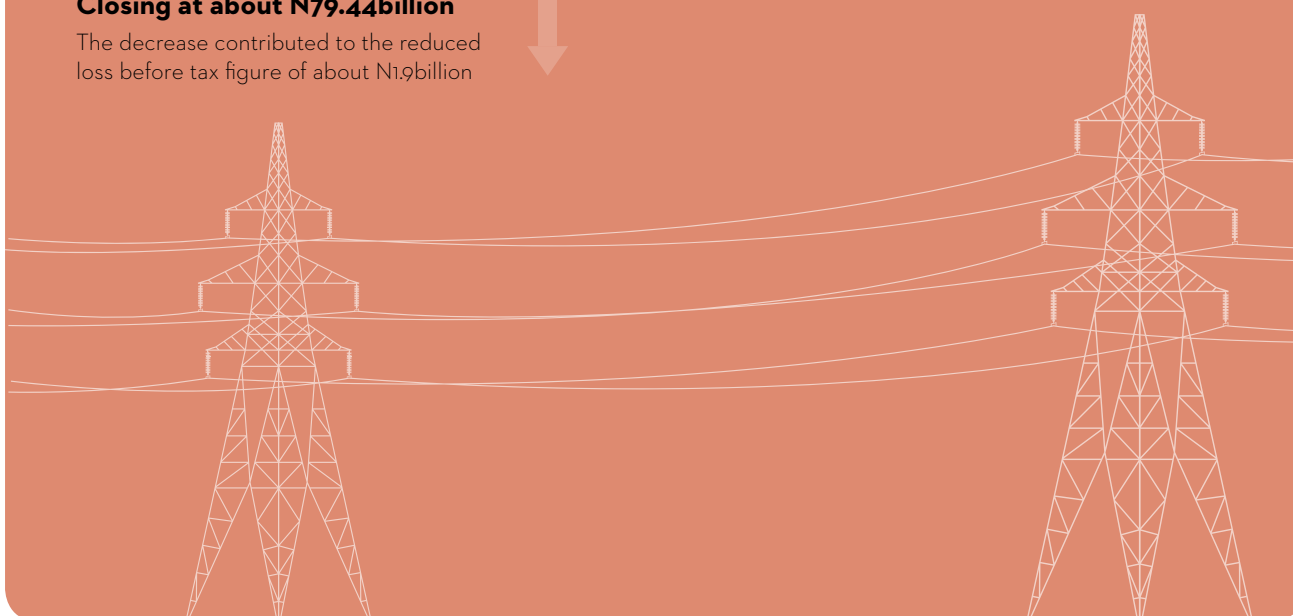
### Total Assets

An 8% increase from the 2016 recorded figure

**11%**

### Reduction in Cost of Sales Closing at about N79.44 billion

The decrease contributed to the reduced loss before tax figure of about N1.9 billion





## Organisational Supply Chain

### Procurement Practices

**E**gbin's Supply Chain Management is aligned with international standards of procurement which involves understanding the business needs at every point in time and managing supplier performance to boost the business performance of the organization. As a way to encourage technological advancement in the country, Egbin prioritizes local sourcing of services, spares and replacement parts. The company sources for services and spares internationally only when they are not readily available locally.

Egbin power PLC supply chain operates a transparent chain which creates a sustained value from the suppliers to the user department.

During the period under review, Egbin power Plc reviewed contractors' engagement to ascertain those that met up with our technical standards and bargaining agreement to continue dealing with the company. Hence, from 270 in 2016, our suppliers decreased to 175 in 2017, recording a 65% reduction from the preceding year. This represents the current number of technically fit and qualified suppliers that have passed through the mandatory vendor registration process. Egbin Power Plc depends on the key suppliers and the third-party providers, locally and internationally, for the supply and maintenance of equipment and services that are needed by the company towards meeting its objectives. Owing to the fact that some critical and high precision equipment are not manufactured in Nigeria, 80% of the suppliers are based in Nigeria while others are based in Asia and Europe.

There is an ongoing Vendor registration process geared towards increasing the number of qualified suppliers and service providers to strengthen our service delivery further.

The total estimated monetary value of payments made to suppliers in the period of review is estimated to the tune of 38 billion Naira.



**There is an ongoing Vendor registration process geared towards increasing the number of qualified suppliers and service providers to strengthen our service delivery further.**







175

Suppliers

A reduction of 65% from the preceding year, due to technical standards and bargaining agreement review

N38 Billion

Estimated monetary payment value made to suppliers

80%

Indigenous suppliers based in Nigeria



## Supply Chain Management

**A**s an organization, we ensure that we create value at every level of our business operations. For ease of understanding, we have categorized some members of our supply chain into the following groups:

### Brokers

In a bid to ensure that the value created at every level of our business operations is also sustained, we ensure that all our generating assets are covered under comprehensive insurance policies through our broker/agent management system, thereby ensuring that are not only our plants insured against risk, but also our people and all other forms of combined risks that could arise from our operations and to our people are fully assessed and covered.

### Wholesalers

The Nigerian Gas Processing and Transportation Company Ltd (NGPTC) is one of our major wholesalers as it supplies the gas that is used as feed-stock to power the turbines of our plant. In 2017, there was a gas constraint for the first four months due to vandalism of the pipelines that transport the gas to our facility, after which gas was freely available.

As part of our measures to forestall the ongoing liquidity challenges and associated challenge of gas constraints, we have taken steps to partially activate our Gas Sale and Aggregation Agreement (GSAA) with Chevron Nigeria Limited (Chevron) for the supply of gas to the facility. The terms have been finalized between the parties for the arrangement to kick-off. However, we envisage that direct gas supply from Chevron will commence in 2018.

### Offtakers

#### A. Nigerian Bulk Electricity Trading Plc (NBET)

Through a Power purchase agreement (PPA) entered into between NBET and Egbin Power Plc, NBET purchases bulk power from Egbin Power Plc and resells the power to the distribution companies (DISCOs) according to demand, based on the vesting contracts it enters into with the Discos. NBET being the primary customer of Egbin Power Plc, plays a vital role in the success of the company. In 2017 NBET with the support of the FGN has guaranteed the payment of 80% of all Genco invoices through 701Bn Payment assurance guarantee scheme. This will improve the liquidity of the power industry although it only covers a percentage of current invoices only, this also guarantees payment of 90% of the gas invoice from the 80% of GENCO invoices guaranteed.

#### B. Bilateral Offtakers

Egbin currently has a bilateral contract with Ikeja Electric (IE), where energy generated by our Unit 6 is supplied to the feeders designated by IE. There is also a plan to provide 450MW for the Light Up Lagos project through a bilateral contract, and it envisaged that this would commence in 2018.

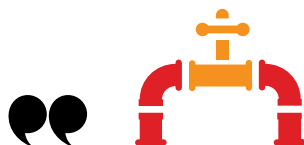


## 450MW Light Up Lagos

Plan by Egbin Plc and Ikeja Electric to provide 450MW for the Light UP Lagos project through a bilateral contract

## Transmission Provider

Power generated by Egbin is transmitted by the Transmission Company of Nigeria (TCN) through the centralised grid. TCN's operations currently comprise of three key functions of Market Operator (MO), System Operator (SO), and Transmission Service Provider (TSP).



**As part of our measures to forestall the ongoing liquidity challenges and associated challenge of gas constraints, we have taken steps to partially activate our Gas Sale and Aggregation Agreement (GSAA) with Chevron Nigeria Limited (Chevron) for the supply of gas to the facility.**

## Consultants

Professional services are an essential aspect of the modern business environment. Egbin Power Plc is not lagging behind. The company has engaged and retained the services of some of the most reputable consultants locally and internationally.

Furthermore, a new Technical Services Arrangement with Korea Electric Power Company (KEPCO) will be signed in 2018 to help sustain the best standards of the plant maintenance and strengthen the skill and knowledge transfer between employees of Egbin Power Plc and KEPCO. This agreement will replace the O&M contract that was realigned in February 2016.

As part of our efforts to ensure the integrity of our financial statements is maintained, Akintola Williams Deloitte, one of the four auditing firms was retained as the company Auditor for the year 2017. The 2016 Financial Statements were submitted to NERC, Abuja before the deadline.

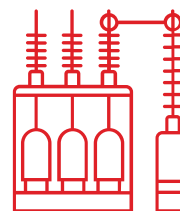
In order to ensure that the company is continually compliant with the operational tax regulations as part of the activities to develop local content participation, we have retained the services of a leading Tax consultant Pedabo Associates during the reporting year, to manage the company's regulatory risk and ensure compliance with all tax filings has been completed.

Also, the process of obtaining Pioneer Status is still in progress. This will enable us to secure tax savings and plough the savings back into the business to boost operational growth.

## Manufacturers

The Power sector is a capital-intensive sector with ground-breaking technology being introduced daily to meet the ever-growing demands of the environment which we operate. In our bid to remain "Provider of choice wherever energy is consumed" we have partnered and are continually looking at partnerships that we deliver on our vision. As such, we have partnered with vendors such as KEPCO, ORBIS, and KPS to help manufacture various capital items over the period.

The latest of these partnerships being the manufacturing of a 270MVA transformer scheduled to be operational by April 2018.



**270MVA**  
**Transformer to be operational in April 2018**

A partnership with KEPCO, ORBIS and KPS



## Our Stakeholders

The management of Egbin Power Plc understands the need for stakeholders' engagement and ensure accountability for all activities carried out by the company, hence there were two board meetings held during the year, while an Annual General Meeting has been scheduled for early 2018.

The board meetings held in 2017 featured some salient issues ranging from the liquidity constraints due to huge receivables from NBET the overhaul of the plant, and security concerns as a result of land encroachment and progress of perimeter fencing project. The Board also focused on the direct sale of power to willing buyers through a joint venture between Lagos state (Light Up Lagos) & Egbin Power Plc to improve the company's financial performance; exploring the possibility of power supply to international customers.

In our daily operations as an organization, we interact with various groups of individuals and organizations. We have grouped our stakeholders into multiple categories based on the type of relationship with the organization. Some stakeholders placed into categories are listed below:

Our esteemed staff and local communities are a significant part of our stakeholders that have also helped to boost our operating activities through their support and dedication.

### Shareholders



Nigeria Gas Company



Bureau of Public Enterprises



Ministry of Finance Incorporate

### Regulators



Nigerian Electricity Regulatory Commission (NERC)



Bureau of Public Enterprises (BPE)



Financial Reporting Council (FRC)



Federal Inland Revenue Services (FIRS)

### Partners



Nigeria Gas Company

ORBIS



KPS

**Marubeni**

Marubeni Corporation

## Suppliers



Nigeria Gas  
Company



Chevron Nigeria  
Limited



Nigeria Petroleum  
Development  
Company (NPDC)



Pan Ocean Oil  
Corporation  
Nigeria



Drury Nigeria  
Limited



BRIGHTEST HOPE GROUP

Brightest Hope  
Company Limited



IKEJA  
ELECTRIC

Ikeja Electric



Hygeia HMO  
Limited

Express  
Cleaners



Eko Electricity  
Distribution Com-  
pany (EKEDC)

Prayerighn Global  
Services Limited

Richard  
Obada & sons



KEPCO Korea



Prime & Hills  
Energy

Polyfirm Nigeria  
Limited

Denee Global  
Nigeria Ltd



## Plant Availability and Reliability

**E**gbin operates a six-steam turbine (ST) unit facility. During the 2017 reporting year, ST3 operated for the first half of the year only and was on corrective maintenance in the other half of the year. The repair was to rectify the vibration problem on the turbine due to some defective bearings. The overhaul on ST1 Generator transformer as well as the installation and testing phase was completed as at the end of the reporting year. Egbin generated a total of 3,505,124.0MWH in the reporting year.

