

**ASSESSMENT OF THE CONSUMERS' ATTITUDE TOWARD POWER
SUPPLY IN ABUJA MUNICIPAL COUNCIL
ACASE STUDY OF POWER HOLDING COMPANY OF NIGERIA
(PHCN)**

BY

MONOKPO BLESSING KADU

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**DEPARTMENT OF ECONOMICS
FACULTY OF SOCIAL SCIENCE
NASARAWA STATE UNIVERSITY, KEFFI
NIGERIA**

DECLARATION

I, Monokpo Blessing Kadu, hereby declare that this research project has been written by me and it is a report of my research work. It has not been presented in any previous application for award of any certificate. All quotations are indicated and sources of information and specifically acknowledged by means of references.



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Monokpo Blessing Kadu

NSU /PGD/ECO/0029/17/18

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Date

CERTIFICATION

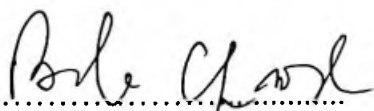
This project titled “Assessment of The Consumers’ Attitude on Power Supply in Abuja Municipal Council: A Case study of Power Holding Company of Nigeria (PHCN)” meets the regulations governing the awards of Postgraduate Diploma in Economics (PGD) of the School of Postgraduate Studies, Nasarawa State University, Keffi, and is approved for its contribution to knowledge.

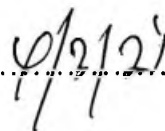
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Osekweyi J. Odonye
(Chairman Supervisory Committee)

Date





Dr. Salihu H. Muhammed-Gani
(Head of Department)

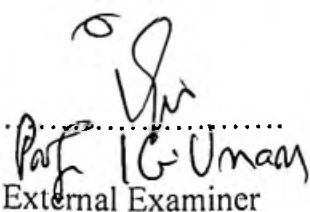
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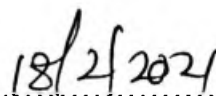
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(Internal Examiner)

Date


Prof. I. G. Umam
External Examiner



Date

DEDICATION

This project is dedicated to God Almighty, and my family.

ACKNOWLEDGEMENT

My utmost gratitude goes to Almighty God for the wisdom and grace given to me to successfully complete this research work which seems impossible from the onset.

I sincerely wish to express my profound gratitude to my project supervisor, Mr Osekweyi J. Odonyewhose professional advice, wisdom, Patience plus words of encouragement has made it possible for the successful completion of this research work.

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Words are truly not enough to appreciate everyone who stood by me. I am remaining ever grateful to all those who contributed in one way or the other to see to the success of this study.

ABSTRACT

This Research Project assessed the consumer's attitude toward Power Supply in Abuja Municipal Council using PHCN as a case study. It takes into recognition the presence of Variables such as the effect of low supply of electricity, Increase in pricing of Electricity and High Corruption Practices of Most PHCN workers and its impact on the consumers' attitude towards electricity bill payment and its general impact on economic development in Nigeria. The adopted descriptive methods by relying on primary data generated by means of questionnaire administration to consumers. A simple percentage (ratio) was employed to analyse the data gathered. The result shows that majority of the respondents are not satisfied with the services being offered by the power holding company of Nigeria in the Abuja Municipal Area Council and hence, do not promptly pay their bills or find other means in obtaining electricity. It was however recommended among others that there is the need to upgrade the power supply in the Abuja Municipal council, while there should be an improvement in the working condition and office environment of the PHCN staff.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Electricity, otherwise generally referred to as the power of a nation, is as essential to the nation as blood is to human beings. It is the life-line of any nation's development and support for developmental features of a nation like communication, manufacturing, industry, agriculture, defence, transport, telecommunication among others. Every man uses electricity in one form or the other each day from common lighting in homes and offices, powering of both electrical and mechanical gadgets to big industrial, medical, educational, social, and political uses (Odenike, 2010).

Electricity and economic development are closely connected. It is recognized that the presence of stable electricity supply has contributed immensely to the development of many economically advanced countries (Chuma, 2006). This relationship is even more heightened by the fact that electricity consumption has become one of the indices for measuring the standard of living of a country thus making the energy sector a very critical one to the economic, industrial, technological, and social development of any country. The expected growth of Nigerian economy and realization of its planning and managerial objectives will be highly dependent on the performance of the power sector and consequently

the effectiveness and efficiency of its ability to meet the growing demand of power supply, (Igbokwe and Emengini, 2004).

In line with Sambo (2008), the history of electricity in Nigeria dates back to 1896 when electricity was first produced in Lagos, fifteen years after its introduction in England. Despite the fact that its existence in the country is over a century, its development has been at a slow rate. In 1950, a central body was established by the legislative council, which transferred electricity supply and development to the care of the central body known as the Electricity Corporation of Nigeria, (ECN) now defunct.

Other bodies like Native Authorities and Nigeria Electricity Supply Company (NESCO) had licenses to produce electricity in some locations in Nigeria. Another body known as Niger Dams Authority (NDA) was established by an Act of Parliament. The Authority was responsible for the construction and maintenance of dams and other works on the River Niger and elsewhere generating electricity by means of water power, improving and promoting fish brines and irrigation. In the early 1960s, the Niger Dam Authorities (NDA) and Electricity Corporation were amalgamated to form the Electricity Corporation of Nigeria (ECN). Then immediately after the Nigerian civil war, the management of ECN changed its nomenclature to National Electric Power Authority in line with Decree No 24 of April 1972 (Wikipedia, the free encyclopedia, 2018).

On historical ground, Popoola and Fadare (2016) reported that the Power Holding Company of Nigeria (PHCN), formerly known as National Electric Power Authority (NEPA) incorporated under the Companies and Allied Matters Act CAP C20: Laws of the Federation of Nigeria, 2004 (PHCN condition of service, 2010) is an organization governing the use of electricity in Nigeria. Despite the vital contributions of the organization to the development of the nation, the sector faces some significant and wide ranging hurdles most especially in the areas of distribution and supply of electricity to the end users in Nigeria. Over the years, the absence of stable electricity has had adverse effects on growth and development of the Nigerian economy.

One of the fall outs of this is the increased cost of doing business in the country, which in turn had resulted in scaring potential investors away, (World Bank, 2002). In the past few decades, the demand rate compared with electricity generation and distribution rate is at variance, hence the serious setback in the economic development. Studies and experiences have shown that power generation in the country has been dismal and unable to compare with what obtains in smaller African countries (Emeka, 2008). Studies on power distribution to the industrial sector in Nigeria showed that due to poor management, an average daily power outage in the industrial sector increased from 13.3 hours in January 2006 to 14.5 hours in March 2006. In a worsening experience, the outage increased to 16.48 hours per day in June 2006. In other

words, power distribution in the month of June 2006 to the industrial sector, on the average was 7.52 hours per day (Ajanaku, 2007).

