

Developing and Supporting Critical Energy Infrastructure for Vision 2020: Challenges, Constraints and Prospects

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This is a very timely conference on a critically important subject. I congratulate the Council for arranging it and I thank them very sincerely for inviting me to participate.

Only a few days ago, last Tuesday, His Excellency, the Vice-President of the Federal Republic of Nigeria, Chief Goodluck Jonathan, GCON, inaugurated, on behalf of the President and Commander-in-Chief, Alhaji Umaru Musa Y'Aradua, GCFR, the National Council on Vision 2020 to be chaired by the President and the National Steering Committee on Vision 2020 with the Hon. Minister of National Planning Commission as the Chairman to provide the leadership in articulating the Vision, and mobilizing the nation and all the stakeholders to own the Vision and to drive its focused, consistent implementation.

It is the tragic truth that 47 years after Independence which was proclaimed with such Great Expectations for fast development and growth, given Nigeria's immense resource endowments, human and material, the caliber and high international standing of our First Republic Leaders, and the abundant international goodwill for Nigeria, we still remain a nation of exporters of primary commodities only, now mainly crude petroleum and liquefied natural gas (LNG) with no value added. The economy has not undergone any structural change despite well articulated National Development Plans of 1970-74, 1975-1980, and 1980-85, which would have diversified the economy and transformed Nigeria into a manufacturing country exporting value-added goods. As we know, only the 1970-74 Plan was implemented. Indeed, the inspiration for those abandoned National Plans was the recognition that oil was a wasting asset and that oil revenues must be invested in diversifying the economy and exiting from the export of one primary commodity and creating renewable sources of future income.

It is only right as we now seek to transform a hope for 2020 into a Vision 2020 to briefly recall the past if only to learn from our mistakes. From 1962 to 1966, the economy grew at an average of 7.6% per annum, then the tragic interruption of the first Military Coup of January 1966 and the second Coup of July 1966 and the Civil War. From 1970 to 1975, the economy grew at an average of just over 11.0% per annum. Then the watershed coup of 1975 which was followed by a mass purge of the Civil Service and the Public Services. The growth rate declined steeply. It became negative in 1981, and 0% in 1986. Per capita GDP fell from US \$800 in 1980 to US \$250 in 1990. Growth from 1990 to 1999 averaged 2.0% per annum while population grew at 3.0% per annum. The growth rate has improved since 2000 averaging over 6% per annum. However, we must emphasize that the better growth rates for this period are largely due to the unprecedented sustained long period of high crude oil prices. Nigeria is yet to embark seriously and consistently on restructuring and diversifying the economy. These figures explain why 70% of Nigerians are living in severe poverty.

Crude oil and gas exports have for three decades now accounted for about 95% of our export earnings. Contribution of manufacturing to GDP declined from 11% in 1991 to 4% in 2001 and is less today. Vision 2010 which mapped out a comprehensive Perspective Plan to achieve a growth rate of 10% per annum from 1998 onwards was completely abandoned with the change of government in 1999. Vision 2010 produced by an all-inclusive group of stakeholders had articulated comprehensive policies, programmes and "road-maps" for achieving the targets set in all sectors of economic activity and infrastructure including education, health, power, transport, agriculture, manufacturing, telecommunications, etc. The only notable omission was the housing sector.

Now again, under President Y'Aradua, the nation is on a threshold of renewing the march to stability and sustained growth and progress. I am pleased that very useful work has been done in the past few months in the National Planning Commission and other sectors of the Government towards, I am quoting from an official document, "clear definition which spells out the goals to be achieved in all the key sectors and aspects of the nation's economic, social and political life which is essential to giving meaning to Vision 2020.

Let me attempt to provide in a preliminary manner a context for embarking on our journey towards Vision 2020. I understand that at present Belgium is the 20th largest economy in the world, the position which we aspire to reach by 2020. The World Bank estimate for Belgium's GDP (PPP) per capita in 2007 is US \$33,542. The population is given as 10,364,000 and the GDP (PPP) is US \$348 billion. The GDP (PPP) per capita for Nigeria in 2007 is given as US \$1611 and the population 128,266,000. On this basis, our GDP (PPP) in 2007 is US \$207

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billion, and if we use our last census figure of 140 million, the GDP (PPP) will be US \$225.5 billion. I believe that in size our economy is currently about No. 54. The economies which are larger than ours will not stand still, and some of them are growing quite fast. This is why preliminary projections would indicate that to achieve the position of being 20th largest economy by 2020, the GDP of Nigeria should be at least US \$600 billion, perhaps, significantly more. Our principal presenters will no doubt give us more authoritative projections but that will not alter the stark reality of the immense tasks before us.