The power generated by Egbin is traded in the energy market which is tightly controlled and regulated by the Nigerian Electricity Regulatory Commission (NERC). The process starts upstream with generating companies like Egbin, who then trade power with the Transmission Company of Nigeria (TCN) for further distribution to the power distribution companies, which then trade the power to end users/consumers.





## Average Availability Factor

The availability factor of a power plant is the amount of time the plant can generate electricity over a certain period, divided by the total amount of time in the period. The availability of a power plant varies greatly, depending on the type of fuel, the design of the plant and how the plant is operated. Generally speaking, plants that are run less frequently have higher availability factors because they require less maintenance and because more inspections and maintenance can be scheduled during idle time.

ST-1: Was on shutdown throughout 2017, due to Generator transformer fault undergoing repair.

ST-2: 56.52%

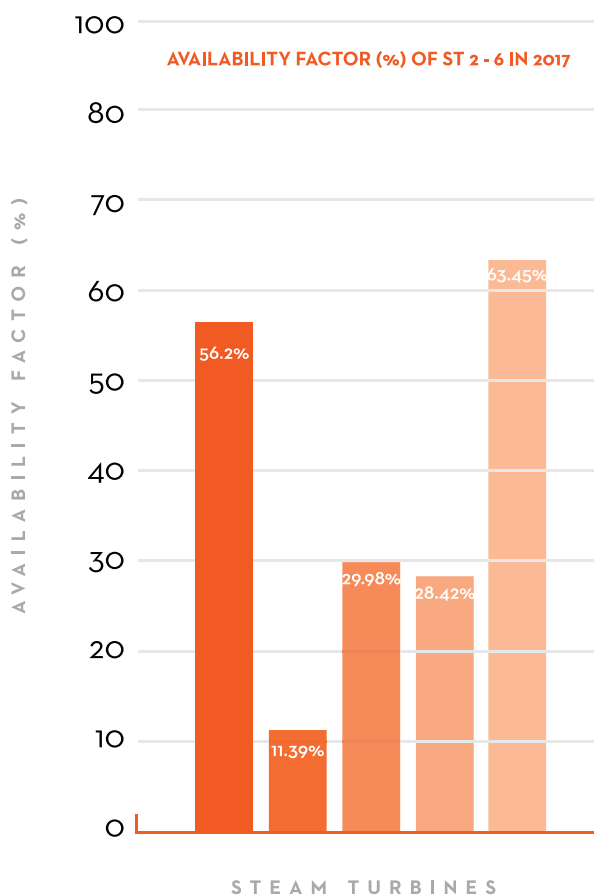
ST-3: 11.39% (The unit had been on shut down since June 2017 due to Turbine vibration fault, and was undergoing restoration.)

ST-4: 29.98%

ST-5: 28.42%

ST-6: 63.45%

On average, the total Availability factor was: 31.63%, about 20.85% lower than the overall average for 2016.

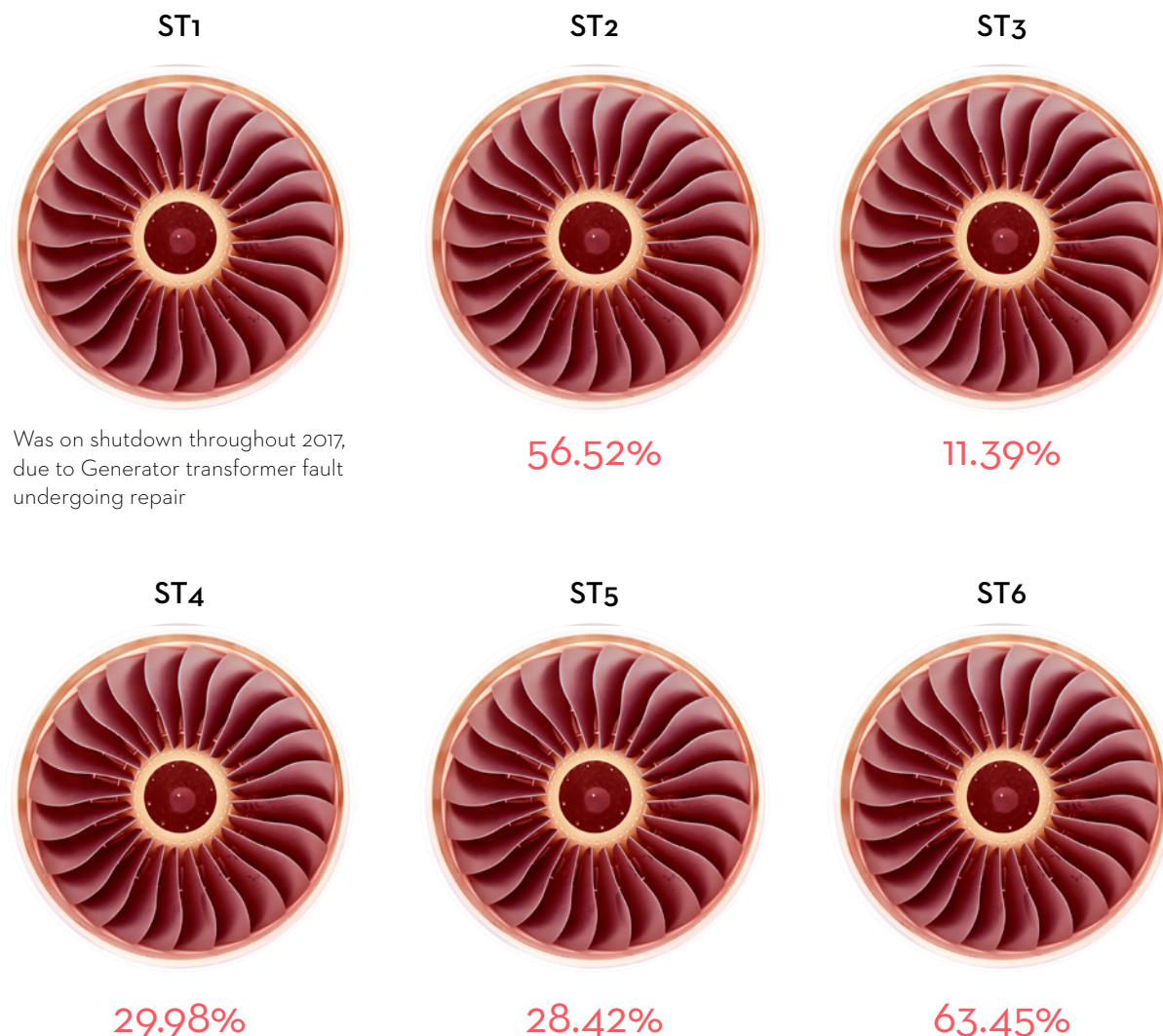








## Egbin's Six-Steam Turbine Unit Facility (with Availability Factor)



# 3,505,124.0 MW

Total power generated in reporting year

ST3 Operated for the first half of the year and was in corrective maintenance in the other half

(The unit was shut down since June 2017 due to Turbine vibration fault, and was undergoing restoration.)



## Financial Status

### Direct Economic Value Generated and Distributed

Egbin Power Plc does not only generate power for the whole Nigerian populace, but it also demonstrates its character as a morally upright citizen of the country through value added to various stakeholders and the community at large.

A breakdown of value added is stated below.

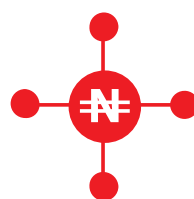
- » Operating Expense (O&M) – 32% reduction from 2016 figures
- » Payment to Employees – 5% increase from 2016 figures
- » Payments to Providers of Capital – 77% reduction from 2016 loss figures
- » Community Investments – 45% down from 2016 figures
- » Due to the challenging situation of the economy, a loss of about N1.9bn was recorded during the financial period. Despite the challenges, the recorded loss represents an improvement over the previous loss recorded of about 77%.

### Financial Assistance Received from Government

Over time, the Government has subsidized operations of businesses through different methods such as grants, tax reliefs, and credits, soft loans, etc. These subsidies will go a long way in assisting Egbin Power Plc in meeting its organizational objectives, due to the fact that most of our revenue has been tied in receivables attributable to NBET. However, during the reporting year, Egbin Power Plc was not able to go through any of the channels listed above to access subsidies from the Government.

The filing for pioneer status is still in progress, this will lead to tax savings when completed, which will lead to savings that management of Egbin Power Plc plan to reinvest into the business to ensure sustainability and profitability.

Although Egbin has successfully transitioned from a Public company to a Private company, Government interest is still very high in the business as the facility is widely considered as a national asset. This Government interest can be seen in the capital structure of the company with the Government owning 30% of shareholdings through the Bureau of Public Enterprise (24%) and Ministry of Finance Incorporated (6%).



#### Operating Expense (O&M)

# 32%

Percentage Reduction from 2016 figures



#### Payment to Employees

# 5%

Increase from 2016 figures



#### Payment to Providers of Capital

# 77%

Reduction from 2016 loss figures



#### Community Investments

# 45%

Down from 2016 figures

Due to the challenging situation of the economy, a loss of about N1.9bn was recorded during the financial period. Despite the challenges, the recorded loss represents an improvement over the previous loss recorded of about 77%.

## Investment and Expenditure

### Investment in Community Projects

At Egbin, we believe that just as we have benefited from the host communities, we should equally give back through our extensive personal and corporate social responsibility (CSR) initiatives.

During the 2017 reporting year, we maintained the supply of uninterrupted power from the plant as well as regular supply of anti-malaria medications to the health centre in order to help combat cases of malaria within the community.

We have expended over N60m on the welfare of the community through donations to schools, hospitals and scholarships to indigenes of host communities etc. during 2017 reporting year. Egbin has constantly been looking for ways to give back to the community to ensure not only a profitable business but also a sustainable business for future generations.

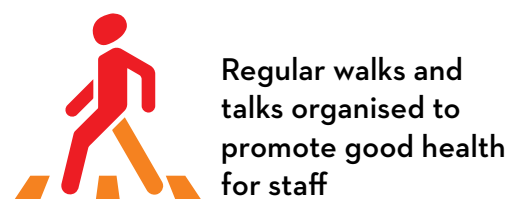
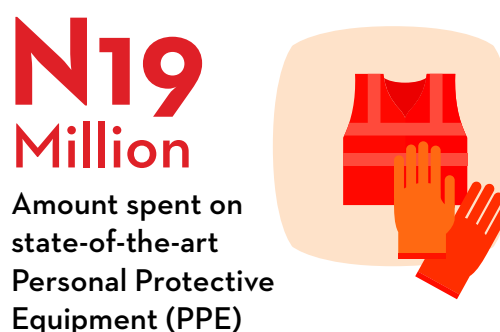
### Investment in Human Capital, Safety and Environment

It is important to highlight that the world has gradually moved from just reporting the bottom-line of a business from the profit angle but has now adopted the “triple P” initiative which represents the People, Planet and the Profit. These conceptions ensure the sustainability of the business and avoid environmental degradation.

In adopting this trend, Egbin Power Plc has invested humongous resources in training of staff including procedures that have been set up for the prevention of spills and carbon emissions. These initiatives range from regular discharge testing (to ensure that we remain within the range of permissible limit at all time) to fixing of broken down equipment that might otherwise lead to wastage or spill or any kind.