The Federal Government of Nigeria in the time past has made some efforts to improve power generations and ensure uninterrupted power supply to the nation. In her drive to achieve the goal of increasing generation capacity, the federal government increased the involvement of foreign participation in the electric power sector through Independent Power Producers (IPPs) to generate electricity and sell it to Power Holding Company of Nigeria (PHCN). In June 2001, there was the commissioning of 270 MW (9 units of 30 MW power plants) by Enron, into the national grid. This was followed in May 2005 by Agip's 450 MW plant located at Kwale in Delta State. The NNPC and its JV Partners- Conoco Phillips and Agip- provided the \$480 million to construct the plant. State governments were also not left out in the commissioning of major power plants to increase generation, including River State, which contracted Shell Petroleum Development Company (SPDC) to expand the 700MW Afam station.

In addition to the above, 14 (fourteen) hydroelectric and natural gas plants were planned for completion by 2010 as at then. China's Exim Bank Su Zhing and Sino Hydro committed themselves to funding the Mambila (3,900MW) and Zungeru (950MW) hydroelectric projects respectively. In addition, the Nigerian National Petroleum Corporation (NNPC), in a joint venture with Chevron Nigeria Limited constructed a 780-MW gas-fired thermal plant in Ijede, Lagos.

The project was constructed in three phases, with the first two phases having capacity of 256MW each (Emeka, 2008). All these and more were the efforts that the federal Government put in place to improve the situation in the electric power sector. Despite all these, the electricity supply is still epileptic. The sector, too many Nigerians, has really disappointed its anxious and dejected customers. With all the efforts made towards efficient power generation, which for electric utilities, it is the first process in the delivery of electricity to consumers or customers, the subsequent transmission and distribution of the generated power should be accorded the necessary attention it also requires. Not only this, efficient functioning of the already available and anticipated generated power cannot be achieved without proper record keeping, but also monitoring of the transmission and distribution network system (Igbokwe and Emengini, 2004).

However, beyond generation, administrative policies and procedures are very crucial and important dimensions to good service delivery of the power sector. They require the needed attention for any organization to run an efficient day-to-day operation and to manage and develop its service effectively. It is important to acknowledge the substantial base of successful practice of administration which must be put in place to carry out all the necessary actions as well as operations that will actually fulfil the objective, goals and existence of such organization to customers.

Regular and adequate power supply remains the driving force for socio-economic and technological transformation of every nation (Agba, 2010; Akpabio & Akpan, 2010). Unfortunately, despite huge capital investments in the sector, endowed energy resources of the country and reforms in the power sector, Nigeria consistently suffers from shortages of electric power supply (Akpan, 2005; Odiaka, 2006; Ogumodede, 2006; Okafor, 2008). Nigeria has repeatedly been experiencing the problem of incessant power outage; with the citizens and organizations already accustomed to living and operating several hours, days, weeks and even months without electricity (Okparaaocha, 2010). With a population of 170 million depending on a grossly insufficient and meagre electricity of less than 2,000 megawatts (MW), every sector of the country is affected (Agba, 2010). This, according to Allianz for Rural Electrification (2007), is a major barrier to growth and development in vast areas of the world in general, and Nigeria in particular, and hence create poor attitude of consumers to power supply in the country. This is the motivation to carry out this study using the Federal Capital Territory, Abuja.

1.2 Statement of Problem

In Nigeria, energy serves as the pillar of wealth creation evident by being the nucleus of operation and engine of growth for all sectors of the economy. The output of energy sector (electricity and the petroleum products) usually consolidate the activities of the other sectors which provide essential services to

state and have attempted to proffer solution to these problems so as to ensure adequate supply of electricity which is central to the radical transformation of the Nasarawa state's economy and put the state's economy on the part of sustainable growth and development.

Electricity plays very crucial role in both home and industrial setups. It is one of the important inputs in production. But electricity supply in Nigeria has been bedevilled by several problems including corruption, mismanagement, and lack of transparency on the part of PHCN workers, incapacitating it to generate enough power in the country. As a result of poor and unreliability nature of the public electric supply system in the country, many companies had resolved in providing their own power generating sets for more reliable generation of electricity leading to high costs of their products and services.

Another problem is that power distribution to the industrial sector in Nigeria also remains abysmally irregular. The effect of irregular power on the cost of production by manufacturing industries has negative implication for growth in Nigeria and hence create poor attitude of consumers to power supply in the country. However, there has been consistent rise in the price of electricity in Nigeria over the years, causing a rise in costs of production which has negative impact on economic growth in the country. Also, the problem of inadequate supply of electricity in the face of increasing demand has led to frequent power outages and this has negatively affected the economic growth in the country.

1.3 Research Questions

The study intends to answer the following questions?

- i. What are the impacts of inadequate and erratic power supply on consumers' attitude towards payment of electricity bills in Abuja Municipal council?
- ii. What are the impacts of increasing electricity bills on consumers' attitude towards payment of electricity bills in Abuja Municipal council?
- iii. How has corruption impacted on consumer attitudes towards payment of electricity bills i Abuja Municipal Councils?

1.4 Objectives of the Study

The major objective of this study is to assess consumers' attitude toward power supply in Abuja Municipal Area Council usingPHCN as a case study. The specific objectives include:

- i. To examine the impacts of inadequate and erratic power supply on consumers' attitude towards payment of electricity bills in Abuja Municipal council.
- ii. To examine the impacts of increasing electricity bills on consumers' attitude towards payment of electricity bills in Abuja Municipal council.
- iii. To evaluate how corruption has impacted on consumer attitudes towards payment of electricity bills i Abuja Municipal Council.

1.5 Statement of Hypotheses

In this study, the following hypotheses shall be tested:

- i. Inadequate and erratic power supply has no impact on consumers' attitude towards payment of electricity bills in Abuja Municipal council.
- ii. Increasing electricity billshas no impact on consumers' attitude towards payment of electricity bills in Abuja Municipal council.
- iii. Corruption has not impacted on consumer attitudes towards payment of electricity bills i Abuja Municipal Council.

1.6 Significance of the study

This study is meant to proffer solution to the challenges hindering efficient/effective electricity supply in Nasarawa State. The study will be relevant to the government and it agencies, development planners for policy formulation to improve electricity supply to the populace. This study will also serve as a reference material to the academia by setting a base for future research and further learning on electricity. The discoveries in this study and the policies recommended when properly implemented can serve as a benchmark for the betterment of electricity and ultimately economic growth in Nigeria and Nasarawa State in Particular.

