



# **APPRAISING THE IMPACT OF POLICY INSTRUMENT ON NIGERIAN ELECTRICITY SUPPLY INDUSTRY\***

**By**

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\*Keynote Paper Presented at International Power Engineering Exhibition & Conference, Nigeria (IPECON) on Monday, 2<sup>nd</sup> August 2021 at Nile University of Nigeria, Abuja.



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# 1. Introduction

- The Nigerian Electricity Supply Industry (NESI) began with 2x30kW diesel generator in 1886, which served the then Colony of Lagos. In 1896 the Ijora power plant in Lagos was built with capacity of 20MW managed by the Public Works Department (PWD). Nigeria came into being in 1914. Another 14MW was added between 1921 and 1923. In 1929 a private company NESCO, Jos constructed 2MW SHP in Kuru. In 1946, Nigerian Government Electricity Undertaking (NGEU) was established to ensure electricity supply spread to other parts of Nigeria.
- In 1950 Electricity Corporation of Nigeria (ECN) was established and in 1951 took over the Assets of 13 FGN over power stations with total capacity of 25.2MW.



# 1. Introduction Cont'd

- In 1962 the Niger Dams Authority was formed to oversee the development and management of hydropower stations.
- While ECN was mainly responsible for distribution and sales, the NDA was established to build and operate power generating plants and transition lines.
- The Energy produced by NDA was sold to the ECN for distribution and sales at utilities voltages.
- In 1972 NDA and ECN were merged to form NEPA under Decree No.24 of 1972. The decree vested exclusively in NEPA, all commercial electric supply activities, generation, transition and distribution in Nigeria. Power generation was mainly from coal and hydropower primary energy sources.
- In 1990, NEPA Decree of 1972, was replaced by NEPA Act, Cap 106, LFN (1990), re-establishing NEPA as a commercial and self accounting authority and vested it with the authority to generate, transmit and distribute electricity in Nigeria.



# 1. Introduction Cont'd

- In 1992, the Utilities Charges Commission Decree was changed to an Act vesting the Commission with power to regulate tariffs on certain public utilities including electric power. It is to monitor electricity tariffs and further make policies in relation thereto.
- In 1998, the NEPA Act was amended allowing for Private Participation in power generation only.
- In 2000, the Electric Power Sector Reform Committee (EPSRC) was set-up to bring up a power policy blue print that will reform the sector. Membership drawn from Federal Ministry of Power & Steel, NEPA, BPE, Federal Ministry of Petroleum, Ministry of Finance, Energy Commission of Nigeria, OPS and other Professional Bodies.



# 1. Introduction Cont'd

- The Committee's report led to the 2001 National Electric Power Policy, with the following objectives:
  - ensuring that the power sector attracts private investments both locally and internationally
  - developing a transparent and effective regulatory framework for the power sector
  - developing and enhancing indigenous capacity in electric power sector technology
  - ensuring that the Government divests interests in state-owned entities and entrenches the key principles of restructuring and densture in the electric power sector
  - promoting competition to meet growing demand through the full liberation of the electricity market; and