Egbin Power Plc. also organizes health walks and talks to enable the staff to maintain good personal health and fitness of body and mind. During the year 2017, an estimated N19m was expended on safety and environmental expenses.

Egbin also complies with policies laid down by the Lagos State Environmental Protection Agency (LASEPA) and National Oil Spill Detection and Response Agency (NOSDRA). This track record is further proven by a history of zero fines or sanctions from the regulatory agencies in charge of environmental protection.





A man wearing a red t-shirt, dark blue trousers, a white hard hat, and safety glasses is bent over, looking at a tablet computer. He is standing in a grassy field with a blurred background of trees and foliage. A vertical red bar is on the left side of the image. The text "Environmental Sustainability" is overlaid in white serif font on the lower left.

# Environmental Sustainability





Environmental Management  
Water Discharge Management  
Waste Management  
Environmental Impacts on Transportation  
Occupational Health and Safety  
Disaster/Emergency Planning and Response



## Environmental Management

**E**nvironmental consciousness is one of our core values at Egbin. Even though all human activities have impacts on the environment, the company is committed to identifying and assessing these impacts at all stages of its business cycle and incorporating them into its decision-making process.

For these reasons, the company's activities are influenced by corporate environmental policies that seek to protect and enhance the environment with the aim of achieving sustainable development. We have put in place an environmental management system (EMS), and the purpose of this is to stimulate good environmental practices focused on protecting natural resources, minimizing waste and conducting spill management, with a commitment to continuous improvement of environmental performance. It is worthy of note that the environmental management principles employed by Egbin are consistent with the provisions of occupational health and management systems (OHSAS) 18001.

Over the years, Egbin has taken a proactive approach in managing environment and safety issues in the plant. This approach has earned the company a leadership role, not only regarding power generational capacity but also in safety and environmental management. The company fully subscribes to the provisions of the Nigerian Electricity Regulatory Commission Health and Safety Code and Factory Act of 2004 LFN. The company also complies with others relevant local and international laws and regulations.

Our environmental issues are closely monitored by regulators like Lagos State Environmental Protection Agency (LASEPA), National Oil Spill Detection and Response Agency (NOSDRA) and Federal Ministry of Environment, for air, land and water discharges to ascertain that the company is in line with the prevailing laws on pollution management and control of wastes attributable to the power plant. In the reporting year, our company had no environmental infractions.

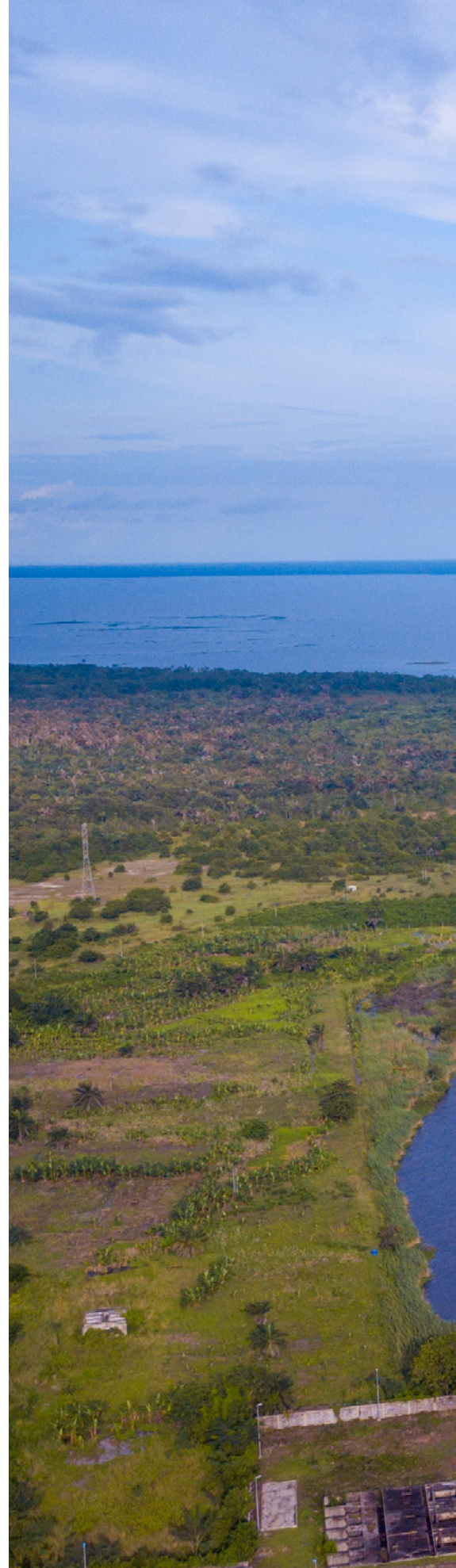


**Number of  
environmental  
infractions recorded  
in the reporting  
year**



**As a member of the British  
Safety Council. We are  
strategically positioned in  
terms of safety management;  
and this has in turn improved  
our safety standards.**

Egbin Power Plc is a member of a United Kingdom safety body known as the British Safety Council. This enables the company to be strategically positioned in our safety management system, and it monitors our active and reactive performance indicators. This has improved our safety standards. However, Egbin Power Plc currently does not have any emission trading scheme; but there are plans, to invest in energy efficiency technology that is more environmentally friendly. A good example is the use of combined power cycle that utilizes heat waste for another cycle of power generation.







We have put in place an environmental management system (EMS), and the purpose of this is to stimulate good environmental practices focused on protecting natural resources, minimizing waste and conducting spill management, with a commitment to continuous improvement of environmental performance.

#### Impact on Sustainability Development Goal



Ensure availability and sustainable management of water for all communities



## Water Discharge Management

The amount and quality of the water discharged by the company is directly linked to ecological impact and operational costs. Therefore, we continue to maintain our commitment to return water to the environment at a level that supports aquatic life. Additionally, we strive to keep the impact of our activities on the environment as low as possible and in line with locally and internationally accepted standards, to prevent adverse impacts. The Effluent discharges are waste water used during power generation processes, some of which are primarily used in condensing saturated steam in the condenser and also for extracting heat from other auxiliary equipment such as closed-circuit coolers and common service coolers.

Egbin's primary goal is the safety of aquatic life in our environment. The cooling water is mainly sourced from the lagoon. This is because water is used in the operation of our boilers and turbines, we are constantly mindful of the need to ensure that safe and low-risk water is discharged into the lagoon. The water we use is monitored and treated before discharge into the body of the lagoon, to achieve full compliance with State and Federal environmental regulations. By progressively improving the quality of discharged water, the company has the potential to reduce its impact on the surrounding environment. Unmanaged discharge of effluents with a high chemical or nutrient load (principally ammonia, phosphorous or potassium) can have a significant impact on receiving waters. This in turn, can affect the marine ecosystem and our relationship with the communities and other water users. Wastewater from our power generating facility is usually discharged into the Lagos lagoon which spans a surface area of 6355km<sup>2</sup>.

About 700million m<sup>3</sup> of lagoon water was used as both planned and unplanned water discharges that come from lagoon to cool condensers and others auxiliary. The variance is only in the temperature of the lagoon water after the cooling process which is higher compared to intake but



**In water discharge,  
Egbin's primary goal is  
the safety of aquatic life  
in our environment.**



**700  
Million m<sup>3</sup>**

**Used as both planned  
and unplanned water  
discharges**





by design of the Egbin power plant, the water discharge through discharge canal for the water temperature to drop back to its initial temperature before getting in contact with the body of water. The discharge canal was designed as an open channel with more than 200 meters length and 50 meters in width. The length and breadth of the discharge canal ensure that the discharge water travels a long distance in order to dissipate a substantial amount of heat before it eventually mixes with the larger water body. The quality of water has a lot of advantages on the process and environmental impact on the body of water (lagoon) for the preservation of aquatic life and pollution-free water that could affect communities living around the power plant.

Additional checks and further treatment are usually performed on the fresh water produced at the water treatment plant and the closed system feed-water respectively using an ion exchange

technology. Also, wastewater from the demineralization plant and other operational processes are first discharged into neutralization sump pits and after undergoing close condition monitoring and treatment to control and neutralize the pH levels, to meet the required standards before released into the lagoon. The quality of water is usually taken from various points before discharge and is treated based on analysis carried out on samples taken. All these are geared towards meeting local and international standards that have been set to guarantee safety for aquatic life and other industrial processes. As part of our safety mechanisms, concrete barriers were installed to ensure that the bulk of the water discharged after cooling in the plant, mix with the larger water body after flowing a significant distance to dispense with heat. In ensuring that Egbin is always in line with international best practices with respect to environmental protection, we perform tests such as pH, Chemical

Oxygen Demand (COD), Biological Oxygen Demand (BOD), Dissolved Oxygen, Hardness, Alkalinity, Acidity, Oil, Sulphate, Total Coliforms, Total Plate Count amongst others. The wastewater that is being used and discharge are not reused by any other organization as it is discharged straight into the lagoon.

#### Impact on Sustainability Development Goal



**Prevent and significantly reduce marine pollution of all kinds**





Water discharge into the Lagoon

As a responsible organization, Egbin engages a reputable consultant to conduct monthly air quality and effluent monitoring exercise. This would give a third-party opinion aside from analysis report from our Chemistry Department. Our environmental performance is assessed from the management level down to the operational or task level. We have successfully developed a compliant system by ensuring that our activities are performed in accordance with regulations by the Lagos State Environmental Protection Agency (LASEPA), National Oil Spill Detection and Response Agency (NOSDRA), Federal Ministry of Environment and the British Safety Council.

In determining the quality of water utilized during the reporting year, physico-chemical analysis and microbial analysis, various methods were used. For physico-chemical analysis, these methods were used namely potentiometric, gravimetric,

titrimetric, turbid metric, argentometry, and methylene-blue atomic absorption and spectrometry methods. For the microbiological analysis, lactose fermentation technique and pour plate method were used. The above techniques are described in detail in the handbook "STANDARD METHOD FOR THE EXAMINATION OF WASTE AND WASTEWATER" 20th Edition, 1998. (Prepared and published by the American Public Health Association (APHA), American Waste Works Association and Water Environment Federation (WEF).

## Waste Management

The environmental dimension of sustainability has to do with an organization's impacts on living and non-living natural systems, including land, air, water, and eco-

 **500 Tons**  
Solid domestic waste generated and evacuated

 **80 Tons**  
Liquid waste generated and evacuated through LASEPA

system. This includes water discharges, the generation, treatment and disposal of waste and spills of chemicals, oils, fuels, and other substances. Waste is a by-product that results from any process which does not have an economic value to the originator and must be managed from the cradle to the grave. Poor management of waste can lead to the epidemic and negative health impact on the community and those within the location. Due to the peculiarity of the operations of Egbin Power Plc, waste management takes priority. The categories of waste generated are mainly garden wastes, metal scraps, burnt electrical bulbs, food wastes, wastewater and gaseous waste (CO, CO<sub>2</sub>) are usually stored on site before contracted out for disposal depending on the type of waste. These types of waste are categorized into solid, liquid and hazardous wastes that are generated during the operation of the power plant. They are further explained below:

## Solid Waste

Solid waste is the unwanted or useless solid materials made from human activities in residential and plant areas. Solid waste generated from Egbin can be categorized in three ways, according to its:

- » Origin (domestic and the plant)
- » Contents (organic material, glass, metal, plastic paper etc)
- » Hazard potential (toxic, non-toxic, flammable, radioactive, infectious etc).

