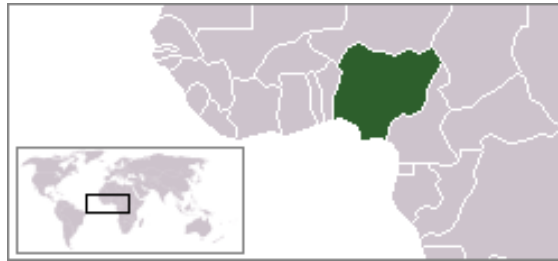


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By **O. Chima Okereke**, PhD, MBA, PMP
International Correspondent for PMForum & PM World Today
Port Harcourt, Nigeria

**An Analysis of the Failure of the National Power Project for the
Supply of 6000MW in December 2009****1. Introduction**

The nation's power generation to the grid reportedly peaked at 3,600MW on December 22nd 2009. This was the highest output in three years according to the Minister of Power, Dr. Olanrewaju Babalola, when he briefed the media in Lagos on the same day[1]. He further revealed that the nation has a capability of 5,500MW, with additional 300MW expected before the end of the year from the hydro and thermal generating plants. However, all these potential generating capacities fall short of the 6000MW promised to be achieved on December 31 by President Yar 'Adua earlier in the year as a major component of his administration's seven point agenda [2].

This failure has been confirmed by the Chief Economic Adviser to the President, Tanimu Yakubu at the opening session of the 15th Nigeria Economic Summit in Abuja on Tuesday, December 15. He was quoted as saying that: "We may not achieve 100 percent of the target. We have been able to achieve 5,200MW so far. As I am talking to you, now another 39MW is being added to the national grid and another 100MW will be added in the next two weeks" [7], [8].

The 6000 MW target is supposed to be enough to guarantee an uninterrupted power supply in the interim. In setting this target, President Umaru Yar'Adua, revised downwards the 10,000 MW target set by his predecessor[7]. He stated his intention to solve the nation's electricity crisis and promised to declare an emergency in the power

sector on assumption of office if necessary. He aptly explained that the provision of adequate and reliable electricity supply was crucial to achieving a transformative economy for Nigeria. This is why it is in his Seven-Point Agenda, which represent the flagship goals of his administration.

The focus of this paper is to analyse the project deliverables and their implications, the business justification, and the project planning and execution in order to elicit reasons for the failure. The analysis should enable us to identify lessons that could be learned from the failed project.

2. The Deliverables and their Implications

President Umar Yar'Adua has always acknowledged the critical linkage between the country's economy and the power sector. In an interview granted to one of the national dailies, he reportedly said: “without power and energy we cannot build a modern economy. We cannot make the economy to grow the kind of growth that is required and that is why power is the highest priority of this administration”. He added that: “We plan to generate 6,000 megawatts by December this year” [4].

Nevertheless, the generation of 6,000 MW electric power will not have an impact on consumers except they can use it. The transmission and distribution capacities have to be available to accept and deliver the power. This was one of the points recognized by Dr. Olanrewaju Babalola, Minister of Power, as he assessed the nation's power generation capability as being close to 6,000 MW. However, he noted that actual generation currently stands at about 60 per cent, with hopes that restoration of gas supply through the Escravos gas pipeline should raise the capacity to 75 per cent power generation before the end of the year. More relevantly, the minister also disclosed that the national transmission capacity has increased from 4,000mw to 5,500mw, while distribution capacity was near 6,000mw. He explained that the Federal Government has approved massive installation of new transformers to enhance the transmission and distribution capacity and improve power supply in the country[1].

In effect, the deliverables in the project that the Federal government set itself to achieve by December 31, 2009, are as follows:

1. Sustainable electricity supply of 6,000 MW
2. Provision of the required transmission equipment
3. Provision of the necessary distribution equipment to ensure effective utilisation of the supplied electricity by the nation.

Implications

In order to achieve sustainability, the administration is planning to provide the following equipment and systems in the medium and long terms.