This study is significant in many aspects. The study reveals the role of Electricity in economic development in Nigeria. It will also sensitise the society on the importance Electricity in Nigeria. Besides, the study will assist policy makers and government in their efforts to make more effective policies that will enhance adequate and steady Electricity in Nigeria. The findings from the study will assist researchers in this and/ or related areas of study. The study will be helpful in educating the public on the role of electricity in economic development.

1.7 Scope of the study

The scope of the study is on the assessment of consumers' attitude towards power supply in Abuja Municipal Area Council. Thus, the study will cover such variables as corruption on the part of PHCN workers, quantity of electricity supply, price of electricity, and their impacts on electricity consumers in the Federal Capital Territory.

1.8 Organization of the study

The study report is structured into five chapters. Chapter one is the introduction. Chapter two reviews the related literatures. Chapter three describes with the Research methodology adopted. Chapter four is concerned with presentation and analysis of the data gathered. Chapter five gives the summary, conclusion as well as recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Concept of Consumers' Attitude

Attitude is an important variable when measuring consumer behaviour towards an object or a product. It can help to determine what a consumer know, feel, value or how it is position in their mind about that particular object or product. According to Evans, Foxall and Jamal (2009), Attitude is a complex mental state involving what we know, our feelings, our values dispositions to act in certain ways. According to Fishbein and Ajzen (1975) it is tough to give an exact definition for attitude because it is dependent on the variables, other concepts and the general theory that are included in the particular attitude towards the targeted issue or object.

There are basic characteristics of attitude that need to be kept in mind when defining its meaning: Attitude is learned, it is a predispose action and that the action needs to be consistently favourable or unfavourable towards the targeted issue or object (Fishbein&Ajzen, 1975). Attitude can be measure by hundreds of different operation designs including Likert scale and semantic differential attitude scale (Ibid). Verbal (meaning that questionnaires are used to evaluate the attitude for a particular issue or object) and nonverbal (has to do with psychological measurements) approaches can be implemented to measure

attitude of an issue or object (Ibid).Through individuals' attitude towards an issue or object, a feeling of liking or disliking can be developed and it is usually when a level of understanding has been reached towards the issue or object (Evans et al. 2009).

2.1.2 Concept of Electricity

Electricity is conceived by Jimbo (2011) as the flow of electricity charge from a power source, through wires, to light up LEDS, spin automobiles and power our communication electronic gadgets. Apogee (2017) amplifies the definition above when it stated that “electricity is the most widely used form of energy, ranging from miniature batteries in wristwatches to large arc furnace for melting steel. The author further stated that electricity must be converted to other forms of energy such as heat, light, or mechanical power to be useful.

Espino (2016) describes electricity as the flow of electrons or electric current. It is invisible form of energy that can be transformed into other form of energy such as heat, light, and mechanical. According to Wikipedia, the free encyclopaedia (2014), electricity is at the heart of many modern technologies being used for:

- i. Electricity power, where electric current is used to energize equipment
- ii. Electricity, which deals with electricity circuits that involves active electrical components such as vacuum tubes, transistors, and associated passive interconnection technologies.

Electricity is used in several ways, including:

- i. In the kitchen, we use electricity to cool refrigerators, for dishwashers, to charge cell phones.
- ii. In the family room, we use electricity to watch games, charge laptops, to light lamps and bulbs; and
- iii. In the basement or utility room, we use electricity for washer and dryer; furnace and water heater (Alliant Energy, 2017).

2.1.3 Discovery of Electricity Power

The fundamental principles of electricity generation were discovered during the 1820s and early 1830s by the British scientist Michael Faraday. The first power source extensively used (other than that available from the muscles of men and animals) was that derived from flowing water either impacting directly upon paddles attached to wheel. These are the water wheels, the forerunners (precursors) of the water turbine, whose origin can be traced to ancient Egypt, China and Persia. Water wheels took over many laborious and monotonous tasks such as grinding grain for flour and animal feed, raising water for irrigation and water supply, textile manufacture and metallurgical processing.

As the demand for power increased over centuries, the simple water wheel became larger. By the middle of the nineteenth century, the revolutionary development of the water turbine by Fourneyron in France began to displace the water-wheel as a power source, in fact, the steam engine had begun the displacement process a half century earlier. The water turbine was vastly

superior to the water wheels from almost any practical point of view. It could generate much more power than the largest water wheels in a much smaller volume or apparatus, it could perform adequately at high or low heads that could not be handled by water wheels, it could also operate at a greater number of revolutions per minute than the water wheels, principally by virtue of its smaller diameter. In New England, during the last half of the nineteenth century, there were more than 50 manufacturers of water turbines supplying the needs of small, rural mill owners. It was not unusual however, for a mill Wright to design and build his own water-turbine, indeed there are a few homemade installations still in existence. By the end of the 19th century, the small water turbine in a mill was often belt-connected to an electric generator, principally for lighting purpose.

With the development of large-scale hydro and thermal electric central generating stations and the extension of electric power lines to rural areas, the manufacture of small water turbine began to decline rapidly. In recent years, however, no doubt because of the energy crisis, there is renewed international interest in the small-scale hydro electric unit; such units are currently available for use in developing nations. By small-scale, low-head hydro electric units, we refer to those capable of generating 5-15KW (kilo-watt) at heads of 10-20ft (3-6m). While the same apparatus can perform useful mechanical task directly, it may be connected via belt or gears to grain mills, pump, wood and metal-working machinery and other machines of production.

For use with low water heads, the fixed-propeller type of turbine or the more familiar Francis type is more suitable than the more complicated types such as the Kaplan which adjust themselves to the electrical load. Small hydro-electric generators are currently available from several manufacturers in US and Europe. Also, there appears to be vigorous manufacture use of such turbine in the people's Republic of China, but this panel has no information regarding their availability for export. Because of the limited production of such small hydro electric units, their cost per-kilowatt is quite high. The following are sources of electricity power generation in the world;

- i. First is the static electricity which is from the physical separation and transport of charge (example triboelectric effect and lightning)
- ii. Secondly is the electromagnetic induction, this is where an electrical generator, dynamo or alternator transforms kinetic energy (energy of motion) into electricity. This is the most used form of generating electricity and based on Faraday's law. It can simply be experimented by rotating a magnet within close loops of a conducting materials (e.g. copper wire)
- iii. Thirdly is the electrochemistry, this is the direct transformation of chemical energy into electricity, as in a battery, fuel cell or nerve impulse.
- iv. The fourth is the photoelectric effect which is the transformation of light into electrical energy, such as in solar cells.