Egbin power plant generated and evacuated about 500 tons of solid domestic wastes from the plant in the year 2017. Some of the hazardous wastes generated are used lubricants, waste oil for cooling purposes, and printer cartridges, etc. These waste materials are produced from the Egbin plant facility and disposed on a weekly basis. In compliance with environmental regulations, the Lagos State Waste Management Authority (LAWMA) are granted access to the plant facility periodically to evacuate the waste that may have been generated.



**As a responsible organization, the company has not defaulted in her obligation to LAWMA agents. Thus this is the main reason for the smooth evacuation of wastes as at when due**

## Liquid Waste

In 2017, the company evacuated 80 tons of waste oil and oily waste through Lagos State Environmental Protection Agency (LASEPA) accredited agents. Most of these oils are unusable lubricating and transformer oils. Before the disposal of these liquid wastes, members of our Chemistry Department perform physical examination, crackle tests, moisture content, viscosity, flash point, particle count and demulsibility tests to ascertain that the oil can no longer be subjected to the oil purification system. In the reporting year, the company also monitored and supervised the waste oil movement in line with environmental guidelines to forestall any acts that might cause damage to the environment. Oil wastes were disposed of for recycling through Lagos State Environmental Protection Agency accredited vendors.

## Domestic Waste

About 9tons of domestic waste were evacuated from the plant weekly

throughout the year 2017 by Lagos State Waste Management Authority (LAWMA) accredited vendor for onward transportation to government-approved dump site. As a responsible organization, the company has not defaulted in her obligation to LAWMA agents. Thus this is the main reason for the smooth evacuation of wastes as at when due.

## Oil Spill

Spills are accidental releases of hazardous substances that can affect human, health, land, vegetation, water body and groundwater. Spills of chemicals, oils, and fuels, among other elements, can potentially affect soil, water, air, biodiversity and human health. The egbin power plant was designed with the alternative of being fired with natural gas or heavy fuel oil; these may have a negative impact on the environment if not properly manage, consider the heavy fuel oil which is fossils fuels are petroleum products. We also use T-32 grade oil for the lubrication and cooling of the turbine shaft. The tendency for the heavy fuel oil to leak or spill on



the land or water cannot be overlooked. We have put in place an Oil Spill Management system as a preventive measure for oil spillage, and we have continually improved on it.

In 2017, Egbin recorded zero spills within the power plant; this translated to 0% spill activities for:

- » Oil spill (soil and water surfaces)
- » Fuel spills (soil or water surfaces)
- » Spills of wastes (soil or water surfaces)
- » Spills of chemicals (mostly soil or water surfaces).

In case of oil spillage, the company has instituted an oil spill contingency plan that has been approved by the Federal Ministry of Environment, the National Oil Spill Detection and Response Agency, and the Lagos State Environmental Protection Agency.

The company's operations are in compliance with regulatory requirements and best practices on environmental management. As a result, the host communities are still going about their regular fishing businesses. Additionally, the company did not record any sanction for non-compliance with the environmental laws and regulations in the year 2017.

## Hazardous Waste

Hazardous waste is waste that has substantial or potential threats to public health and the environment. Some of the hazardous wastes in Egbin plant are by-products of water treatment, demineralization, low capacity resins, and resin regeneration are tested for acidity and alkalinity before discharge or evacuation. Hazardous waste transporters play an integral role in the hazardous waste management system by delivering hazardous waste from its point of generation to ultimate destination. This includes transporting hazardous waste from a generator's site to a facility that can recycle, treat, store or dispose of the waste. It can also include carrying treated hazardous waste to a site for further treatment or disposal.

Zero ton of hazardous waste was neither transported, imported, exported nor treated in the year 2017. However, hazardous wastes have to reach some certain threshold of accumulation before it is evacuated from the plant. An agent of Lagos State Environmental Protection Agency (LASEPA) is responsible for its evacuation from site and transporting it to the approved dump site.

### Water Management and Conservation

The Lagos lagoon is a lagoon sharing its name with the city of Lagos, Nigeria, the largest city in Africa, which lies on the south-western side. The lagoon is more than 50 km long and 3 to 13km wide separated by the Atlantic Ocean by long sand spit 2 to 5km wide, which has swampy margins and its surface area is approximately 6,354.7km. The lagoon is the primary source of water for cooling purposes in Egbin power plc. The water used are discharged into a discharge canal which was designed as an open channel with more than 200 meters length and 50 meters in width. The length and breadth of the discharge canal ensure that the discharge water travels a long distance to dissipate a substantial amount of heat before it eventually mixes with the lagoon and has no negative impact on the natural habitat. In Egbin, we compare the intake water with the final discharge effluent to ascertain how our operations affect the properties of the intake water (lagoon water).

The values of the final effluent discharge when compared with the intake values are usually positive and within the Federal Ministry of Environment permissible limits. The villagers still go about their regular fishing businesses.

## Environmental Impacts on Transportation

Transportation aims to move supplies in a reliable and safe manner physically, on time, cost effectively and efficiently to its destination.

Egbin has no significant environmental impact due to the transportation of products and other goods and materials for its operation. Majority of the workforce resides in the housing estate while the few that reside outside the estate come with their vehicles or public transport. However, due to poor road network, there is usually a long delay when materials have to be transported from source to the power plant.



### Oil Spill recorded in the power plant

Resulted in zero percent spill activities for oil spill, fuel spills, chemical spills

.....



## Occupational Health and Safety

**The prevention of occupational risks is a key priority of the company.** We have worked to establish a standard policy of health and safety in all our departments, with the primary goal of “Zero accidents”. Safety committees are on ground recommended by health and safety laws to enable company management to attend to safety issues holistically to reduce incidents in the plant. The company’s management has created committees and subcommittees within the organization to achieve a correct implementation of the health and safety measures in the entire company. Their mission is to collect information on health and safety at all different operational levels and to involve as many employees in the communication of the current situation and the definition of a preventive plan.

25% of Egbin employees are involved in safety committee groups. A 30-man committee comprises of the various departmental heads, section heads and some other employees with the Chief Executive Officer as Chairman and Head of Health, Safety and Environment (HSE)

# 25%

**Egbin employees involved in safety committee groups**

Comprising of various departmental heads, section heads and some other employees

# 40

**Man team of safety representatives from each department**



as the secretary, making up the safety management committee. Their principal function is to help drive safety commitments and policies in the company, and they are also responsible for quarterly plant inspections. The committee meets once a month except during inspection.

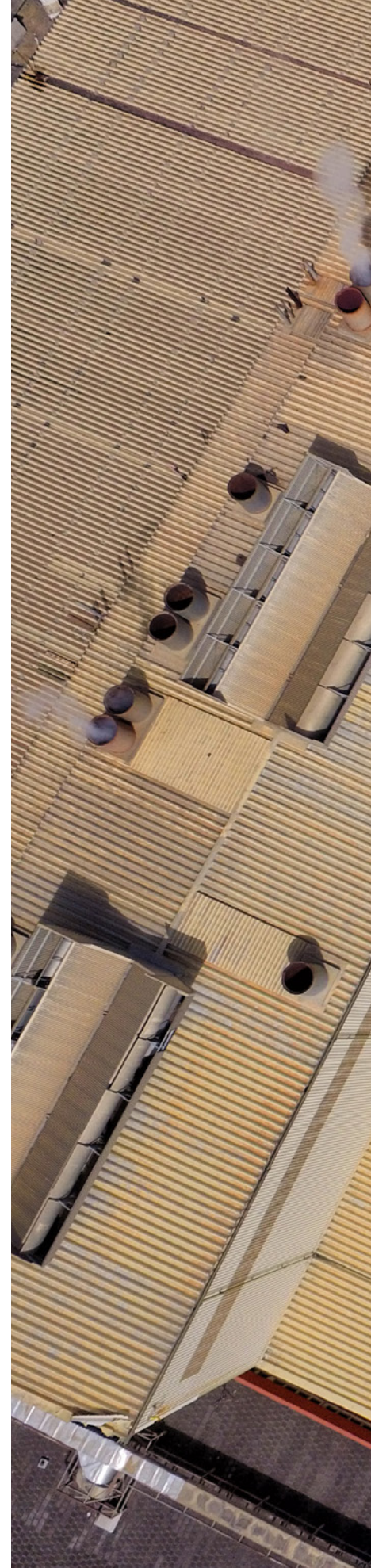
Also, there is a 40-man team of safety representatives selected from each of the departments. The safety representatives have two subcommittees; the housekeeping committee and toolbox meeting committee. The housekeeping committee takes care of the housekeeping issues within the plant while the toolbox committee monitors the effectiveness of toolbox meetings being carried out by different departments and sections of the power plant during morning meetings. The safety management committee handles any issues beyond the safety representatives. The company has provided safety management policies to ensure safe activities using accumulated skills from the on-site experience of the human resources. Also, we have improved our safety management efficiency by sharing safety instructions in real-time through e-mail updates and safety training for all employees. We also perform accident preventive activities and policy through toolbox meetings, pre-job briefings, and safety procedures when dealing with hazardous chemicals.

## Disaster/Emergency Planning and Response

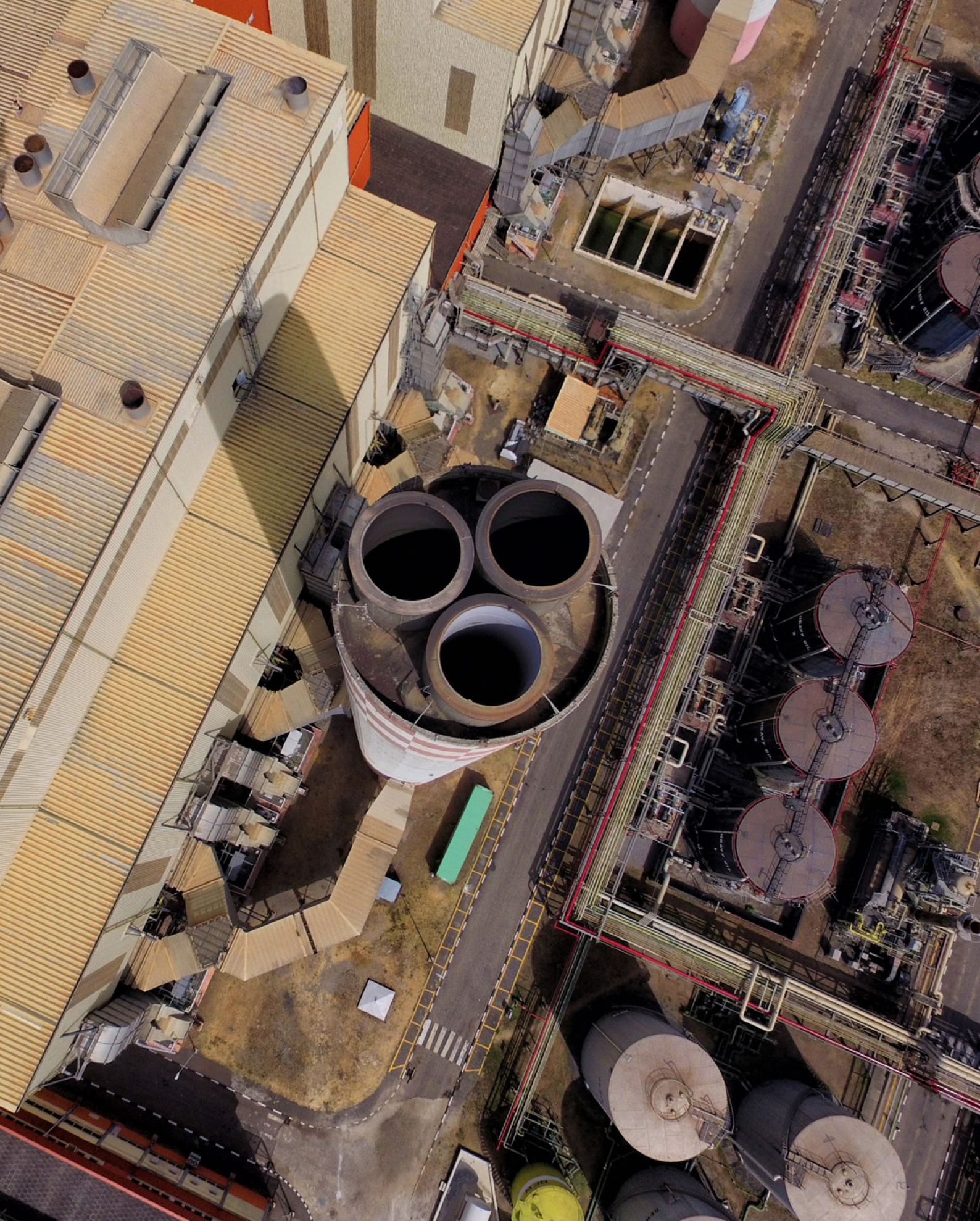
Emergency and disaster planning involve a co-ordinated, co-operative process of preparing to meet urgent needs with available resources. The plan is an exploratory process that provides general procedures for managing unforeseen impacts and should use carefully constructed scenarios to anticipate the requirements that will be generated by foreseeable hazards when they strike.