- 1) Use of various types of power generators: In the medium term, the Minister of Power said that the government was planning to establish new hydro, coal and renewable power plants across the country within a five year period.
- 2) Use of other types of fuel: In the long term, he explained that it is planning to diversify into other types of fuel such as the Low Pour Fuel Oil (LPFO) and Liquefied Petroleum Gas (LPG). This is to ensure regular fuel supply to the power stations and limit the unpredictable failures caused by the failure of gas supply[1].
- 3) Reduced dependence on thermal power generators: While it is a fact that gas is one of the cheapest sources of generating electricity, the experiences of the past two to three year have shown that it is clearly the most vulnerable in our environment. For, in spite of whatever security arrangement is in place, it takes an aggrieved militant group a few hours to destroy a major gas pipeline supplying gas to the nation's electric power generators. It is certainly practically impossible to man every pipeline effectively in order to prevent such a costly and devastating eventuality. This is why, for the purposes of energy security and stable power supply, the nation should diversify to other electricity sources like hydro, coal, solar and other renewable energy.
- 4) Institutional and organisational changes: The solution to the deficiency in the power supply will not be wholly and only determined by the infrastructural installations such as power generators, transmission and distribution transformers, circuit breakers and other ancillary equipment. It is also dependent on the institutional and organisational arrangement of the processes and people in the industry. To expatiate, for example, it is necessary to challenge and reform the electricity supply organisation. For, the country was served for decades by a national monopoly, an organisation that was protected by national legislations and therefore allowed to get away with its failings and shortcoming at the expense of the nation.

3. Business Justification

There are so many arguments to proffer for massive investments on the power supply in Nigeria that for purposes of effective communication of the depths of sufferings and hardships faced by the people, this paper will highlight just a few points. They include the following:

- I. Impact on large companies: Manufacturers associations and other professional bodies have consistently complained that inadequate power supply remains the greatest constraint to the competitiveness of the Nigerian economy. Companies spend large resources every year to provide large generators as alternatives to

the poor electricity supply. These generators are no longer “standby” as they were designed to function but now function as the main generators since the mains power supply is hardly available. It is also reported that many factories have had to shut down over the lack of power supply. It is alleged that over 100 companies including multi-nationals across the country have closed down in recent times. Textile/garment, chemical/leather are some of the affected sectors. Others such as those in the cement industry are unable to operate at full capacity. Both situations result in loss of jobs and increase in levels of unemployed [4].

- II. Relocation: Many multinational companies have reportedly relocated to neighbouring countries after finding it difficult to cope with the electricity supply challenges[3].
- III. Impact on investments: It is alleged that potential investors are briefed in advance about our persistent power supply problem and this increases the costs of doing business in Nigeria. It is equally alleged that luxury apartments in the high brow areas of Ikoyi and Victoria Island in Lagos and other posh areas of cities in the country, have standby generators listed as compulsory extras to potential tenants where they are not installed[4].
- IV. Both large and small companies, educational institutions, and households invest heavily on electricity generators. A case in point was a generator donation made recently to the University of Lagos to help them keep one of their facilities operational. Star Deep Water Petroleum Ltd, a Chevron Company, together with four other Agbami partners, has donated an SP 150KVA generating plant to the Faculty of Business Administration, University of Lagos, Akoka. The partners include: Famfa Oil, Petrobas, Statoil, and the Nigerian National Petroleum Corporation (NNPC). Speaking at the commissioning ceremony held at the faculty car park last week, the week before Christmas, the Chevron Community Engagement Representative, Tuoyo Eribo, said the donation of the generator was to encourage academic activities on the campus. In his reply, the Vice Chancellor, Professor Odugbemi pledged the support of the university to the Faculty of Business Administration. He added that the works department would oversee the fuelling and maintenance of the generator. He then called on well-meaning Nigerians to heed the call of salvaging the country from its present predicament. Earlier in his welcome address, the Dean, Faculty of Business Administration, Professor Ben Oghojafor, said the generator would help in providing uninterrupted power supply in the faculty to aid the optimal use of the ICT laboratory [11]
- V. Failure of small and medium size businesses: Small and medium businesses have also been adversely affected. Some have shut down, and it is reported that those surviving such as “business centres”, hair dressing/barbing