How do we grow the economy from US \$225 billion to US \$600 billion from 2008 to 2020, a period of 12 years? Vastly increased volumes of goods and services must be produced. Agriculture must be modernized, enormous volumes of raw materials in the agro-allied sector, food, sugar, cassava, rubber, cotton, oil seeds, etc. must be processed into value-added products for the international market. In the oil and gas sector, a completely new order of activity must be achieved in converting our crude oil and gas into valuable petroleum and petrochemical products to be distributed internally and to be exported to the world. The country is also endowed with significant reserves of various solid minerals awaiting exploitation and processing to generate wealth. Let us imagine the exponential growth in tonnage of goods and products to be carried by road, rail, water, and air and the necessary transportation infrastructure to make all this possible.

This is where we are confronted by the theme of this conference – “Developing And Supporting Critical Energy Infrastructure For Vision 2020”. There is a direct relation between total energy consumption and growth of GDP. The amount of energy used per worker largely determines his productivity in agriculture and manufacturing. There are interesting studies which showed the energy available per worker in USA expressed in horsepower rising from about 0 in 1850 by nearly 10% per year to about 2 horsepower in 1900 and 7 horsepower in 1950. That was the period of industrialization and expansion in the USA. It is also a truism that per capita energy consumption is a fairly accurate indication of the level of economic development and of the quality of life in a country.

As we all know, the energy situation in Nigeria today is disastrous whether we are considering generation and distribution of electricity or the availability of petroleum products or other types of fuel.

Electricity Generation and Consumption

There is perhaps no sector in which our national failure to determine correct policy and to implement and manage agreed programmes and projects is so glaring as in the power sector. It is derisive enough to advertise to the world that the installed capacity of the national power monopoly, PHCN, is a mere 6000 megawatts for a population of 140 million, notwithstanding the fact that expensive privately owned generating sets may about equal the PHCN installed capacity. The lack of access to the power grid for many would-be-users, as only about 40% of the population is connected, and even then the supply is unreliable, constitutes the greatest factor contributing to the unattractive investment climate in Nigeria. Besides, it renders many Nigerian producers internationally uncompetitive and prevents the emergence of a viable sector of small and medium scale industries and enterprises which would accelerate progress in poverty reduction and the achievement of the Millennium Development Goals.

There are these aspects of the challenge in the power sector which the nation must deal with constructively if we are to escape from the failures and frustrations of the past three decades :

- Investment
- The Structure of the Industry and the Regulatory Environment
- Management and Manpower Constraints.

Extrapolating from the figures for annual investment for 20 years in power generation and distribution required by the developing countries which were discussed at the World Energy Congress in Montreal in 1989 for the purpose of drastically reducing poverty, it was estimated that Nigeria would need to invest at least US \$2 billion per annum from then for the period of 20 years. Yet, from then to 1999, there was practically no investment in power generation and distribution. To make matters worse, the pricing structure for power did not allow for full cost recovery let alone produce the surpluses required for necessary timely maintenance of existing plants and installations. All this in the context of 3% per annum population growth.

Since 1999, the situation has been one of initial confusion resulting in the mistaken approach of postponing making well considered investments in the power sector because of imminent privatization. Four years later, this approach was reversed and there was a rush into quick-fix sub-optimal investment decisions.

In order to begin in earnest to advance to our desired Vision 2020 what installed capacity should Nigeria have? Let us consider a few comparative figures of electricity consumption per capita measured in

terms of kilowatt hours per person:

- Egypt rose from 683.4 in 1990 to 1,173.1 in 2003;
- China rose from 511.1 in 1990 to 1,378.5 in 2003;
- India rose from 275.8 in 1990 to 434.8 in 2003;
- Indonesia rose from 161.4 in 1990 to 440.1 in 2003;
- Malaysia rose from 1,194.3 in 1990 to 3,060.5 in 2003;
- South Africa rose from 4,431.5 in 1990 to 4,756.8 in 2003; and
- Nigeria rose from 91.6 in 1990 to 106.3 in 2003.

Should we go back to 1975, with the sole exception of South Africa, we would find that Nigerian consumption was on the same level as the rest, or even better than one or two. It is this sort of stagnation that explains why in terms of ranking of prosperous nations Nigeria has fallen from around No. 55 in 1980 to No. 157 in 2007 – i.e., among the bottom 20. For more poignant comparison – consumption in a developed country like France went from 5,975.3 in 1990 to 7,585.5 in 2003.

To produce adequate power for modernizing, transforming, and improving productivity in our advance towards Vision 2020, some experts estimate that we need as urgently as we can achieve it installed capacity of at least 60,000 megawatts. This would require investment in excess of US \$60 billion. More would be required for transmission and distribution. We cannot find this internally. We must have recourse to the international capital market.