- v. The fifth source of electricity is the “thermoelectric effect which involves the direct conversion of temperature differences to electricity, as in thermocouples, thermopiles and thermionic converters.
- vi. The sixth source is the “piezoelectric effect which is from the mechanically anisotropic molecules or crystals. Researchers at the US department of energy Lawrence Berkeley Nation Laboratory (Berkeley Lab) have developed a piezoelectric generator sufficient to operate a liquid crystal display using thin films of M13 bacteriophages.
- vii. The seventh and the last source of electricity is the “Nuclear transformation” that involve the creation and acceleration of charged particle (e.g. beta rays or alpha particle emission)

2.1.4 Uses of Electricity

Electricity has diverse uses and is required by almost all other sectors of the economy as an input which results to virtually all goods and services produced in an economy. Electrical and electronics are practical and activity oriented subjects that require electricity to function effectively in the work shop and laboratories. It is because of the practical oriented activities that the subject requires electricity supply in electric lamps, motors, wiring and connections of equipments, tools soldering, indicating instruments and measurement of quantities and resistor and capacitor testing.

Electricity power is used in the banking sector activities to run their gadgets and machines such as; Automated Teller Machine (ATM), Point of Sales (POS), online transactions which include; money transfer, currency conversion etc. and also permits the use of computer system which makes all transactions easier and reduces the cost of banking operation thereby increases profit margin of the commercial banks of the country. Health care sector also uses electricity for running/operating their equipment such as laboratory machines, refrigerating, and other equipments for lightning of the hospital and environs. Media houses such as radio and television stations unavoidably need electricity to operate their gadgets for efficient and effective dissemination of information and hosting of other productive programs.

Information and Communication Technology (ICT) is having a mass usage of electricity and electronic gadgets. Without electricity the ICT cannot function so as to provide information and Communication technology to the people as expected, electricity is vital for effective operation of ICT.

Electricity is also use by industries, manufacturing factories for lightning and for multitude of purposes to supply heat, energy and motion for industrial, manufacturing and training institutions processes. Since about 1910 the growth of the use of electricity in factories, institutions and other establishments has reason at an increasing rate and there is now hardly any industrial work without electricity. According to Odhams and Tingling (1979) when electricity is brought into the factory or institutions, it is often first employed in the offices,

class rooms and for lighting the electrical and electronics equipments. It has been estimated that electric light alone will save the average user of about 100 man-hours of labour per winter and industrial labour season, that is, the supply of current when connected to users; the progressive worker soon puts it to numerous labor saving uses.

Informal sector activities such as; weltering, barbing/hair dressing saloon also require electricity for their productions and service delivery, business setting such as Cyber Café and other forms of computer operation require electricity to operate. Households need electricity for lightning, running house hold electronic appliances e.g. Television, fan, refrigerator and other minuet uses. These importance/uses of electricity and others not mentioned clearly indicates that electricity energy is a vital ingredient of economic growth of a state and a nation at large if properly harnessed/focused upon by the government. It therefore, means that if electricity is adequately, efficiently and regularly supplied to all these sectors there will be increase in investment, productivity/output, employment of both human and material resources, increase profit margins, decrease in production cost, increase in income, living standard and a sustainable economic growth of a nation.

2.1.5 Roles of Electricity on Economic Growth

Electricity power is the engine that drives industrialization, which improves communication, helps innovation in science and technology, provides sound

healthcare delivery system and improves citizen's standard of living. Apart from serving as a pillar of wealth creation in Nigeria, electricity is also the nucleus of operations and subsequently the engine of growth for all sector of the economy (Sesan Ayodele, 2004). He has indirectly re-echoed that electricity consumption is positively related to economic growth and that the former is a cause factor of the latter, this means that electricity consumption have diverse impacts in a range of socio-economic activities and consequentially the living standard of Nigerians, Nasarawa State in particular.

Energy plays the most vital role in the economic growth, progress and development as well as poverty eradication and security of any nation. Uninterrupted energy supply is a vital issue for all countries today, future economic growth crucially depends on the long term availability of energy from sources that are affordable, accessible and environmentally friendly.

Energy is an important factor in all the sectors of any country's economy, the standard of living of a given country can be directly related to the per capita energy (electricity) consumption. The per capita electricity energy consumption is a measure of the per capita income as well as a measure of the prosperity of a nation. Electricity energy supports the provision of basic needs such as cooked food, a comfortable living temperature, lighting, the use of appliances, piped water sewage, essential health care (refrigerated vaccines), educational aids, communication (radio, television, electronic mail, the world-wide web).

Electrical energy also fuels productive activities including agriculture, commerce, manufacturing, industry and mining. On the other hand a lack of access to energy contributes to poverty and deprivation and can contribute to the economic backwardness. Energy and poverty reduction are not only closely related to each other, but also with the socio-economic development which involves productivity, income growth, education and health. The economic progress of past decades has seen hundreds of millions of people enjoy major improvements in their material well being, and these changes have been particularly evident in the merging economies like Nigeria. We all understand how globalization and market liberalization has underpinned these developments, but we must not lose sight of the crucial enabling role played by the power/energy sector, without heat, light and power you cannot build or run the factories and cities that provides goods, jobs and homes, nor enjoy the amenities that makes life more comfortable and enjoyable.

Energy is the “oxygen” of the economy and the life-blood of growth, particularly in the mass industrialization phase that a merging economic giants are facing today as their per capita GDP moves between approximately US\$ 15,000. The electricity industry significantly influences the vibrancy and sustainability of the entire economy from job creation to resource efficiency and the environment. Electricity energy is an inevitable ingredient/catalyst of economic growth of either a particular state or a nation as a whole, it is

therefore, expedient that the power sector be given due attention and funding so as to ensure efficient and effective functioning of the sector.

2.1.6 Development of Electricity Power Generation in Nigeria

Nigeria builds its first power plant in 1896 with a 20Mw power station at Ijora, near Lagos. Until 1951, there was no government entity to regulate or manage nationwide electricity generation and supply, this necessitated the formation of the Electricity Corporation of Nigeria (ECN) to oversee the electricity sector. Later in 1960 the Niger Dam Authority (NDA) was set up to build and manage dams in Nigeria, with total installed generation capacity a little above 50MW. In 1972, Federal government of Nigeria (FGN) approved the merger of NDA and ECN to form the “National Electricity Power Authority” (NEPA) as a vertically integrated (monopoly) power utility, responsible for generation, transmission, distribution and trading of electricity to customers in Nigeria.