Egbin Power Plc has robust emergency response policies and procedures which are being tested on a periodic basis to ascertain readiness and continual improvement. We have put in place adequate plans for events such as fire and explosion, oil spills, medical evacuation, chemical, and fuel spills, civil unrest and hostage situations. Proper safety and security arrangements are already in place to prevent any of these events; but if they occur, arrangements for emergency response are in place to avert any disaster to personnel and the power plant.

A 40-member committee known as Emergency Support Staff has been constituted to support fire marshals in case of any emergency situation. They work along with firefighters during evacuation drills to achieve successful drill exercises. Emergency Support Staff are trained for emergency handling and are readily available all the times in duty hours in adequate numbers to assist the firemen team.









A group of people, mostly wearing orange t-shirts, standing outdoors. The text "Social Responsibility" is overlaid in white. The woman in the foreground on the left is wearing a grey sweatshirt with a "Devil Nui" logo. The woman on the right is wearing glasses and holding a small object. The background shows a crowd of people, some wearing blue and orange shirts, and a chain-link fence.

# Social Responsibility





Stakeholder Dialogue

Stakeholders' Mapping, Engagement & Relationship

Stakeholders' Support

Our People

Diversity and Equal Opportunity

Occupational Health and Safety

Grooming Future Leaders

Environment

Scholarship Programmes

Investment in Future Leaders



## Stakeholder Dialogue

**W**ithout compromising our corporate policies, we maintained our commitment towards achieving sustainable social relations with our stakeholders in the year 2017. This was in recognition of Egbin's social relations with its stakeholders as a core part of its sustainable management system.

### Stakeholders Mapping, Engagement, and Relations

The success of an organization and sustainability of its business are hinged upon the synergy between that organization and each level of stakeholders. Egbin recognizes its coexistence with its stakeholders as a business ecosystem; and has mapped out the needs and expectations for mutual growth and unhindered delivery of power. In its sustainable management system, Egbin mapped out its stakeholders in categories of Regulators, Customers, Suppliers, Employees, Host communities, and Shareholders. A synergy between Egbin and these stakeholders has ensured successful operations in the business environment by meeting expectations within the company's corporate policy. Also, as a

reputable brand, Egbin recognizes that its business success is hinged on social, economic, and environmental responsibilities to these stakeholders.

Egbin's continuous engagement with stakeholders will provide ample opportunity for its stakeholders to understand its decision-making processes which will, in turn, give it the needed support and co-operation for unhindered business operations while maintaining openness and honesty in communicating its strategies, targets, performance and governance policy to the stakeholders.

In the 2017 reporting year, the company actively engaged all stakeholders who are directly and indirectly affected by its operational decisions and no social or environmental concern was raised at the meetings. The company took all feedback received from stakeholders seriously and maintained open dialogue to ensure that the needs/requirements outlined were treated.

Over the years, Egbin has been proactively meeting its Corporate Social Responsibility to its host communities. In the reporting year, the organization maintained its support with the supply of drugs and mosquito nets to the health facilities within the communities; provided quality education through the Powerfields Group of Schools, and also provided Scholar-



**Over the years, Egbin has been proactively meeting its Corporate Social Responsibility to its host communities. In the reporting year, the organization maintained its support with the supply of drugs and mosquito nets to the health facilities within the communities;**



ships to deserving students from the host communities who met the entry criteria for Powerfields Group of Schools.



*Egbin donating drugs and mosquito nets to the health facilities within the communities*

#### Impact on Sustainability Development Goal



**Prevention of Malaria outbreak in the community**



Egbin provided Scholarships to deserving students from the host communities who met the entry criteria for Powerfields Group of Schools.



## Stakeholders Support

The relationship of an organization with its stakeholders is critical in ensuring a high level of business performance while upholding the values of honesty, partnership, and fairness in the relationships with these stakeholders. Egbin maintains its support to its stakeholders by:

- » Providing training courses and making available its facilities for use to hold seminars and industry meetings;
- » Maintaining a clean, healthy and safe working environment in line with its health and safety policy;
- » Providing accommodation to critical operatives as approved by the Board of Directors of Egbin Power Plc;
- » Establishing and communicating standard maintenance procedures on the allocated apartments to forestall the use of unauthorized persons in carrying out maintenance on the apartment;
- » Making admission opportunities into Powerfields Group of Schools available to stakeholders, subject to meeting entry requirements.
- » Constituting an all-inclusive committee that meets regularly to discuss NGC and TCN operations and facility related issues with a view to resolving them amicably.
- » Providing desired support and co-operation amongst stakeholders, and improving operational communication.
- » Paying courtesy visits and familiarization tours to the premises of these stakeholders at least twice in a year to be abreast of their operations, activities and challenges.
- » Increasing participation in media engagements and activities to highlight our contributions to national development as well as challenges that may reduce the organization's business performance.



### Impact on Sustainability Development Goal



**Alleviate poverty in all its forms in the community**

## By partnering with the communities, Egbin seeks to



Increase the standard and quality of education in the environment by providing scholarship scheme for brilliant and indigent students from host communities.



Provide employment opportunities (skilled and unskilled).



Support and encourage our employees and partners to help local community organizations and activities in our environment, particularly local charities.



Encourage dialogue with local communities for the mutual benefit of peaceful co-existence through quarterly community forum with the representatives of each community and courtesy visits to the community leaders.



Work with public schools (primary and secondary) in our host community, to develop the standard and quality of education, to assist young people in choosing their future careers and to be an advocate for our industry.



Develop environmental policies and objectives as part of the business planning.



Support and encourage a thriving local economy through synergy with Ikeja Electric in promptly resolving electricity supply and distribution issues within the communities.



Support the provision and availability of health-care within the host communities through the supply of medicine to the state-owned general hospital in Ijede.



Provide sustainable support for infrastructural upgrades within the communities.







## Our People

**E**gbin prides itself on its competent, resourceful, innovative, dedicated, and physically fit personnel who are committed to the safe, efficient and successful operational services of the organization within the power sector. To support continuous delivery to other stakeholders, Egbin provides its employees with appropriate tools and opportunities for skill development as they experience career development and growth.

In the 2017 reporting year, the staff strength of the company as at December 2017 was 377 as against 386 that was reported in 2016. This consists of 337 males and 40 females with employee turnover of 18 at a rate of 0.57. The organization leveraged on its interest in the development of future leaders by engaging the services of 6 (six) graduate interns and 44 (forty-four) undergraduate interns who were trained during the period of engagement.

In the 2017 reporting year, Egbin maintained its commitment to the operating principles that recognize business people, conduct, society, and environment. This ensured fairness and non-discrimination within the organization and in its relationship with its stakeholders.









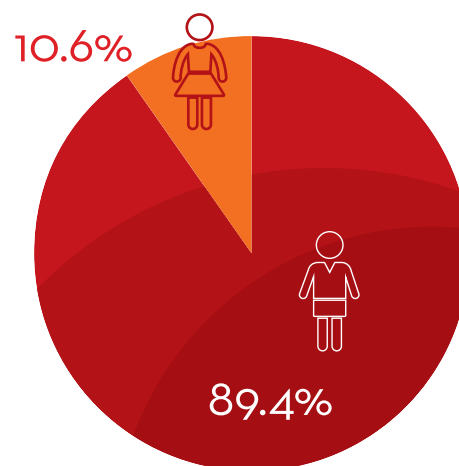
**377**  
Staff strength  
in 2017

**337** Male

**40** Female



## Employee Demography



Opportunities  
Created

**44**  
Undergraduate  
Interns

**6**  
Graduate  
Interns





## Diversity and Equal Opportunity

Egbin values diversity and equal opportunity in recruitment and appointments as a tool for development, performance improvement and social commitment to nationhood. This ensured the recruitment and retention of qualified, competent, efficient and excellent employees for innovative business solutions. It is also evident in the diversity of background, groups, race, and gender of the staff members and management. The organization ensured strict adherence to equal treatment of all employees as adopted in its corporate governance policy. This is aimed at ensuring equal opportunity, treatment and welfare base for all employees as well as maintaining high energy, rewarding and favorable business environment.

Promoting gender equality at the highest levels of business guaranteeing equal treatment for all employees irrespective of

gender, respecting and supporting human rights and non-discrimination; ensuring the health, safety, and wellbeing of all employees, promoting education, learning and development, has been among our guiding principles as an organization.

Egbin has buttressed its stand against discrimination, through an anonymous whistle-blowers email address, [expressyourself@egbin-power.com](mailto:expressyourself@egbin-power.com). In concordance with equality in the workplace, Egbin provides childcare support systems, ensuring a work-life balance for both genders in the workplace. Some of the packages of the organization's childcare support system include the parental leave, daycare and educational services within the premises of the organization. As opposed to the previous year where we had about 5% usage of the parental leave, in the 2017 reporting year, 2.65% of the employees utilized the parental leave of absence. The parental leave of absence, which serves as a paid leave of absence from work for parents (Male and Female) with new babies, includes a flexible



Utilized parent leave of absence



In concordance with equality in the workplace, Egbin provides childcare support systems, ensuring a work-life balance for both genders in the workplace

### Impact on Sustainability Development Goal



**Achieve gender equality, empowering females in the industry**

working time for the female employees, to ensure a smooth transitioning after their maternity leave period.

## Occupational Health and Safety

Egbin recognizes the importance of occupational health and safety of its workforce as not just a requirement for compliance but a priority for its sustainability. This helps the organization in providing initiatives that enable all employees to maintain their overall health and wellbeing.

The protection and enhancement of health and safety of every employee improves organizational and personal productivity which is measurable in reduced incident and accident rate, and lesser downtime as a result of ill-health or human error. The health and wellness policy serves as a guide for our quarterly health education where employees are engaged in interactive sessions with accredited health experts from Hygiea HMO on topics ranging from daily body care to prevention actions against diseases.