saloons, tailoring shops, Internet cafes etc., charge extra costs for their services. For example, a writer narrated how on December 18, he experienced first hand the reality of the damage done by the poor power supply. Having searched the length and breadth of his town for ice blocks to cool drinks for a funeral event, he was informed that the town did not have any electricity supply for three continuous days. He was advised to go to the next town[4].

VI. Several households have been forced to spend money on ill installed and poorly ventilated generators whose toxic fumes have sometimes caused people to die in their sleep. Similarly, the widespread use of kerosene lanterns during blackouts has resulted in deaths through explosions caused by adulterated kerosene[10].

4. Project Planning and Execution

From the foregoing, it is understandable that the planning of the power industry for effectiveness has been such an important subject that previous national governments tried to address it. In spite of the persistence of the problem, it will be incorrect to fail to admit that the leaders, past and present, have tried to resolve it even if inefficiently. For example, the last administration under President Olusegun Obasanjo committed significant resources in a bid to reform and create effective institutional framework for the industry. It is relevant to touch on some of the measures as they constitute a platform which the Yar'Adua administration could build on. Some of the measures the last administration implemented include the following:

- a) In 2003, it passed the Electricity Sector Reform Act (ESRA) to provide institutional and legislative frameworks for overhauling the integrated monopolistic structure of the electricity sector. Under the Act, the then organisation known as National Electric Power Authority (NEPA) was changed to Power Holding Company of Nigeria (PHCN).
- b) NEPA was to be broken up into 18 companies; comprising six generation companies, one transmission company and 11 distribution companies.
- c) The Nigerian Electricity Regulatory Commission (NERC) and Rural Electrification Agency (REA) were established as components of the ESRA.
- d) During its last months, the Obasanjo administration, made significant investment on the establishment of government owned power plants, under the National Integrated Power Project (NIPP). It planned that by 2007, Nigeria should have a generation capacity of 7,000 MW.

Project Planning and Execution by the Yar'Adua Administration

It is public knowledge in Nigeria that the Obasanjo NIPP was a bungled project. In spite of the good intentions of the administration, its planning and execution were ineptly handled leading to a situation that the nation was plunged into almost interminable hours of darkness as the norm in most cities and towns for months on end. This was why the nascent Yar'Adua administration made the restoration of stable national power supply one of its primary objectives.

According to the Electric Power Sector Reform Act, the sector should have been substantially liberalised by now, but President Yar'Adua stopped the momentum towards deregulation of the sector. This is one of the interventions he made to stop or reverse some of the decisions taken on some national issues by the last administration.

Probably, one of the relevant projects under discussion in the Yar'Adua administration is the second phase of the Okpai Independent Power Plant which will increase the installed capacity of the Okpai Power Station at Kwale, Delta State, to 1000 MW. It should be completed in 20 months after the signing of the contract. The project includes an overhead 130kv transmission line 54km in length that crosses the River Niger to connect the plant to the national grid at Obosi/Onitsha in Anambra State.

5. Reasons for the Failure

5.1. The immediate reason for the failure to meet the promised target is the deficiency in the gas supply. Gas cannot be supplied until the repair is completed of the Escravos-Lagos gas pipeline which was reportedly violently ripped open in May this year by suspected Niger Delta militants. The pipeline is operated by the Nigerian Gas Company (NGC), a subsidiary of the Nigerian National Petroleum Corporation (NNPC) [2]. The inability to complete the repairs of the pipeline has been attributed to “four new breached points” discovered in Warri South Local Government area in the Delta state during concluding tests by De Wayles International Limited, the company doing the repairs. The company thought it had completed the repairs as scheduled and planned to hand over the pipeline on Saturday, December 12, when the discovery was made[2].