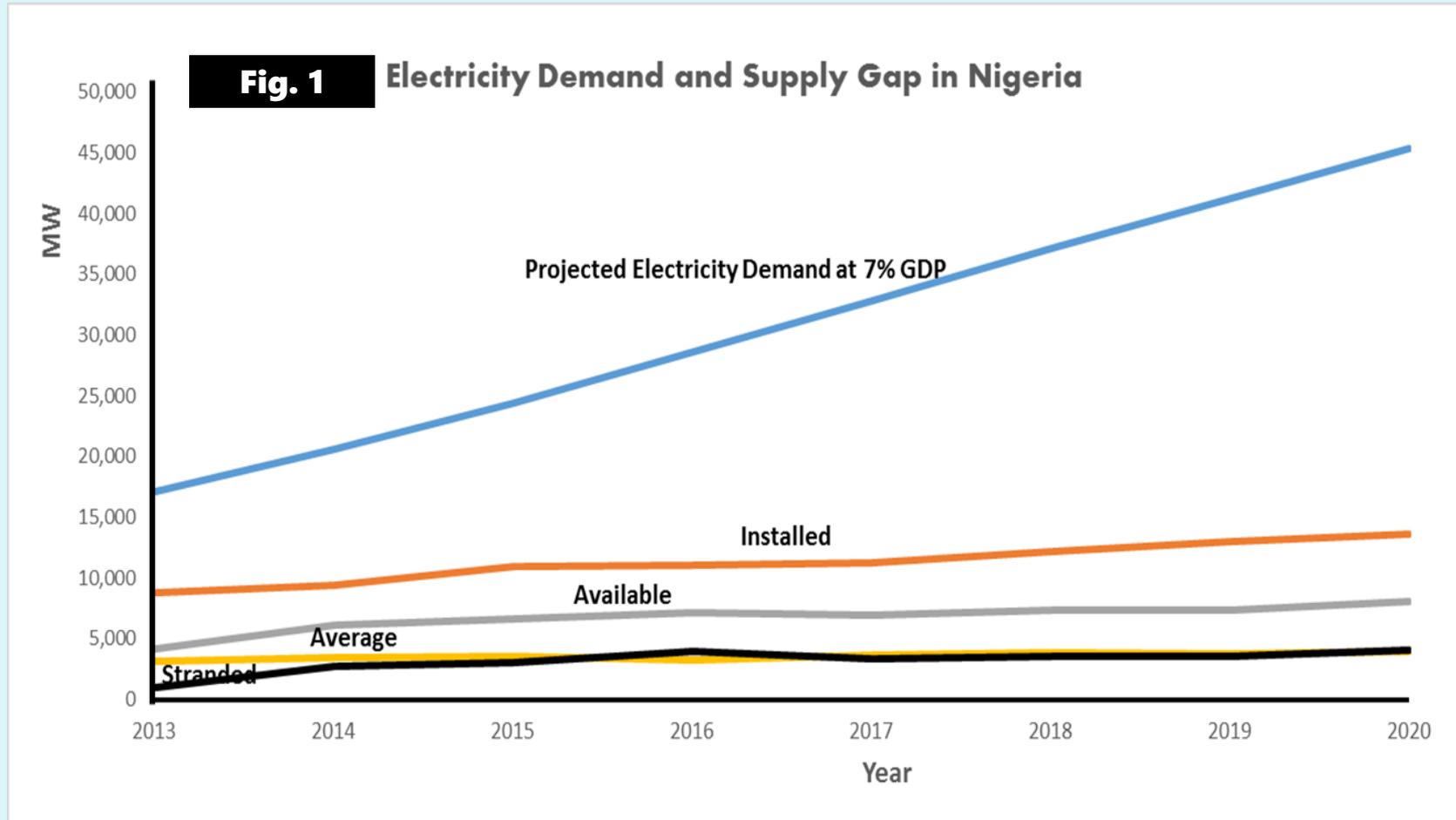


# 1. Introduction Cont'd

- reviewing and updating electricity laws in conformity with the need to introduce private sector operation and completion into the sector.
- 2005, the Electric Power Sector Reform Act was enacted to provide legal backing to the principles and recommendations of the 2001 power policy.
- 2013, the Power Reform Act led to the privatization of the state-owned power utility (NEPA – PHCN) into eighteen successor companies of:
  - Six(6) Power Generation Companies (GENCOS)
  - Eleven(11) Power Distribution Companies (DISCOS)
  - One(1) Power Transmission Company (TCN)
- Despite all these the Gap between Demand and Supply of electricity continues to rise. As shown in Fig.1



# 1. Introduction Cont'd



Sources: ECN, TCN, NERC and APGC



## 2. Recent Policy Legal and Regulatory Instruments in NESI

S/N	Policy	Year	Brief
1.	National Electric Power Policy	2001	Federal Government aspiration's on electricity development in Nigeria.
2.	National Energy Policy	2003	Federal Government's aspirations on sustainable energy development in Nigeria.
3.	Electric Power Sector Reform Act (EPSRA)	2005	Aims at improving electricity access in the country by unbundling the then NEPA and privatization of Generation and Distribution aspects of the supply chain; creation of industry Regulator, Rural Electrification Agency and Nigerian Bulk Electricity Trader.
4.	Roadmap for Power Sector Reform (2010)	2010	To develop roadmap for the implementation of reforms in the National Electricity Power Policy (2001) as enshrined in ES PRA 2005.
5.	National Renewable Energy and Energy Efficiency Policy (NREEEP)	2015	Develops renewable energy and energy efficiency and Power roadmap and support for electricity market reforms; Promotes off-grid renewables development and financing; Recommends additional regulations and economic instruments; Research, development and training; Bilateral and regional cooperation; Implements existing planning and policy.
6.	National Renewable Energy Action Plan (NREAP)	2016	Sets out the implementation strategy for the National Renewable Energy and Energy Efficiency Policy (NREEEP) (2015). It provides an overview on concrete policy and regulations, laws, incentives and measures, to be implemented to achieve Nigeria's renewable energy targets and the Sustainable Energy for All (SE4ALL) goals.
7.	Sustainable Energy for All Action Agenda (SE4ALL – AA)	2016	Provides the vision and targets until 2030, including Nigeria's SE4ALL targets, energy access targets, and the renewable energy target.