The Nigeria electricity power sector has over the years witnessed a slow and steady decline leading to a complete failure of the system at the beginning of the present civilian regime in 1999. The government has therefore as a matter of urgent necessity led to the establishment of the “Nigeria Electricity Regulating Commission (NERC) in 2005. The reform has so far led to the corporatization and unbundling of the state owned monopoly, now known as the “Power Holding Company of Nigeria” (PHCN). The unbundling has led to the

establishment of 18 successor companies from PHCN comprising of six Generation companies, one transmission company and 11 distribution companies. The sector has also been deregulated leading to private sector participation in the generation sector and the operation of a number of independent power plants in the country today.

2.1.7 Power Sector Reforms in Nigeria

A key objective of electricity reforms in developing countries (such as Nigeria) has been to attract private sector investments in order to improve the quality and reliability of electricity supply. In Nigeria where quality and reliability of electricity supply is poor, self generation capacity tends to be high. It is critical to recognize that the fundamental interest of most developing countries in power sector reform stems not from any desire to change ownership/or to introduce competition for its own sake, but from the fact that they have no choice but to attract foreign private investors if their power systems are to grow fast enough to keep pace with demand. In many cases they (imposed) restructuring of these industries can be considered a failure because the "textbook approaches" adopted from industrialized nations did not work in developing countries setting, e.g., due to a lack of institutional capacity or simple lack of political will to implement reforms (Gabriele 2004).

The federal Government of Nigeria using National Council on Privatization (NCP) in 1998 has therefore, embarked on an electric power sector

reform programme which gave birth to 18 companies with the support of the Power Holding Company of Nigeria(PHCN). These companies unbundled from the former vertically integrated Nigeria Power Authority(NEPA) monopolistic utility are characterized with horizontal structure.

In the year 2001 the National Electricity Power Policy (NEPP) was developed, which set the pace for the electricity reform. As a follow up to this, an electric power sector reform bill(EPSRB) was proposed to the National assembly which in year 2003 was passed by both houses and submitted for presidential approval into law, after due amendment though. It was re-submitted to the two legislative houses for further deliberation and passage. This was harmonized by the two houses and assented to by the president in March 2005. Along this line therefore, the National Electricity Power Authority(NEPA) in January 2004 commenced its internal unbundling by creating 11 semi-autonomous business units from its former distribution sector, similarly, its transmission sector was in April, 2004 unbundled into a semi business unit known as “Transysco” with the creation of the office of the market operator and system operation.

Generation sector was subsequently unbundled into 6 semi-autonomous business units in November, 2004. The unbundling exercise is with a view to facilitating the eventual corporatization of the business units of the enactment of the EPSRB. These acts were in anticipation to achieve government with the bill. In October, 2005, Nigeria Regulatory Commission (NERC) commenced operation with its headquarters at Abuja, Nigeria (IfeyIkeonu 2012)

2.1.8 Nigerian Electricity Regulatory Commission (NERC)

Nigeria electricity regulatory commission was established under the Nigeria electric sector reform Act, which was passed into law in March, 2005. NERC effectively, took off on October 31, 2005, following the inauguration of its seven full time commissioners. NERC is an independent and self-funding sector regulator whose main functions include:

- i. Ensure orderly development of a competitive power market
- ii. Promote competition and private sector participation
- iii. Evolve standards and codes that measure with international best practice
- iv. Protect consumer and public interest
- v. Ensure efficient, safe and adequate production of electricity
- vi. Settle disputes amongst industry participants
- vii. Evolve stable and equitable rates-cost reflective and reasonable profit
- viii. License and regulate persons engaged in electricity business
- ix. Ensure expansion of access to Rural and urban dwellers
- x. Establish and administer the power consumer assistance fund for subsidizing underprivileged consumers.

These efforts are targeted at opening up of the power sector for private sector participation. As at October 2011, nearly 40 private entities have been licensed by the commission (to generate more than 12,00MW) and many are already operational. As at 2011, also, the nation has an installed capacity of 4500MW. The current National demand is estimated about 16,000MW(ECN), the present administration worked and is working tirelessly to increase power supply to 6000MW by December 2012 and 14000MW by year 2013. This reaffirms the

need for the reform programme to enable private sector participation as government alone cannot fund the power sector.

2.1.8 Challenges of Power Sector Reforms in Nigeria

Beginning in 1896 when electricity was first produce in Lagos with a generation capacity of 60KW and continuing to the establishment of NEPA in 1972, several efforts have been to continually increase capacity output. The widely known privatization and commercialization decree number 25 of 1988 which established the technical committee on privatization and commercialization (TCPC) led to the review of the failure of state monopolies including NEPA and proposal to commercialize the operation of PHCN.

After seven years of implementation in 2005 reform Act, the liberalization process remained stalled and mired in interactive challenges. Power shortages, poor operational performance, a lack of foreign investment, the absence of a sustained and deliberately deployed longterm power development strategy, under-exploitation of the Nations abundant energy endowments and the inadequate implementation of reforms, where readily conceded by government in Presidential Road map of 2010.

Poor management of public finances retards the sector's performance, and as a result, budgetary management is frequently afflicted with inefficiencies and corruption. It is self-evident that the poor performance of the electricity power sector in Nigeria has been a significant barrier to private investment in the

country, the overall development and economic growth. The sector's market structure like most economies of the developing world is dominated by the state-owned power entity-Power Holding Company of Nigeria (PHCN) formerly NEPA in a monopolistically, vertically integrated business model. The dissatisfaction with the performance of PHCN shown by its low capacity generation, high costs, inadequate distribution of electric power, inability to finance new or expand infrastructure, inadequate machinery for effective billing and collection of bills fuelled the debate on the theoretical and empirical justification for its involvement in Nigeria's electricity power sector and become the driving force behind liberalization.

In a nutshell, liberalization has not enjoyed the predicted success. The challenges facing the sector can be summoned up as both institutional and regulatory. Though there have been measures towards improving this sector, there have not yet been an impact to truly ensure that the required development in this sector is reached.