5.2. The political controversies, probes and questionable handling of the investigations of the failed National Independent Power Project (NIPP) of the last administration. Progress made in dismantling NEPA during the Obasanjo administration was immediately halted while all execution activities on the NIPP were also suspended. By the time the suspension was lifted, valuable time had been lost. This was quite early in the Yar 'Adua administration and inevitably affected the realisation of its 6,000MW goal.

5.3. As already explained, addressing power generation is just one aspect of the efforts needed to deliver efficient electricity supply. Other aspects like transmission and

distribution should also be addressed with the same level of urgency. It is alleged that the country has one of the highest rates of transmission and distribution losses in the world because nearly half of what it generates does not get to the consumer[3].

5.4. The Niger Delta crisis, which became quite serious between early to middle part of the year, had stalled some of the plans already laid by government and the major oil producing companies to get adequate gas for the power plants. Thus, most of the power stations that are supposed to deliver the 6,000MW are already starved of gas and are working far below optimal capacity[5].

For example, on December 6, the shortfall in gas supply was reportedly 599.92 million standard cubic feet per day as the gas demand was 782.77 million scfd while only 182.86 million scfd was supplied. Translating this information into electricity generation, it is said that the electricity company had thermal generating capacity of 2,794.5MW, but it was only able to generate 652.8MW leaving an idle generating capacity of 2,141.7MW [5]. Since the beginning of the year, the gas run power stations have been saddled with the problem of inadequate or no gas supply and the situation has just slightly improved based on the amnesty granted to militants by the Federal Government.

Chief Economic Adviser to the President, Taminu Kurfi at the opening session of the 15th Nigeria Economic Summit in Abuja which held on December 15th disclosed that stoppage of gas supply occasioned by militancy in the Niger Delta had made the target unattainable. He disclosed that the inability of the Power Holding Company of Nigeria (PHCN), to do a turn-around maintenance on some of the power plants and militancy problem for most part of the year in the Niger Delta had truncated the supply of gas which invariably affected the ability to power the engines [8].

5.5. Inadequate Transmission and Distribution Capacity: Mr. Immamudeen Talba, the administrator of the Nigeria Electricity Regulation Commission (NERC), addressing participants at the Power Consumer Assembly held at the Maiduguri International Hotels, Maiduguri, Borno State, on December 22, stated that the nation does not have the capacity to distribute 6,000 MW to consumers even if it had been able to meet the December 2009 deadline. He was quoted as saying: "This assembly is an established platform to educate electricity consumers and bring all stakeholders together to exchange ideas on how to ensure safe, reliable and affordable power in Nigeria. This event is in conformity with the mandate of the commission as enshrined in the ESPR act"[6].

5.6. Minister of National Planning Shamsuddeen Usman stated that the power sector had been neglected for the last twenty or more years. "We need to address key issues of the power sector which includes the whole chain of generation, transmission and distribution. While a lot of focus has initially been on generation, not enough attention was paid to transmission and distribution. Government has a robust programme of re-invigorating power transmission and distribution" [8].

5.7. Without adequate and reliable electricity supply, socio-economic transformation would remain a mirage. In Nigeria it has for long been a case of epileptic power supply. The situation is not being helped by other problems ranging from unending gas shortages to vandalization of power lines and power distribution equipment[8].

5.8. Short-termism and Absence of Long-term Consistent Policy /Project Plan Implementation: President Obasanjo made serious attempts to reform the power sector and through him, the Electric Power Sector Reform Bill was passed into law. According to the law, the sector should have been substantially liberalised by now, but President Yar'Adua came and reversed the momentum towards deregulation of the sector[5]. This was following the failure of the IPP.