## 2. Recent Policy Legal and Regulatory Instruments Con'd

S/N	Policy	Year	Brief
7	Rural Electrification Strategy and Implementation Plan (RESIP)	2016	Coordinates and implements Nigeria's rural electrification policies, target and strategies; Administers the Rural Electrification Fund; Promotes low-cost technologies and private sector participation.
8	Power Sector Recovery Programme (PSRP) of ERGP 2017-2020	2017	Increases electricity access by implementing off-grid renewable solutions; Establishes data driven processes for decision making across the sector; Develops and implements a foreign exchange policy for the power sector; Makes electricity market contracts effective and ensures cost reflective tariffs.
9	Nigerian Electricity Regulatory Commission Mini-grid Regulation	2017	Provides definition, registration and grant of permit for minigrid systems; Develops contract templates and enforcement of electricity contracts between all parties concerned; Describes operation of the minigrid including technical specifications; Proposes commercial arrangement including tariff setting; Establishes framework for investor and consumer protection.
10	The Nigeria Electrification Roadmap	2019	An agreement between Nigeria and Siemens Germany which aims to achieve 25,000MW of electricity in the country by 2025.



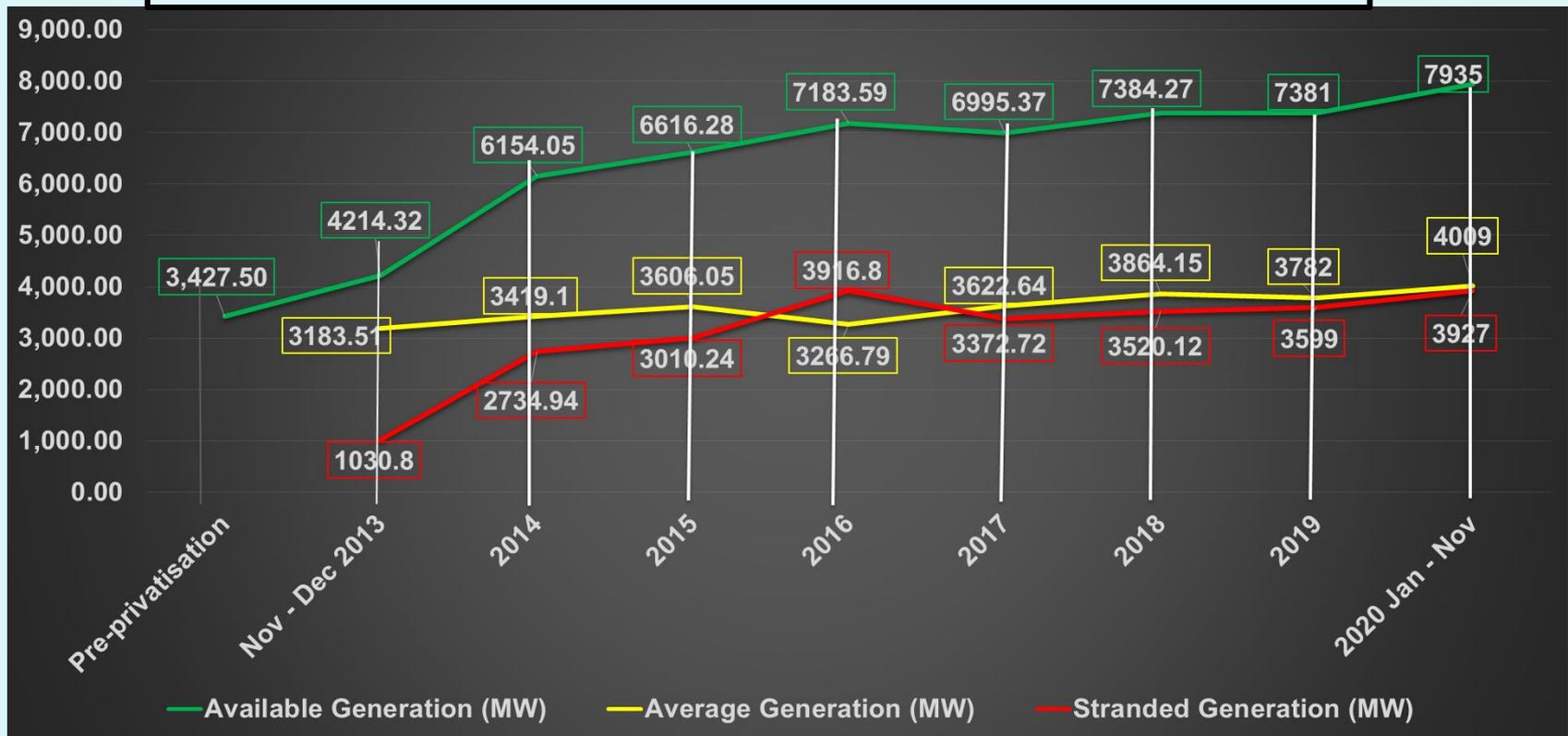
### 3. Impact of Policy Instruments on NESI