Recently, the United States Coordinator for international energy affairs, Ambassador Carlos Pascal has stated that Nigeria's economic growth is constrained by insufficient electricity generation capacity which results in a lack of sufficient reliable and affordable power supply. He said "the Nigerian power sector has operated largely under a vertically integrated inefficient monopoly. The insufficient generation and supply of electricity is caused by low and

unsustainable investment by the government over the years. The situation has resulted into business leakages where indigenous and foreign companies have relocated to neighboring countries as the cost of doing business in Nigeria was no longer profitable. This could also be attributed to power failure is the overloading because of the increasing population of people using electricity in Nigeria. Other factor includes;

- i. Faulty wiring of residential building
- ii. Low gas pressure and water level
- iii. Lack of investment opportunity
- iv. Illegal connection of electricity
- v. Lack of sound payment structured
- vi. Damaging of PHCN underground cable by road construction
- vii. Theft and vandalization of PHCN equipments.

2.1.9 Problems of Electricity Power Supply in Nigeria

Nigeria a developing nation and is more than most associated with the problem of power shortage and unstable electricity transmission, this situation has been infused into the system so much that the electricity situation is the direct opposite of developed nations, the epileptic power supply found in Africans most populous nation most definitely has hampered the growth of commercial activities in the country making it unattractive for foreign business investment.

The challenges of electricity or facing the power industry in Nigeria ranges from generation to distribution of electricity. In the 1950s, the demand for

electricity was below its supply, the industry was able to meet the countries need at that period. The demand for electricity gradually increased and later outstripped supply as industrialization came. The estimated total installed capacity of the combined hydro thermal power stations was 7941.1MW as at December 2008. Mean while the power generation capacity available is 4,428MW of which 3.273MW is from PHCN while 1,155MW is from IPPS.

It is an indisputable fact that Nigeria has one of the most problematic electricity sectors in the world, with an estimated installed electricity generation capacity of 8,644MW and available capacity of only approximately 3,718MW, to cater for the need of a population of over 160 millions. By comparism, South Africa, with a population of just 50million, has an installed capacity (electricity) generation of over 52,000MW. On a per capital consumption basis, Nigeria is ranked a distant 178th with 106.2Kwh per head-well behind Gabon (900.00), Ghana (283.65), Cameroon (176.01) and Kenya (124.68).

According to presidential tax force on power project (PTFP) the sector need on a yearly basis, 520 billion naira (US\$ 3.5 billion) to increase generation capacity from approximately 4000MW available to 13,000MW by 2013. The transmission network is over loaded with wheeling capacity less that 4000MW. In Nigeria, there are significant line voltage and power losses as high as 25% compared with 3% in the US and 0.5% in Japan, in transmission system due to the large distance between 300 and 500KM over which electricity energy is

distributed. Low transmission grid voltage, typically 330KV and 132KV compared with 765KV in developed countries also cause significant transmission and distribution losses. The losses could be attributed to the poor and obsolete state of the transmission network. (PTFP 2009).

Energy mix is another challenge facing the power supply in Nigeria. The electricity sector has been powered by hydro and thermal plant and this have not been sufficient to meet the electricity need of the country Nigeria is said to be blessed with abundant solar and wind, which are yet to be tapped in generating electricity. According to national Bureau of statistics (NBS) 2012, electricity in Nigeria is characterized by excess capacity and inadequate supply. It has been observed that peak demand is often about one-third of installed capacity because of the non-availability of spare parts and poor maintenance.

A poorly-motivated work force, vandalization and theft of cables and other vital equipment, accidental destruction of distribution lines, illegal connection and resultant of over-loading of distribution lines are additional, major problem of the PHCN. The historical between the demand for electricity and the available capacity has led to the current wide spread power shortage and inefficiency and consequently, self generation of power by both industrial and residential consumers. The manufacturers association of Nigeria (MAN) and the national association of small scale industries (NASSI) have estimated that there members spend an average of about two billion naira (about \$12 million) per

week on self-power generation. These have been responsible for unannounced loads shedding, prolonged and intermittent outages which most consumers of electricity in Nigeria have had to contend with over the years. NBS (2012).

The trade sector continues to derive the economy while the manufacturing sector remains weak. Most of the goods traded in Nigeria are not produced locally because industry infrastructure is fragile. And an active whole seller and retail trade market without a strong local manufacturing sector reduced the value of Nigeria export. As such, the country continues to lack its potential of being one of the strongest economies in the world. Unavailability of regular, sufficient and affordable electric power supply is a major constraint to businesses, especially in the industrial sector in Nigeria. Self generated electricity power accounts for about 30-90% of the operating cost of most businesses in Nigeria. (Straplan Research June 2012).

2.2 Theoretical Review

Tra-Based Conceptual Model

The Theory of Reasoned Action Approach (TRA) helps to understand the attitude of consumers and the process leading to their attitude . It helps to discuss the significant correlation between various concepts and its consumers' attitude with regards to electricity, environment and renewable energy and their salient consequences.

The Theory of Reasoned Action was first developed in the late 1960s by Martin Fishbein and was expanded by Fishbein and Ajzen in decades that followed. It is a Theory that focus on a person's or a group intention to behave in a certain way. It seeks to understand consumers' attitude which Perfectly fit within the framework of the research presented. The models have been developed to address behaviours and attitude of consumers (E.gto study the consumer's attitude toward paying a premium for electricity).

The theory of Reasoned Action(TRA) proposes that attitude is formed by the sum of beliefs about salient consequences of using renewable energy such as electricity and evaluation of these salient consequences. According to TRA, attitude is derived from two Factors:

- i) A group of beliefs that one holds about the object of the behaviour.
- ii) The Valences evaluations of the beliefs.

Beliefs are based on knowledge or what the individual perceives to be true specifically TRA poists the attitude towards the behaviour which is the summation of the product of the beliefs that the behaviour leads to. The key concept tackled are the concern for the Environments, the Ecological awareness, the Ecological behaviour, Knowledge about renewable energy (Electricity) and willingness to promote it. This concept contributes to the belief component of the Fishbein model According to Fishbein and Ajzen (1975).

2.3 Empirical Review

Ansgar, (2010), investigated the long-run relationship between electricity consumption and real GDP, including electricity prices, for 25 OECD countries from 1981 to 2007. The study used principal component analysis to show how developed both at an international level and national level account growth. Based on the results, it can be stated that international development accounts for most the long-run relationship between electricity consumption and real GDP. The study also showed that electricity consumption is price-inelastic. Furthermore, it concluded that there is a bi-directional causal relationship between energy consumption and economic growth.

Gbadebo and Chinedu (2009) used co-integration analysis to examine the impact of electricity consumption in Nigeria economy during the period of 1970 to 2005. The dependent variable was real GDP and the independent variables were crude oil consumption, coal consumption and electricity consumption. The result showed a negative relationship between the logged values of electricity consumption and economic growth. The study suggested there should be an increase in electricity supply to enhance growth.