5.9. Separation of partisan politics from national projects is an important and very relevant suggestion by the Ghanaian Deputy Minister of Energy, Kwabena Donkor. He advised that if the Nigerian government wants to solve our national problem successfully, it must show seriousness by separating electricity supply project from partisan politics and make it a national priority.

Donkor, who spoke in Lagos at the 5th annual lecture organised by AELEX, a firm of legal practitioners and arbitrators, bemoaned the lack of sustainable policy implementation in the country. He stated that even though Ghana has had its fare share of governance, one of the things that have made it attractive to the world in the last decade or two is the country's consistent sustainable policy implementation. He identified efficient management of the power system as well as a strong political will to achieve the overall agenda of government as a major ingredient through which power generation could improve. Donkor revealed that the major reason why Ghana has been able to keep its electricity on is the fact that since 1990, every successive government in Ghana has been committed to the full implementation of power policy, even the military administrations. He noted that his country's current access to electricity is about 65 percent of the entire population thus, making it one of the countries in sub-Saharan Africa with high rate of accessibility to electricity supply. "Let me state that keeping the lights on require an effective management of the power system and a strong political will to ensure adequate, reliable and cost-effective power supply to achieve the overall developmental agenda of the government.

It would also require a determination of the body politic, devoid of partisanship to see electrification as a development imperative and access as an economic right", Donkor concluded. It is believed that though there had been conscious efforts to boost power generation in the country, the government in the coming year should make sure that the issue of power is tackled headlong as it is significant to national development and growth. No country can make progress if her industries depend on alternative source of power supply such as generating sets[8].

5.10. Indiscipline, Inefficiency, Waste, and Introduction of Electricity Regulation Laws: As a result of years of institutionalised indiscipline, inefficiency and waste in the use of electricity, it is unlikely that the national electricity supply problem can be solved by ambitious increases in the generating capacities alone. It is necessary to introduce energy efficiency plans for all classes of users, increase the use of prepaid meters, and reduce system losses. A power analyst suggests that: "Nigeria's electricity problems cannot only be solved by merely increasing the megawatts required. A major problem is lack of harmonization of the our institution. One should not just turn one's home into a business and start installing all kind of machines with high electric current demand in you home without approval. One should be made to go to an area designated as industrial, where the electricity supplied takes care of industrial needs"[9]. It is however true that many people, especially small businesses, “ act smart” by installing a mini-factory in their homes. They do this by raising the current capacity of their circuit breakers and fuses in the electricity supply box. This is done without the knowledge and approval of the power supply authority. This leads to the overloading and damaging of the distribution transformers which are generally overloaded even without the unknown additional load created by the so-called smart entrepreneur. As a result, it becomes difficult to supply power irrespective of whether the power supply from the grid is adequate or not.

It is also the case that some houses operate without electricity meters. Houses should only be wired by responsible and certified persons that have obtained an approved training and not just because one has picked up a few ideas from a certified electrician. Government should enforce energy and electricity usage laws and penalties for failing to comply. New installations and any expansion or modifications should be inspected, vetted for safe use and approved by government before being used.

Conclusion and Suggestions for Lessons Learned

Given the hardships currently confronting Nigerians because of continual shortage of power supply over many years, it should be a priority objective of every government to find solutions to the sorry situation. Lessons learned from the failure of the national power project to supply 6,000 MW by December 2009, include the following:

A. Peace in the Niger Delta: Clearly, one of the recurring reasons for the failure of the Yar 'Adua project has been the deficiency in gas supply to the thermal power electricity generators. Thankfully, the Nigerian Federal Government has agreed a settlement with the Niger Delta militants, the main suspects, in the damaging of the gas pipelines. One of the lessons that one should take away from this study is that it is in the national interest that peace is maintained in the Niger Delta. If nothing, it should ensure that the militants are kept off the pipelines so that the gas thermal electric power plants will be operational.