### Other initiatives promoted by the organization's health policy include:

- » Periodic checks for vitals
- » Monthly health walk and aerobics sessions
- » Pre-employment medical tests for new intakes
- » Confidential review of employee health status
- » Health maintenance cover for employee and specified number of Dependants

The safety policy drive in the year under review broadened the enlightenment, education, and tasking of the workforce on the maintenance of personal health and a hazard-free workplace. This was achieved by leveraging on the activities of the joint management-workers safety committee and representatives as recommended by health and safety law to enable organizations to manage industrial safety and reduce incidents holistically.



**Egbin recognizes the importance of occupational health and safety of its workforce as not just a requirement for compliance but a priority for its sustainability.**







As a reputable organization, Egbin is committed to the development of its employees from bottom to top as a strategy towards youth empowerment and national development

## Grooming Future Leaders

As a reputable organization, Egbin is committed to the development of its employees from bottom to top as a strategy towards youth empowerment and national development. In the year under review, the organization recruited qualified young graduates through internal and external recruitment processes and retrained them for the intricacies of the business. Egbin also ensured all-inclusive development opportunities strategically for young employees towards building their business and technical management competencies. The organization also provided students and graduate internship programs for students and graduates of relevant education.



## Trainings

Egbin values the training of its employees and recognizes this as a tool for the addition of knowledge and skills for performance improvement. This will result in the organization's overall performance improvement and capability to meet the expectations of its stakeholders within its corporate policy. In the year 2017, Egbin implemented some training programs and learning initiatives put in place for its existing employees and supporting staff in furthering their professional education through part-time studies. The organization also leveraged on its in-house learning and development initiatives across all functions. The in-house learning and development initiative called "Egbin X-Change"

was incorporated into the Human Resources training curriculum to enlighten every employee on various facts relating to the operations of all departments.

Egbin further integrated formal learning process as well as systematic talent management in the areas of internal knowledge sharing and e-learning programs. The continuous training and development exercises represent a lifelong contribution of the company to its employees, as the skills and knowledge imparted cannot be retrieved from them at the point of exit.

In achieving our vision of being the provider of choice wherever energy is consumed, the training initiatives ensure that employees are ready to face new challenges with innovative solutions continually.

## Environment

In tandem with the sustainability approach to businesses which adopts the triple “P” initiative centering on People, Planet and Profit, Egbin ensures sustainability of its business and the ecosystems through conscious avoidance of environmental degradation.

In the year 2017, Egbin Power Plc., invested resources into the training of staff in the prevention of spills and carbon emissions. This formed part of the continuous professional education and development of employees from various learning and development initiatives. The implementation initiatives ensured effluents were within permissible limits and that there was zero spill. This was reflected in and measured through the zero-spill record, zero sanction, allowable effluents/emissions and zero record/report of incidences, conflicts or settlement during community engagement meetings with the host communities.



## Scholarship Programmes

Egbin views investment in access to quality education, leadership and development of the next generation as a tool for raising future leaders and industry players

for business and global sustainability. In the 2017 reporting year, Egbin continued its scholarship programme introduced in 2016 for primary and secondary school students who are indigenes of the host communities. Upon excellent performance in the keenly competitive selection process and meeting the admission criteria for Powerfields Group of Schools, scholarship and admission were offered to students based on merit. In the 2017 reporting year, 12 (twelve) indigenes were selected as beneficiaries of the Egbin Scholarship Programme. We envisage that the beneficiary base will grow in 2018 to support more indigenes who are students through further levels of education.

### Impact on Sustainability Development Goal



**Ensure Sustainable quality education for all ages**

## Investment in Future Leaders

The company values the training, education, and exposure of young minds as a strategic tool in grooming future leaders who will be capable of business and technical management within the organization. In 2017, the year under review, Egbin engaged the services of 6 (six) National Youth Service Corps members and 44 (forty-four) interns whose disciplines were closely related to our organizational functions and other relevant business areas.







# Appendix





Sustainable Development Goals (SDGs)  
GRI Standards Content



## Sustainability Development Goals (SDG)

	GOALS	SPECIFIC PROJECT
 <b>1 NO POVERTY</b>	Alleviate Poverty in all its forms in the community	» Economic Empowerment project in Ijede
 <b>3 GOOD HEALTH AND WELL-BEING</b>	Prevention of Malaria outbreaks in the community	» Upgrade of Community Health Centre facility » Monthly donation of Malaria prevention drugs
 <b>4 QUALITY EDUCATION</b>	Ensure sustainable quality education for all ages	» Establishment of Powerfield Group of Schools for Children » Economic Empowerment Project in Ijede for boat technicians, boat drivers, and tailors
 <b>5 GENDER EQUALITY</b>	Achieve gender equality; empowering females in the industry	» 10% of total staff strength are females » Vocational skill training for women in the community » Management positions occupied by women
 <b>6 CLEAN WATER AND SANITATION</b>	Ensure availability and sustainable management of water for all communities	» Provision of boreholes and water handling facilities within every surrounding community
 <b>7 AFFORDABLE AND CLEAN ENERGY</b>	Ensure access to affordable and clean energy for all	» Clean electricity production using Natural Gas
 <b>8 DECENT WORK AND ECONOMIC GROWTH</b>	Promote sustainable economic growth and productive employment	» The overhaul projects on the Plant, provided employment for indigence of the local communities » Recruitment 33 young engineers, 15% being beneficiaries from the local communities
 <b>9 INDUSTRY INNOVATION AND INFRASTRUCTURE</b>	Develop quality, reliable, sustainable and resilient infrastructure, to support economic development	» Upgrade of Steam Turbine Control System to a digital distributed control system
 <b>11 SUSTAINABLE CITIES AND COMMUNITIES</b>	Ensure access for staff to adequate, safe and affordable housing and basic services	» Donation of communication equipments to local Police station » Upgrade of recreational and housing facilities within housing colony
 <b>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</b>	Ensure sustainable management and efficient use of natural resources	» Installation of water consumption totalisers
 <b>13 CLIMATE ACTION</b>	Integrate climate change measures into company policies, strategies and planning	» Establishment of Green Areas in the power station » Clean electricity production using Natural Gas
 <b>14 LIFE BELOW WATER</b>	Prevent and significantly reduce marine pollution of all kinds	» Oil spill management training and awareness of staff member » Installation of containment boom

# GRI Standards Content Index

## GRI 101: Foundation

**T**his report has been generated in accordance with the Global Reporting Initiative Standards. The emphasis on the application of the reporting principles that should define the quality and content of a sustainability report was made by the GRI standards and implemented in this sustainability report.

In defining the report content, internal and external stakeholders were involved in the identification of where impacts occur and the potential threats to sustainable power generation. Also, the report has attempted to present Egbin's activities in the wider context of sustainability whilst completely covering material topics that specifically describe Egbin's impact on the economy, environment and society. This is to enable our stakeholders assess our performance in 2017.

In the spirit of sustainability, Egbin has ensured that the 2017 sustainability report adheres strictly to the principles stipulated by the Global Reporting Initiative that guarantee high quality reporting. These principles are very much reflected in the report, as we have ensured that the 2016 sustainability report is balanced enough to manifest both positive and negative performance in the reporting year, that will be sufficient for our stakeholders to form an opinion of our overall performance in 2017.

Additionally, the report may be compared to the previous edition, and this should enable stakeholders assess change in performance. Although this report has not been externally assured, the accuracy of this report is not in doubt as all the facts and figures disclosed are subject to audit by our stakeholders.

Furthermore, Egbin has decided to report its economic, environmental and social impacts on a regular basis, in order for stakeholders to receive timely information to make decisions. In the course of the reporting process, the clarity and reliability of the disclosures were emphasized. This was to ensure that stakeholders are abreast with the data that have been compiled, analyzed and subjected to quality and materiality checks. Also, this data has been presented in a manner that will be understandable and accessible to stakeholders.



## GRI 102: GENERAL DISCLOSURES

GRI Standard Disclosure Number	Disclosure Definition	Disclosure Location	Disclosure Status	Direct Response and Clarification
<b>ORGANIZATIONAL PROFILE</b>				
Disclosure 102 - 1	Name of the organization	Profile	Disclosed	-
Disclosure 102 - 2	Activities, brands, products and services	Profile	Disclosed	-
Disclosure 102 - 3	Location of headquarters.	-	Disclosed	7A Oluwa Road, Ikoyi, Lagos, Nigeria.
Disclosure 102 - 4	Location of operations.	-	Disclosed	One Country (Nigeria)
Disclosure 102 - 5	Ownership and legal form.	Egbin Ownership Structure	Disclosed	-
Disclosure 102 - 6	Markets served.	Business Framework	Disclosed	-
Disclosure 102 - 7	Scale of the organization.	Profile	Disclosed	-
Disclosure 102 - 8	Information on employees and other workers.	-	Disclosed	<p>These are regular employees who are directly employed to work for the organization and are paid directly by the company. They are entitled to wages, subsidized health care, holidays, sick time and contributions to a retirement plan.</p> <p>The total no of permanent staff in the company as at December, 2017 was 377 as against 386 that was reported in 2016. This consists of 337 males and 40 females with employee turnover of 18 at a rate of 0.57.</p> <p>The organization leveraged on its interest in the development of future leaders by engaging the services of 6 (six) graduate interns and 44(forty-four) undergraduate interns who were trained during the period of engagement.</p>
Disclosure 102 - 9	Supply Chain.	Organizational Supply Chain	Disclosed	-
Disclosure 102 - 10	Significant changes to the organization and its supply chain.	Supply Chain Management	Disclosed	-
Disclosure 102 - 11	Precautionary Principle or approach.	Environment	Disclosed	-
Disclosure 102 - 12	External initiatives.	-	Disclosed	International Financial Reporting Standard Global Reporting Initiative
Disclosure 102 - 13	Membership of associations.	-	Disclosed	<p>Association of Power Generation Companies. Operators of Electricity Industry.</p> <p>Council for the Regulation of Engineering in Nigeria.</p>
Electric Utilities Disclosure 1	Installed Capacity, broken down by primary energy source and by regulatory regime.	Profile	Disclosed	-

Electric Utilities Disclosure 2	Net Energy Output broken down by primary energy source and by regulatory regime.	Power Generation	Disclosed	-
Electric Utilities Disclosure 3	Number of residential, industrial, institutional and commercial customer accounts.	-	Not Disclosed	Egbin is a power generation company and due to the structure of the Nigerian power industry, does not interface with residential, industrial, institutional and commercial customers, thus Egbin does not have these customer accounts. The electricity distribution companies will have such information.
Electric Utilities Disclosure 4	Length of above and underground transmission and distribution lines by regulatory regime.	-	Not Disclosed	Egbin is a power generation company and does not directly manage above and underground transmission and distribution lines to residential, industrial, institutional and commercial customers. The Transmission Company of Nigeria and the electricity distribution companies will have such information.
Electric Utilities Disclosure 5	Allocation of CO <sub>2</sub> emissions allowances or equivalent, broken down by carbon trading framework.	-	Not Disclosed	There is currently no carbon trading framework in Nigeria at the moment, therefore Egbin does trade CO <sub>2</sub> .