According to Samuel and Lionel (2013), annual time series data was used taking 1970 to 2009 to investigate relationship between electricity supply and economic development in Nigeria. The study employed ordinary least square estimated by using error correction mechanism. The result showed that per-

capital gross domestic product, lagged electricity supply technology and capital are the relevant variables that influence economic development in Nigeria. The ECM test showed that lagged electricity supply is statistically significant at 5% level, i.e. a 1% rise in previous years' electricity supply will lead to 0.3% increase in the current per-capital gross domestic product.

Chibueze, Jude and Nnaji (2013) examine the casual long run relationship between electricity supply, fossil fuel consumption, carbon emission and growth in Nigeria used 1971-2009 period. The research uses ARDL and VECM to test the relationship. The bound result indicated the long run short run estimates that CO₂ emission and fossil fuel consumption also shows a positive relationship between electricity supply and CO₂ emission showing the poor state of electricity supply in the country. The Grange causality test showed an insignificant impact of electricity supply on economic growth in Nigeria. The researchers indicated that government should increase investment in energy infrastructure.

In the same vein Udah (2010), investigate the relationship between electricity supply, industrialization and economic development in Nigeria from the period of 1970-2008. He used the Granger causality test and ARDL bound test to invest their relative impact on economic performance in Nigeria. The result indicates a 1 percent rise in industrial output. Capital, technology, and energy supply leads to about 3.8, 11, 4.1 and 4.5 percent rise in real output respectively.

He also conducted error correction model which shows index of the independent variable and their significant determinants of economic development. He concluded that result was highly significant.

Simon (2012) examined the impact of electricity crises on the manufacturing productivity growth in Nigeria from 1980 to 2008, using ordinary least square multiple regression to analyse the time series data. The result shows a positive relationship between capacity utilization, exchange rate and the index of manufacturing productivity, while electricity generation and government capital expenditure produced negative relationship with manufacturing productivity index as the dependent variable.

Ongono (2009) carried a study on energy consumption and economic performance in Cameroon, the results of this study show that there is no Granger causality between electricity consumption and economic performance (GDP) at the national level and primary sector. The result also revealed that in the secondary sector. Production Granger causes electricity consumption. Furthermore, in the tertiary sector, the causality runs from electricity consumption to production. He recommended that any policy aimed at strengthening growth and reduce poverty must pay special attention on energy production.

According to Turban(2002), studies of customer dissatisfaction show that customers are with their purchases about 25 percent of the time but that only 5

percent complain. The other 95 percent either feel that complaining is not worth the effort, or that they don't know how or to whom to complain. Of the 5 percent who complain, only about 50 percent report a satisfactory problem resolution. Yet the need to resolve a customer problem in a satisfactory manner is critical. On average, a satisfied customer tells three people about a good product experience, but the average dissatisfied customer gripes to eleven people. If each of them tells still other people, the number of people exposed to bad words of mouth may grow exponentially. Nonetheless, customers whose complaints are satisfactorily resolved often become more company loyal than customers who were never dissatisfied. About 34 percent of customers who register major complaints will buy again from the company if their complaints are resolved, and this number rises to 52 percent for minor complaints. If the complaints are resolved, between 52 percent (major complaints) and 95 percent (minor complaints) will buy again from the company.

2.4 Gaps in Literature

The adverse effects of what the consumers' attitude would be towards power supply with consideration of variables such as the presence of Low Supply of electricity, The increase in Pricing of electricity and the Corruption of Most PHCN Workers was not recognised by most literature's.

However, this research work would take into recognition the presence of Such Variables such as the effect of low supply of electricity, Increase in pricing of Electricity and High Corruption Practices of Most PHCN workers and its

impact on the consumers' attitude towards electricity and its general impact on economic development in Nigeria as well as Abuja Municipal Area Council.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Study Design

The study has adopted descriptive methods to assess consumers' attitude towards Power supply in Abuja Municipal Area Council, using PHCN as a case study in the Federal Capital Territory. To this end, the method of simple percentage (ratio) will be employed.

3.2 Nature and Sources of Data

The data that will be collected for this study are primary in nature, and they will be collected from respondents across the Abuja Municipal Area Council with use of questionnaire administration.

3.3 Population and Sample Sizes.

The population covered in this study is the total population of the Abuja Municipal Area Council. They are about 776,298 (Seven Hundred and Seventy-Six Thousand Two Hundred and Ninety-Eight) people as at 2006 Census with 415,951 males and 360,347 females. A sample size of one thousand (1000) respondents was drawn from the population as there are Twelve(12) Wards of Abuja Municipal Area Council namely City Centre, Garki, Gui, Gwagwa, Gwarinpa, Jiwa, Kabusa, Karshi, Karu, Nyanya , Orzo, and Wuse.

3.4 Sampling Techniques

Thus, the study adopted stratified and simple random sampling techniques to draw the sample from the population. The respondents were randomly selected from the six (6) Area Councils Headquarters namely: Nyanya, Karu, Garki, Orzo and Karu. These wards were chosen because they are more populous and constitute the main commercial areas in the territory. The respondents were stratified into six according to area councils and the name of each respondent was written on a piece of paper and a simple random sampling was done by picking one piece of paper at a time from each group. Thus, 160 respondents will be selected from each five wards while 200 respondents will be selected from Nyanya since it is the most populous. A total of one thousand questionnaires were distributed to respondents in the FCT.

3.5 Method of Data Analysis

The collected data for the study were presented in tabular form and analysed using simple ratio (percentage) method, with the aid of E-views 9.0. This method is based on Tende (2014) with some modifications.

CHAPTER FOUR
DATA PRESENTATION AND ANALYSIS

4.1 Presentation and Analysis of Responses to Questionnaires

Questionnaires were administered to one thousand (1000) consumers (customers) of electricity in Abuja Municipal Area Council. Nine Hundred and twenty- three questionnaires were answered and returned. The responses are presented and analysed below.

Table 4.1: Socioeconomic and Demographic Characteristics of Respondents

Question No	Socio-economic Characteristics	No. of Respondents	Percentage
1.	Age Bracket		
	18-24 years	115	12.46
	25-64 years	676	73.24
	65-Above years	132	14.30
	Total	923	100
2.	Marital Status		
	Married	794	86
	Single	102	11
	Widow	9	1
	Divorcee	18	2
	Total	923	100
	Occupational Distribution		
	Civil Service	462	50
	Farming	231	25

3.	Housewife	23	2.5
	Trading	162	17.5
	Others	45	5
	Total	923	100

Source: Field survey, 2018

Findings from the table 4.1 show that most of the respondents 794(86%) were married, 102 (11%) were single while Widowed and divorced respondents accounted for 9 (1%) and 18 (2%) respectively. It was also found that 808 (87.54%) of the respondents were 25 years or over. This is in line with Bigombe and Khadiagala (2003) who found that, average age at marriage in Nigeria is 24 years.