B. Separation of national projects from partisan politics to ensure continuity in project planning and execution: Each project normally has a planned duration for its implementation. Nothing will be achieved if a project is aborted abruptly only because the president and his ministers who sponsored it are out of the office at the end of their term. While in the short term, it could be seen as a popular action by opponents of the project, in reality however, it is the nation that stands to lose.

For example, a number of people were opposed to some of the steps taken by the Obasanjo administration to break up the former national electricity supply company, the National Electric Power Authority. It was a company that operated as a monopoly for many years and had been responsible for the inefficiency in the power supply to the country. It required being broken up and privatised so that the discipline of market forces will help cure its chronic inefficiencies.

Unfortunately, some vested interests opposed the move by President Obasanjo. These were the people who kept up their protest such that there was a suspension of some of the measures by the incoming Yar'Adua administration. As discussed in the text, some of the steps taken by the new administration became counter-productive and adversely affected the achievement of their promised target. It is therefore necessary to achieve the separation of partisan politics from national projects as suggested by the Ghanaian Deputy Minister of Energy, Kwabena Donkor.

An independent ministry, the Ministry of National Planning, should be involved in the choice, planning and execution of national projects. National Development plans should be such that there are series of projects implemented over time, could be over ten or more years, with the objective of achieving some national strategic goals. Consistency in project monitoring and execution is desirable in the successful implementation of such projects in order to ensure that the desired goals are being achieved. We shall be failing ourselves as a people if we allow such an important economic development process to be determined by partisan politics.

C. Long term, public – private partnership: A lot of funds are required for building of the resources and infrastructure to meet the national power supply requirements which a government alone cannot easily provide. There is therefore a good case for a public-private partnership as suggested by Mr. Immamudeen Talba, the administrator of the Nigeria Electricity Regulation Commission (NERC). He explained that there is need for partnership between the federal, state and private sector to meet the electricity requirement of the nation. He stated that it was regrettable that only 3,000 megawatts had been generated out of the 20,000 megawatts required by Nigerians, adding that in this technological age, no country can develop without adequate electricity supply [6].

However, making power generation, transmission and distribution to be state-based investments cannot stand up to the costs and economy of scale required to achieve

efficiency in the industry. It will certainly make for discipline in the use of resources and efficiency in operations to involve the private sector in the national power supply.

In spite of these observations and recommendations, it is appreciated that the development of a sustainable power supply in a large country like Nigeria with its well documented institutionalised failings is not a simple task. It should take time. However, progress will be made only as we are prepared to learn not only from our mistakes but also from other nations' experiences.

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About the Author



O. Chima Okereke, PhD

International Correspondent - Nigeria



Dr. O. Chima Okereke, Ph.D., MBA, PMP is an International Correspondent for PMForum and ***PMWorld Today*** in Nigeria. Dr. Okereke is also Managing Director of Total Technology Consultants, Ltd., based in Port Harcourt, Nigeria and in the UK. He was previously a chief engineer for Delta Steel Company in Aladja; a project engineer/technical writer for Shell Petroleum Development Company in Warri; Section Head for Instrumentation & Control for the National Electric Power Authority in Lagos; and Electrical Engineer for the Ministry of Works & Housing, Nigerian National Government. Chima is also now sponsor and president of a potential chapter of the Project Management Institute (PMI®) in Port Harcourt. Dr. Okereke has a Bachelor of Science Degree in Electrical Engineering from the University of Lagos, and a Ph.D. and Masters in Business Administration (MBA) degree from the University of Bradford in the UK. With over 25 years of experience in industrial operations and PM, he has been a registered engineer in Nigeria since 1983. Total Technology is also the authorized representative in Nigeria for Primavera and PertMaster. Additional information about Dr. Okereke can be found at <http://www.pmforum.org/pm%20forum%20team/index.htm>. More information about Total Technology Consultants can be found at <http://www.totaltechnologyconsultants.org/>. Chima can be contacted at OkerekeOC@gmail.com.