#### STRATEGY

Disclosure 102 - 14	Statement from the senior decision-maker.	Board Chairman's Message	Disclosed	-
Disclosure 102 - 15	Key impacts, risks and opportunities.	Business Priority	Disclosed	

#### ETHICS AND INTEGRITY

Disclosure 102 - 16	Values, principles, standards, norms of behaviour.	Egbin Corporate Governance	Disclosed	
Disclosure 102 - 17	Mechanisms for advice and concerns about ethics.	Diversity and Equal Opportunity	Disclosed	

#### GOVERNANCE

Disclosure 102 - 18	Governance Structure.	Board of Directors	Disclosed	
Disclosure 102 - 19	Delegating authority.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 20	Executive-level responsibility for economic, environmental and social topics.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 21	Consulting stakeholders on economic, environmental and social topics.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 22	Composition of the highest governance body and its committees.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 23	Chair of the highest governance body.			Not Applicable to Core "In Accordance" Option



Disclosure 102 - 24	Nominating and selecting the highest governance body.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 25	Conflicts of interest.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 26	Role of highest governance body in setting purpose, values and strategy.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 27	Collective knowledge of highest governance body.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 28	Evaluating the highest governance body's performance.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 29	Identifying and managing economic, environmental and social impacts.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 30	Effectiveness of risk management processes.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 31	Review of economic, environmental and social topics.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 32	Highest governance body's role in sustainability reporting.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 33	Communicating critical concerns.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 34	Nature and total number of critical concerns.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 35	Remuneration policies.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 36	Process for determining remuneration.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 37	Stakeholder's involvement in remuneration.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 38	Annual total compensation ratio.			Not Applicable to Core "In Accordance" Option
Disclosure 102 - 39	Percentage increase in annual total compensation ratio.			Not Applicable to Core "In Accordance" Option
<b>STAKEHOLDER ENGAGEMENT</b>				
Disclosure 102 - 40	List of stakeholder groups.	Our Stakeholders	Disclosed	
Disclosure 102 - 41	Collective bargaining agreements.	Procurement Practices	Disclosed	

Disclosure 102 - 42	Identifying and selecting stakeholders.		Disclosed	Regulatory requirements and compliance.  The Nigerian Electric Power Sector Reform Act 2005.  Corporate Social Responsibility  The Egbin Code of Ethics and Corporate Governance Principles.
Disclosure 102 - 43	Approach to stakeholder engagement.	Our Stakeholders	Disclosed	
Disclosure 102 - 44	Key topics and concerns raised.	CEO's Message	Disclosed	
<b>REPORTING PRACTICE</b>				
Disclosure 102 - 45	Entities included in the consolidated financial statements.		Disclosed	Only Egbin Power Plc
Disclosure 102 - 46	Defining report content and topic Boundaries.	Board Chairman's Message	Disclosed	
Disclosure 102 - 47	List of material topics.	Economic Section Environment Section Social Section of the Sustainability Report	Disclosed	
Disclosure 102 - 48	Restatements of information.		Disclosed	Some restatements were made because the issues had neither not changed or simply continued into the reporting year.
Disclosure 102 - 49	Changes in reporting.		Disclosed	There were no significant changes made to the 2017 sustainability report as the reporting period in the list of material topics and topic boundaries were fairly the same.
Disclosure 102 - 50	Reporting period.		Disclosed	January 2017 to December 2017
Disclosure 102 - 51	Date of most recent report.		Disclosed	November 2017
Disclosure 102 - 52	Reporting cycle.		Disclosed	Annual
Disclosure 102 - 53	Contact point for questions regarding the report.		Disclosed	Legal, Regulatory and Compliance Department, Egbin Power Plc, expressyourself@egbin-power.com or corp.gov@egbin-power.com
Disclosure 102 - 54	Claims of reporting in accordance with the GRI standards.		Disclosed	This report has been prepared in accordance with the GRI Standards: Core Option.
Disclosure 102 - 55	GRI content index.		Disclosed	Most of the disclosures needed to be disclosed by an Electric Utility company like Egbin Power Plc, were disclosed in the content index.
Disclosure 102 - 56	External assurance.		Disclosed	No external assurance was provided for the 2017 sustainability report.



## ECONOMIC IMPACTS

### GRI 201: ECONOMIC PERFORMANCE

Disclosure 201 - 1	Direct economic value generated and distributed.	Economic Performance Direct Economic Value Generated and Distributed	Disclosed	
Disclosure 201 - 2	Financial implications and other risks and opportunities due to climate change.	Climate Change and Sustainable Electricity Generation	Disclosed	
Disclosure 201 - 3	Defined benefit plan obligations and other retirement plans.		Disclosed	Egbin maintains a defined contribution Pension Scheme in accordance with the Pension Reform Act, 2004. Based on the reviewed Pension Reform Act 2014, the contribution by the employer and the employee was reviewed to 10% and 8% respectively of the employee's monthly emolument. The scheme covers 100% of the pension benefit and liabilities. The participation in retirement plans is mandatory, as it is guided by the Pension Reform Act 2014.
Disclosure 201 - 4	Financial assistance received from government.	Financial Assistance Received from Government	Disclosed	The company was able to achieve major milestones in the process of filing for the Pioneer Status that will lead to tax savings.

### GRI 202: MARKET PRESENCE

Disclosure 202 - 1	Ratios of standard entry level wage by gender compared to local minimum wage.	Our People	Disclosed	
Disclosure 202 - 2	Proportion of senior management hired from the local community.		Disclosed	None in employment

### GRI 203: INDIRECT ECONOMIC IMPACTS

Disclosure 203 - 1	Infrastructure investments and services supported.	Plant Operations and Maintenance	Disclosed	
Disclosure 203 - 2	Significant indirect economic impacts.	Investment in Human Capital, Safety and Environment Economic Contributions to the Local Communities	Disclosed	

### GRI 204: PROCUREMENT PRACTICES

Disclosure 204 - 1	Proportion of spending on local suppliers.	Economic Contributions to the Local Communities	Disclosed	
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### GRI 205: ANTI - CORRUPTION

Disclosure 202 - 1	Ratios of standard entry level wage by gender compared to local minimum wage.	Our People	Disclosed	
Disclosure 202 - 2	Proportion of senior management hired from the local community.		Not Disclosed	None in employment

Disclosure 205 - 3	Confirmed incidents of corruption and actions taken.		Not Disclosed	No confirmed incidents of corruption.
<b>GRI 206: ANTI - COMPETITIVE BEHAVIOUR</b>				
Disclosure 206 - 1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices.		Not Disclosed	There were no legal actions of this nature.
<b>Electric Utilities Disclosure: Availability and Reliability</b>				
Disclosure 206 - 1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices.		Not Disclosed	There were no legal actions of this nature.
Electric Utilities Disclosure 10	Planned Capacity Against Projected Electricity Demand Over the Long Term, broken down by energy source and regulatory regime.	Investments Towards a Sustainable Future	Disclosed	
<b>ELECTRIC UTILITIES DISCLOSURE: DEMAND - SIDE MANAGEMENT</b>				
Former Electric Utilities Disclosure 7	Demand-side management programs including residential, commercial, institutional and industrial programs.	-	-	Not applicable
<b>ELECTRIC UTILITIES DISCLOSURE: RESEARCH AND DEVELOPMENT</b>				
Former Electric Utilities Disclosure 8	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development.			Not applicable for now
<b>ELECTRIC UTILITIES DISCLOSURE: PLANT DECOMMISSIONING</b>				
Former Electric Utilities Disclosure 9	Provisions for decommissioning of nuclear power sites.		Disclosed	Egbin power station is a natural gas fired power plant, therefore no provision has been made for nuclear decommissioning.
<b>ELECTRIC UTILITIES DISCLOSURE: SYSTEM EFFICIENCY</b>				
Former Electric Utilities Disclosure 11	Average Generation Efficiency of Thermal Plants by Energy Source and by Regulatory Regime.		Disclosed	The average generation efficiency of the Egbin power station in the reporting year was 29.79%.
Former Electric Utilities Disclosure 12	Transmission and distribution losses as a percentage of total energy.		Disclosed	The transmission losses target of the Multi Year Tariff Order of the Nigeria Bulk Electricity Trading Company is 8.05%. This is used to compute the net power generated and wheeled into the grid by the Egbin power station.
<b>ENVIRONMENTAL IMPACTS</b>				
<b>GRI 301: MATERIALS</b>				
Disclosure 301 - 1	Materials used by weight or volume.		Not Disclosed	The information is not currently being recorded. Systems will be put in place to collate this data in the nearest future.



Disclosure 301 - 2	Recycled input materials used.		Not Disclosed	The information is not currently being recorded. Systems will be put in place to collate this data in the nearest future.
Disclosure 301 - 3	Reclaimed products and their packaging materials.		Not Disclosed	This disclosure is not applicable to Egbin Power Plc as a power generating company.
<b>GRI 302: ENERGY</b>				
Disclosure 302 - 1	Energy consumption within the organization.		Disclosed	Energy Consumption
Disclosure 302 - 2	Energy consumption outside of the organization.		Disclosed	Energy Consumption
Disclosure 302 - 3	Energy intensity.		Disclosed	Energy Consumption
Disclosure 302 - 4	Reduction of energy consumption.		Disclosed	Energy Consumption
Disclosure 302 - 5	Reductions in energy requirements of products and services.		Disclosed	Energy Consumption
<b>GRI 303: WATER</b>				
Disclosure 303 - 1	Water withdrawal by source.		Disclosed	Water Utilization
Disclosure 303 - 2	Water sources significantly affected by withdrawal of water.		Disclosed	Water Utilization
Disclosure 303 - 3	Water recycled and reused.		Disclosed	Water Utilization
<b>GRI 304: BIODIVERSITY</b>				
Disclosure 304 - 1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.		Disclosed	Biodiversity
Disclosure 304 - 2	Significant impacts of activities, products, and services on biodiversity.		Disclosed	Biodiversity
Disclosure 304 - 3	Habitats protected or restored.		Disclosed	Biodiversity
Disclosure 304 - 4	IUCN Red List species and national conservation list species with habitats in areas affected by operations.		Not Disclosed	Egbin Power Plc does not have the total number of IUCN red list species and national conservation list species affected by our operations at the moment.
Electric Utilities Disclosures 13	Biodiversity of offset habitats compared to the biodiversity of the affected areas.		Not Disclosed	The information is not currently available. This data will be collated and disclosed in subsequent reports.
<b>GRI 305: EMISSIONS</b>				
Disclosure 305 - 1	Direct (Scope 1) GHG emissions.		Disclosed	Green House Gas Management

Disclosure 305 - 2	Energy indirect (Scope 2) GHG emissions.		Disclosed	Green House Gas Management
Disclosure 305 - 3	Other indirect (Scope 3) GHG emissions.		Disclosed	Green House Gas Management
Disclosure 305 - 4	GHG emissions intensity.		Disclosed	Green House Gas Management
Disclosure 305 - 5	Reduction of GHG emissions.		Disclosed	Green House Gas Management
Disclosure 305 - 6	Emissions of ozone-depleting substances (ODS).		Disclosed	Green House Gas Management
Disclosure 305 - 7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions.		Disclosed	Green House Gas Management

#### GRI 306: EFFLUENTS AND WASTE

Disclosure 306 - 1	Water discharge by quality and destination.		Disclosed	Effluent Quality Control
Disclosure 306 - 2	Waste by type and disposal method.		Disclosed	Effluent Quality Control
Disclosure 306 - 3	Significant spills.		Disclosed	Spill Management
Disclosure 306 - 4	Transport of hazardous waste.		Disclosed	Waste Management
Disclosure 306 - 5	Water bodies affected by water discharges and/or runoff.		Disclosed	Effluent Quality Control

#### GRI 307: ENVIRONMENTAL COMPLIANCE

Disclosure 307 - 1	Non-compliance with environmental laws and regulations.		Disclosed	Environmental Compliance
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#### GRI 308: SUPPLIER ENVIRONMENTAL ASSESSMENT

Disclosure 308 - 1	New suppliers that were screened using environmental criteria.	Suppliers were not screened in the reporting year 2016 with environmental criteria.	Disclosed	
Disclosure 308 - 2	Negative environmental impacts in the supply chain and actions taken.		Not Disclosed	The information was not taken in the reporting year 2017. Systems may be put in place to collate the information in the nearest future.