The occupation of majority 462 (50%) of respondents is civil service, 231 (25%) are farmers while 162 (10%) were traders. Students and housewives accounted for 23 (3.75%) of the respondents, while 45(3.75%) of the respondents made their livelihood from other sources such as skilled and unskilled artisans. The type of occupation in the region-predominantly civil servant who are mostly not fully paid in the face of rising cost of living-also underscores the serious economic and social deprivation and contribute to the poor attitude of residents to electricity consumption in Abuja Municipal Area Council.

Table 4.2: Respondents' sources of electricity supply

Sources of electricity	PHCN Non-Meter Reading	PHCN Prepaid	Generator set	Solar System	Energy	Total %
						Š.

generation	System	System			
Number of Respondent	813 (88.08)	23 (2.49)	84 (9.1)	3 (0.33)	923 (100%)

Source: Field Survey, 2018

The table 4.2 above reveals that most electricity consumers are being connected and charged based on the non-meter reading system. They constituted 88.08 percent while prepaid system, generating sets and solar energy system contributed only 12 percent of the total respondents.

Table 4.3: Respondents service delivery rating of the electricity provider- PHCN.

Respondents	Satisfactory	Unsatisfactory	Total
Number	98 (10.62%)	825 (89.38%)	923 (100%)

Source: Field Survey (2018)

The data on table 4.3 showed that about 90 percent of the respondents are not satisfied with the services being offered by power holding company of Nigeria while the remaining 10 percent are satisfied.

Table 4.4: Respondents attitudes towards electricity consumption and conservation patterns

Option	Agree	Not Agree	Total
Number of Respondents	570 (61.76%)	353 (38.24%)	923 (100%)

Source: Field Survey (2018)

The findings show that the larger percent, i.e 61.76 percent of the respondents agreed that rationing of electricity consumption will stabilize the electricity distribution; whereas about 38 percent of them were not in agreement.

Table 4.5: Responses on the impact of corruption on Consumers' Attitude to Electricity Supply in Abuja Municipal Area Council

Option	Number of Respondents	Percentage
Yes	600	65
No	138	15
I do not know	185	20
Total	923	100

Source: Fieldwork, 2018

An examination of table 4.5 showed that 600 (65%) respondents say cooperative societies play role in raising capital for small scale enterprises while 138 (15%) answered 'No' and 185 (20%) answered 'I do not know in that order. This means that corruption is one of the causes of poor attitude of consumers to electricity supply in the Abuja Municipal Area council.

Table 4.6: Responses on the impact of poor and erratic supply of electricity on its consumers' attitude in Abuja Municipal Area Council

Option	Number of Respondents	Percentage
Yes	415	45
No	231	25
I do not know	277	30
Total	400	100

Source: Fieldwork, 2018

Looking at table 4.6, it can be seen that 415 (45%) respondents answered “Yes” and 231 (25%) answered “No” while 277 (30%) responded “I do not know” respectively. The findings indicated that poor and erratic supply of electricity has positive impact on attitude of consumers of electricity in Abuja Municipal Area Council.

Table 4.7: Responses on the impact of increase in price of electricity on Attitudes of Electricity consumers in Abuja Municipal Area Council

Option	Number of Respondents	Percentage
Yes	739	80
No	138	15
I do not know	46	5
Total	400	100

Source: Fieldwork, 2018

The data on table 4.7 showed that 739 (80%) participants answered “yes” while 138(15%) and 46 (5%) responded “No” and “I do not know respectively. This implies that increase in price of electricity is one of the causes of poor attitude of electricity consumers in Abuja Municipal Area Council.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Major Findings

The major findings of the study are summarised below:

- i. It was found that the type of occupation in the region-predominantly civil servant who are mostly not fully paid in the face of rising cost of living-also underscores the serious economic and social deprivation and contribute to the poor attitude of residents to electricity consumption in Abuja Municipal Area Council.
- ii. It was also found that most electricity consumers are being supplied and charged based on the meter reading system.
- iii. It was found that majority of the respondents are not satisfied with the services being offered by power holding company of Nigeria in the Abuja Municipal Area Council hence do not pay their bills or find other means in obtaining electricity.
- iv. It was again found that majority of the respondents agreed that rationing of electricity consumption will stabilize the electricity distribution in Abuja Municipal Area Council.
- v. It was found that corruption of Most PHCN workers is one of the causes of poor attitude of consumers to electricity supply in Abuja Municipal Area Council.

- vi. The findings also indicated that poor and erratic supply of electricity has positive impact on attitude of consumers of electricity in Abuja Municipal Area Council.
- vii. I also found that increase in price of electricity is one of the causes of poor attitude of electricity consumers in Abuja Municipal Area Council.

5.2 Conclusion

From the findings and discussion above, most electricity consumers in Abuja Municipal Area Council are being connected and charged based on the electricity non-meter reading system, that majority of the respondents are not satisfied and hence have poor attitude to electricity supply in the territory.

5.3 Recommendations

Based on the findings above, the following recommendations are made:

- i. There is urgent need to fight corruption amongst staff of Power Holding Company of Nigeria. To this end, there is need for an improvement in the working condition and office environment of the PHCN staff. In addition, adequate planning and training should be given priority for the staff development especially those who are dealing directly with the customer;
- ii. Increase electricity supply around the country. Since it has been found that energy is related to growth, increasing energy supply in an energy hungry nation like Nigeria will have influence on economic growth

increasing energy supply should also involve optimal production and utilization.

- iii. **Attain Efficient Pricing of Electricity Supply.** When energy prices are not high, then there is abuse of resources by the masses who can't afford it and this might reduce consumption especially that of low income class people on one hand and increase cost of production on the other. Also when prices are a bit low there tends to be inefficient use of energy. Hence appropriate price will enhance productivities in the economy.
- iv. The management of the organization should ensure that before any policy is made, adequate consultation should be made with all the stakeholders involved, so that in implementation, it will not bring any negative effect on the service delivery.

Limitation of the study

Some factors may limit the level of accuracy and reliability of this study. Such factors include:

- i. Difficulty in obtaining data from respondents
- ii. Limited time frame for carrying out the research due to the period given to embark on the research work
- iii. Resources needed for the research work is insufficient
- iv. Rising cost of transportation and material.

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