- Policies in the Nigerian Power Sector are formulated to improve on electricity supply and access in the country. These policy instruments have no doubt positively impacted on the NESI albeit slowly and not too drastic.
- Slightly over 1½ decade after the enactment of EPSRA in 2005, installed grid generation capacity continues, to increase; however, without commensurate increase in the electrical energy generated into the grid. See Fig. 2 and Table 1.



# 3. Impact of Policy Instruments... Cont'd

**Fig. 2: GENERATION TREND (2013-2020)**



Source: NCC (SO) and OVP (APT)



### 3. Impact of Policy Instruments... Cont'd

**Table 1: Historical Grid Electricity Consumption (Kgoe/Capita)**

Item	1957	2005	2008	2011	2018
Nigeria	0.4	181.4	142.9	165.0	157
Africa Average	-	563	571	592	567
World Average	-	1780	1830	1880	1880



### **3. Impact of Policy Instruments... Cont'd**

- Another aspect of the Sector that enjoyed positive impact of policy instruments is the off-grid electrification.
- Over the past 1½ decade, off-grid electricity has grown rapidly in the country and its now estimated at about 400MW of dispersed solar PV generation as mini-grids, solar street lights, solar traffic combos system, solar powered water boreholes and supply, etc.
- The Nigeria Electrification Roadmap – an agreement between Nigeria and Siemens Germany is a three-phase Nigerian electrification project which aims to achieve 25,000MW of electricity in the country by 2025.



### **3. Impact of Policy Instruments... Cont'd**

- Phase 1 of the project seeks to take in the stranded power about 2GW so as to increase power delivered to 7GW by 2021.
- The objective of second phase is to increase the grid capacity from 7,000MW (expected to be realized from phase 1) to 11,000MW by 2023.
- The third phase of the Nigeria Electrification Roadmap would focus on additional transmission and distribution assets upgrade and large-scale power project in order to increase the grid capacity from 11,000MW to 25,000MW by 2025.



## 4. Challenges

- There are some factors identified as bottlenecks to successful implementation of energy policies in Nigeria. They include the following:
  - Electricity is a derived form of energy from other primary energy resources controlled by other Ministries other than Ministry in charge of electricity. (FM Petroleum, FM Water Resources, FM Mines & Steel Dev.)
  - Non economic pricing of electricity as a tradable product.
  - Financial constraints hindering smooth implementation.
  - Absence of synergy and cooperation between MDAs and other policy implementing partners.
  - Inconsistent targets in different policy documents or National Targets.
  - Lack of policy continuity.
  - Sluggish participation of the Private Sector.
  - Weak coordinator for the Nigeria Energy Sector.



## 5. Going Forward

- Creation of Ministry of Energy to provide platform for coordination and synergy of energy matters.
- Review of EPSRA inline with lessons learnt.
- Proper integrated strategic planning of the entire sector.



## 6. Conclusion

- In conclusion, the current policy instruments in the Nigerian Electricity Supply Industry have no doubt contributed to improvement in electricity supply in Nigeria.
- Review of the policies are necessary to reflect lessons learnt.
- The Ministry of Energy should be re-enacted to provide platform for coordination of the entire energy sector for achieving national objectives.
- I sincerely commend the Nigerian Institution of Power Engineers for organizing this Conference and wish you all fruitful deliberations.
- Thank you all and God bless Nigeria!



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Thank you for  
your kind  
attention!