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AN APPRAISAL OF THE IMPERATIVE OF RURAL ELECTRIFICATION ON NIGERIA ECONOMY

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ABSTRACTS

Rural electrification is imperative for any nation's development. No nation can strive when some of her populace is being neglected in terms of electrifications. This means that development will be far for the people living within such environs and this will lead to increase in breeding of miscreants like Boko Harams insurgents, Niger Delta militants and their likes which are anti-economic development .This paper therefore, listed the benefits of rural electrification as: reduction in migration rate, reduction in disease transmission, high quality of education and learning environment, poverty alleviation, employment rate, export rate, provision of new markets, security, time saving, communication industries, cashless policy, banking processes, stimulation of economic growth.

KEYWORDS: Economic, Development, Electrification, Benefits, Miscreants, Electricity.

INTRODUCTION

Rural electrification is simply the process of bringing electrical power to the door step of every individual in the rural or remote areas. Electricity is used not only for lighting and household purpose but it also allows for mechanization of many farming operations such as milking, thrashing and hoisting grains for storage.

The current internal wrangling between the managing director of Rural Electrification Agency [REA] and the supervisory board is harmful to the power sector reform and a sad

reminder of the agency's past chequered history. Nigeria's Rural Electrification Agency has got a very bad operational past as the agency had from its inception failed to make tangible inputs in government's power sector reform effects.

While some of the agency's changes are obviously unique, coming in different shades and reform, others have overtime included challenges relating to technical, political, economical, financial, and social issues, and all these have put REA at very uncomfortable position that have contributed to its moribund in the past. (Okafor, 2014).

The components of power system in Nigeria are made up of generation, transmission, distribution and utilization of electric energy. In Nigeria the power station generates electric energy at 16KV and this is stepped up to 330KV which is transmitted to the grid system which is the primary transmission. This is further step down to 132KV as secondary transmission and further to various 132/33KV sub-stations in cities or towns of the country. The voltage is stepped down to 33KV and even 11KV feeders. There is a step down transformer at this level which steps down voltage to 415V for three phase and 220V for single phase consumers.

The electric power sector has an installed capacity of 6000MW through a number of hydro [Kainji, Jebba, Shiroro], and thermal stations [Egbin, Ughelli, Afam, Sapele].The transmission voltage levels are 330KV for the grid transmission;132KV for the sub-transmission lines while the 33KV,11KV, and lower voltages constitute the distribution networks. The system normal frequency is 50Hz. With the expected full implementation of the Electric Power Reform Act of 2005, and the unbundling of the companies into the proposed generation and distribution companies under a functional regulatory regime, the electricity market will be liberalized. However, a large number of manufacturing companies currently generate their own power, which further leads to increased cost of production. (http:wwwpub.iaea.org/MTCD/Publication/PDF/CNPP2011_CD/countryprofiles/Nigeria/Nigeria2011.htm). Mehta, and Mehta (2000), Theraja and Theraja(2000). Adeoye, and Ekejiuba, (2014), noted that Nigeria with a population of about 140 million would require a power demand of 13,160.33MW signifying that all hands must be on desk to generate about 15,000 MW which is capable to constantly supply power to the consumers in the country. The Nation (2012) noted that the present power generation is 4439.5MW and there is high transmission loss which means that to achieve constant power supply seems to be far away from us and the developmental rate of the country is slow.

Looking at the margin between what we generate and what is needed, it is clear evidence that what is needed is basically twice more than what is being generated. This rendered many industries, factories, and small scale businesses inadequately function able.

This effect necessitates high number of idle mind in different geographical regions which are being brain washed as an instrument of violence in the North (Boko Haram), Niger Delta (Militant), and pro-Biafra in the South East.

BENEFITS OF RURAL ELECTRIFICATION

- **Reduces Migration Rate:** Poor electrification increases migration rate in search of white collar jobs, thus increasing the load demand of the migrated area. Rural electrification bridges the gap between rural and urban life. With rural electrification, migration rate is controlled.
- **Reduces Disease Transmission:** Adding electric powered wells for clean water can prevent many water-borne diseases example dysentery by reducing or eliminating direct contact between people (hands) and the water supply (Crawford, 2009). During migration as early mentioned, there is high rate of spreading of diseases, which on the other hands, electrification can aid in controlling.
- **High Quality of Education and Learning Environment:** With proper electrification, students and staff gain easy access to internets service and computer works. Classrooms and staff offices are liable to be air conditioned which gives an enabling environment for staff and students to be interested in their jobs and studies. In this way, education system is improved and mind you the economic development of any nation is a function of its science and technology.
- **Poverty Alleviation:** Electrification of rural areas has a great impact on the farm processes (milking, grinding, frying, storage, heating, drying, thrashing of grains), and production outputs through mechanized electric powered driven machines. When processes and production outputs are increased, food availability is improved hence reducing hunger. However, most Okada or Keke riders are potentially talented individuals but due to lack of access to sufficient power supply and high cost of running and maintaining generators, most of them abandoned their professions and join Okada riding business as a means of livelihood. If power is improved, these talents will be useful in economic reform.