### SOCIAL

#### GRI 401: EMPLOYMENT

Disclosure 401 - 1	New employee hires and employee turnover.		Disclosed	In 2017, Egbin Power Plc hired 6 (six) graduate interns and 44(forty-four) undergraduate interns; with an employee turnover of 18 at a rate of 0.57.
Disclosure 401 - 2	Benefits provided to full-time employees that are not provided to temporary or part-time employees.		Disclosed	Paid Time Off from Work Health Care Life Insurance Disability and invalidity coverage Housing Allocation Welfare packages



Disclosure 401 - 3	Parental leave.		Disclosed	As part of an employee benefits package, Egbin provides a variety of options for paid time off. A paid time off (PTO) policy includes paid annual leave, paid sick leave, paid compassionate leave, paid funeral or bereavement leave and paid parental leave. A PTO policy creates a pool of days that an employee may use at his or her discretion.
Former Electric Utilities Disclosure 14	Programs and processes to ensure the availability of a skilled workforce.		Disclosed	The Egbin Power Plc recruits qualified young graduates by internal and external recruitment processes and trains them for the intricacies of the job. It also has training programme for existing staff to develop themselves. It allows a staff member to further their educational qualification through the part time program for further individual educational development. The company also engages the services of youth corps members whose discipline is closely related to the organizational functions. There is also room for internship programmes for students and graduates of engineering, chemistry, and other business related areas.
Electric Utilities Disclosure 15	Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region.		Disclosed	<p>In the next five years:</p> <p>Power Plant Operators = 4%</p> <p>Engineers = 6%</p> <p>Support Services = 1.3%</p> <p>Maintenance Staff = 9.1%</p> <p>In the next ten years:</p> <p>Power Plant Operators = 9.3%</p> <p>Engineers = 9.92%</p> <p>Support Services = 3.37%</p> <p>Maintenance Staff = 24.6%</p>
Former Electric Utilities Disclosure 16	Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors.	Occupational Health and Safety	Disclosed	
Electric Utilities Disclosure 17	Days worked by contractor and subcontractor employees involved in construction, operation & Maintenance activities.		Disclosed	None
Electric Utilities Disclosure 18	Percentage of contractor and subcontractor employees that have undergone relevant health and safety training.		Disclosed	70% of Egbin Power Plc contractors and their employees received both formal and informal HSE training for task within or outside the power plants.

#### GRI 402: LABOUR MANAGEMENT RELATIONS

Disclosure 402 - 1	Minimum notice periods regarding operational changes.		Disclosed	One Month
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#### GRI 403: OCCUPATIONAL HEALTH AND SAFETY

Disclosure 403 - 1	Workers representation in formal joint management-worker health and safety committees.	Plant Operation and Maintenance	Partially Disclosed	
Disclosure 403 - 2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities.		Not Disclosed	The type of injury recorded in the reporting year were minor injury of first aid cases (FAC). Details of the injury rate, occupational disease rate, lost days' rates etc. are not available at the moment due to the unavailability of the monthly health record statistics of employees from the HMO.
Disclosure 403 - 3	Workers with high incidence or high risk of diseases related to their occupation.		Not Disclosed	Details are not available at the moment.
Disclosure 403 - 4	Health and safety topics covered in formal agreements with trade unions.		Not Disclosed	The health and safety topics covered during the monthly health talk by the HMO are determined by a democratic process of voting by all members of staff.

#### GRI 404: TRAINING AND EDUCATION

Disclosure 404 - 1	Average hours of training per year per employee.		Disclosed	All staff members are scheduled to proceed on training annually irrespective of gender level or cadre. However, for the year 2017, there were no local or international trainings due to paucity of funds.
Disclosure 404 - 2	Programs for upgrading employee skills and transition assistance programs.		Disclosed	On the Job Training In-house Plant Training Scheduled Trainings
Disclosure 404 - 3	Percentage of employees receiving regular performance and career development reviews.		Disclosed	Male: 100% Female: 100%

#### GRI 405: DIVERSITY AND EQUAL OPPORTUNITY

Disclosure 405 - 1	Diversity of governance bodies and employees.	Our People Gender Diversity	Disclosed	
Disclosure 405 - 2	Ratio of basic salary and remuneration of women to men.		Disclosed	Ratio 1:1

#### GRI 406: NON - DISCRIMINATION

Disclosure 406 - 1	Incidents of discrimination and corrective actions taken.		Disclosed	None
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### GRI 407: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING

Disclosure 407 - 1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk.		Disclosed	None
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### GRI 408: CHILD LABOUR

Disclosure 408 - 1	Operations and suppliers at significant risk for incidents of child labour.		Disclosed	None
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### GRI 409: FORCED OR COMPULSORY LABOUR

Disclosure 409 - 1	Operations and suppliers at significant risk for incidents of forced or compulsory labour.		Disclosed	None
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### GRI 410: SECURITY PRACTICES

Disclosure 410 - 1	Security personnel trained in human rights policies or procedures.		Disclosed	Egbin employed the services of a third-party company to ensure the safety and security of the facility and the environs. The third-party company reports that 100% of its security personnel have undergone human rights trainings.
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### GRI 411: RIGHTS OF INDIGENOUS PEOPLES

Disclosure 411 - 1	Incidents of violations involving rights of indigenous peoples.		Disclosed	None
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### GRI 412: HUMAN RIGHTS ASSESSMENT

Disclosure 412 - 1	Operations that have been subject to human rights reviews or impact assessments.		Disclosed	None
Disclosure 412 - 2	Employee training on human rights policies or procedures.		Disclosed	None at the moment.
Disclosure 412 - 3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening.		Disclosed	None at the moment.

### GRI 413: LOCAL COMMUNITIES

Disclosure 413 - 1	Operations with local community engagement, impact assessments, and development programs.	Improved Health Care Safety of Marine Life Investment in the Sustainable Future	Disclosed	
Disclosure 413 - 2	Operations with significant actual and potential negative impacts on local communities.	Major Environmental Issues	Disclosed	

Former Electric Utilities Disclosure 19	Stakeholder participation in decision making processes related to energy planning and infrastructure development.		Not Disclosed	Egbin is currently working on the strategic document which will capture the processes and procedures for stakeholder participation.
Former Electric Utilities Disclosure 20	Approach to managing the impacts of displacement.		Not Disclosed	The construction of Egbin power plant commenced in 1983 and was completed in 1989. Back then, the plant was owned by the Federal Government of Nigeria, therefore all forms of re-settlements and compensation to the local indigenes for the impacts of the construction of the power plant, was systematically carried out.
Former Electric Utilities Disclosure 21	Contingency planning measures, disaster/ emergency management plan and training programs, and recovery/restoration plans.	Spill Management	Disclosed	
Electric Utilities Disclosure 22	Number of people physically or economically displaced and compensation, broken down by type of project.		Not Disclosed	The records of the displaced people from their lands when Egbin power plant was constructed in 1983 is not with Egbin Power Plc at this point in time, as these records may be in the possession of the relevant government agency when the power plant was still owned by the Federal Government of Nigeria.
<b>GRI 414: SUPPLIER SOCIAL ASSESSMENT</b>				
Disclosure 414 - 1	New suppliers that were screened using social criteria.		Disclosed	None, as this system was not in place in the reporting year 2017.
Disclosure 414 - 2	Negative social impacts in the supply chain and actions taken.		Disclosed	In the reporting year 2017, no supplier was penned down to have significant actual and potential negative impact on the society with respect to our supply chain management system.
<b>GRI 415: PUBLIC POLICY</b>				
Disclosure 415 - 1	Political contributions.		Disclosed	None
<b>GRI 416: CUSTOMER HEALTH AND SAFETY</b>				
Disclosure 416 - 1	Assessment of the health and safety impacts of product and service categories.		Not Disclosed	None, as Egbin Power plc is a power generation company, therefore does not manufacture a product whose cycle life may pose risk to the general public.
Disclosure 416 - 2	Incidents of non-compliance concerning the health and safety impacts of products and services.		Disclosed	None



Electric Utilities Disclosure 25	Number of injuries and fatalities to the public involving company assets including legal judgements, settlements and pending legal cases of diseases.		Disclosed	None
<b>ELECTRIC UTILITIES DISCLOSURE: ACCESS</b>				
Former Electric Utilities 23	Programs, including those in partnership with government, to improve or maintain access to electricity and customer support service.		Disclosed	Considering the fact that Egbin power plant is situated in Lagos -the economic nerve centre of Nigeria, there are plans with the Federal Ministry of Power, to dedicate unit 6 to serve the Lagos metropolis, therefore boosting economic activities in the state.
Electric Utilities Disclosure 26	Percentage of population unserved in licensed distribution or service areas		Not Disclosed	Due to structure of the Nigerian power industry, Egbin is only licensed to generate electricity. Thus, Egbin are not in custody of the data with respect to transmission and distribution infrastructure, and may not be able to estimate overall and unserved population.
Electric Utilities Disclosure 27	Number of residential disconnections for non-payment, broken down by duration of disconnection And by regulatory regime		Not Disclosed	Egbin Power Plc is a power generation company, and therefore does not interface directly with residential, commercial, or industrial electricity consumers.
Electric Utilities Disclosure 28	Power outage frequency		Not Disclosed	Due to the structure of the Nigerian power industry, Egbin who is a power generation company, does not have in its possession the accurate number of customers served. This information is domiciled at the electricity distribution companies and the transmission company. Therefore, we cannot at the moment, accurately calculate the System Average Interruption Frequency Index (SAIFI).
Electric Utilities Disclosure 29	Average power outage duration.		Not Disclosed	These are performance indices for power transmission and distribution companies, and are not applicable to GENCOs.
Electric Utilities Disclosure 30	Average plant availability factor by energy source and by regulatory regime.	Availability Factor	Disclosed	

# ELECTRIC UTILITIES DISCLOSURE: PROVISION OF INFORMATION

Former Electric Utilities Disclosure 24	Practices to address language, cultural, low literacy and disability related barriers to access and safely use electricity and customer support services.		Not Disclosed	Egbin Power Plc generates and wheels out power into the national grid in a contained facility that is accessible to only authorized personnel and screened visitors. Therefore, Egbin does not relate directly or indirectly with electricity consumers. However, our signage labeling and safety warnings are written in English and Korean, which are the official languages of Nigeria and South Korea (KEPCO being our technical partner).
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# GRI 417: MARKETING AND LABELING

Disclosure 417 - 1	Requirements for product and service information and labeling.		Disclosed	None
Disclosure 417 - 2	Incidents of non-compliance concerning product and service information and labeling.		Disclosed	None
Disclosure 417 - 3	Incidents of non-compliance concerning marketing communications.		Disclosed	None

# GRI 418: CUSTOMER PRIVACY

Disclosure 418 - 1	Substantiated complaints concerning breaches of customer privacy and losses of customer data.		Disclosed	None
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# GRI 419: SOCIO-ECONOMIC COMPLIANCE

Disclosure 419 - 1	Non-compliance with laws and regulations in the social and economic area.		Disclosed	None
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