- **Increase Employment Rate:** Electrification attracts new investors thereby giving room for increased employment rate. Both the investors and the employee pay tax to the government thereby improving the revenue generation and reduction in insecurity.
- **Increases Export Rate:** Export rate is increased through electrification of rural areas. The farm process is increased due to efficient machines powered by electricity. The government generates income through export duties paid by the exporters.
- **Provision of New Markets:** When an area gains electrification, there is every tendency that people begin to open shops like computer centre, printing workshop, drinking bar, hair style saloon, barbing saloon, cosmetics shop, welding and the likes, thus reducing the risk of going to the nearby town to get their needs. However, those shops owners pay tax to the local government, hence adding to national income revenue.
- **Security:** The security and safety of citizens are the optimum priority of every nation. With adequate rural electrification, street light become function-able, cameras for crime detection in various strategic points, offices, hospitals etc become efficiently reliable. And individual housing illuminances are also increased, thus putting fear in the mind of people that they can be caught. (Okereke and Adeloye, 2012).
- **Saves Time:** time is one of the basic factors considered in every process. Manually operated machines consume time and also give poor quality output. In other words, electrically operated machines increase production speed and then save time.
- **Communication Industries:** Electricity is the major key factor considered in Telecommunication industries for effective dissemination of information. People in the rural area gain easy access to information through TVs, Radios, Internets and also high quality and visual typed and printed work is obtained, unlike the days of type writing machines.
- **Cashless Policy:** Cashless policy which is a policy made to bring national development, economic growth and reduce corruption rate can fully been implemented through rural electrification to enable those living in rural area to key in to such development and growth.
- **Increases Banking Processes:** ATM machines and internets service of banks are designed and expected to operate on 24 hours of the week through months which are powered with electricity. If an area lacks proper electrification, this will reduce the rate of banking operations within that area because of high cost of running and maintaining of generators, hence reducing economic activities of such region which also affects the economic development of our dear country.

- **Stimulation of Economic Growth:** Once the farmers get the right machines and proper electrification for powering of these machines, there will be an increase in the production and this will enhance national economic growth.

LIMITATIONS

Depending on the source, rural electrification [and electricity in general] can bring problems as well as solution. New power plants may be built or existing plants generation capacity increased to meet the demands of the new rural electrical users. Among the main issues that have been considered in rural electrification are as follows:

Potential Conflicts with Land Use

With regards to land use, administrators will need to ensure that adequate planning in regards to infrastructure development and land use allocation is put in place.

Environmental Impact

Concerns on the effects of generating and distributing electricity in rural areas is also of significance. The environment in rural areas will be affected by the location of the power plants. The energy source used in this power generation is the area that may have most impact. The use of coal-based power is dangerous t the environment as it releases pollutants such as sulphur, nitric oxide, carbon dioxide and among others.

The use of hydro power is much cleaner with fewer pollutant released into the atmosphere. However, this method is more land intensive and would thus a larger financial commitment to acquire property and to relocate locals who reside in identified zones. A developer may be inclined to use the cheapest generation source which may be highly polluting.

Political Instability

You can agree with me the protocols a project undergoes for approval, signing and procurement of materials and then the installation processes which can take an ample time for its completion. The question is that how many years will the government that signed the contract be on seat? The newly elected government may not have interest on rural electrification which may render the project abortive.

RECOMMENDATION

With the performance of official institution and private initiatives involvement in poverty alleviation, the Federal Ministry of Agriculture and Rural Development as the lead National

Institution for promotion of sustained and accelerated transformation of the rural sector should monitor the implementations of the national policies and programmes on integrated Rural Development and co-ordinate the activities of all Rural Development institutions and partners.

The government should put the rural economy back on the path of equitable economic growth with the urban sector through the sustainable development strategies and capacities enhancement for the integral sector which is plagued by low productivity, unemployment and high poverty.

CONCLUSION

Electricity adds values to life and forms a building block to all round development. Life without electricity is like a garden without grasses and it is highly excruciating. Poor and insufficient power supply is a major canker worn eating up the fabric walls of our economy and that should be debunk to dustbin of history.

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