I now wish to discuss briefly issues regarding the structure and regulatory environment for the power sector. I am glad that the National Electricity Regulatory Authority is now established under the law. I agree on the need for privatization but I invite the conference to examine critically the policies which have been pursued in privatizing NEPA. The emphasis has been on what is called “unbundling”. In the process, I understand that about 18 distribution companies, several generating companies and one public sector monopoly transmission company are being established. With such an atomized approach and the insistence on a public sector transmission monopoly company whom are we trying to attract? We know how dismally public sector parastatals have performed over the past four decades.

The main attraction of Nigeria to would-be investors—Nigerians in diaspora and foreigners—is the size of the Nigerian market as the economy begins to grow. I believe that as a country of 140 million with our enormous resource endowments we should seek to attract globally significant power companies. If they can see the possibility of selling from 10,000 or more megawatts installed capacity each in the medium term, we may begin to succeed in re-positioning the power sector to meet the challenges of Vision 2020. To this end, should we not examine the North American, Japanese, European, indeed even Asian and Latin American models and divide Nigeria into four or five zones running from the coast to the Northern boundary and invite bidding for franchises for the zones where the successful bidders will be allowed to generate, transmit and select their own distribution dealers. The Regulatory Authority can still monitor the prices, insist on adequate arrangements for inter-connectivity and ensure a level playing field. There will still be room for smaller companies generating and distributing electricity to captive industrial or other clusters. Might we not be able to repeat in this sector the great achievement registered in the introduction of GSM in our Telecommunications sector?

On the question of management and manpower challenges, the failure to anticipate and plan for growth in demand, to operate and maintain efficiently installed plants, and to persuade the Government to make necessary investments, and approve appropriate pricing policies is largely to be explained by the inadequate calibre of the Chief Executives appointed in the power sector. At a time, when the rest of the world, developed and developing, recruited the best people they could find from the world market to help deliver accelerated development we were handicapping ourselves in Nigeria with the constraints of a mechanical approach in the implementation of the principle of “federal character”. Good people are to be found from every part of the country, but they can only realize their potentials if they are challenged to compete on the basis of merit and the pursuit of excellence. The power sector was not alone. Other parastatals suffered the same affliction.

Oil and Gas Sector

Progress in the upstream sector has been fairly satisfactory over the past 15 years. With the signing of the first Production Sharing Contracts with several of the major oil companies for deep offshore exploration and production in 1993 and the encouragement given to indigenous concession owners to enter into similar arrangements with competent oil companies, and the subsequent agreement on an MOU for JVA operations, there has been enough funding, albeit with occasional delays from the Government, to ensure the achievement of a significant increase in total reserves. It is now just over 30 billion barrels. Product-

ibility has also risen to 2.4 million barrels a day. However, there are discussions to which the public is not yet privy about a Revised MOU for JVA operations, and for modalities for meeting the Government portion of cash calls promptly, as and when due.

Personally, I do not believe there is any need to reduce Government and private sector indigenous Nigerian interests in existing JVAs below 51%. It is profitable business and good investment in the public interest. It is only reasonable that the public sector should pay as when due its own portion of operational expenses and commercialize optimally its proportionate share of oil produced. Borrowing from the banks to pay for operational expenses cannot in the final analysis be of net benefit to the nation especially when the cash flow so generated is spent on needlessly bloated recurrent personnel costs and other items.

After our many missed opportunities starting from 1965, the LNG industry has made tremendous progress since the first two trains were commissioned in 1999. The 7th train is now under construction. I also expect that the new O LNG and B LNG will be successfully executed. There is, however, need to continue to maintain competitive conditions, while protecting our national interest, to ensure that all associated gas is harnessed and that non-associated gas deposits will be developed in time as necessary to fuel the power and industrial projects now on the drawing board and not yet assured of gas supplies, and also that gas flaring is ended by 2010.

Niger Delta Situation

There is urgent need to address the situation in the Niger Delta with equity in resource allocation, and rapid progress in implementing infrastructure, agricultural and industrial projects agreed with the communities in order to transform the economic situation in the Region and greatly improve the quality of life of the people of the Delta. This is the route to achieving sustained peace in the Region which is so essential for realizing energy-sufficiency to drive the 2020 Vision.

Downstream Sector

As we are all aware petroleum products currently accounts for 62% of total energy consumption in the country. I shall leave it to one of our principal presenters to delineate what needs to be done to end the disgrace of Nigerians being incapable of operating and maintaining petroleum refineries to end fuel scarcity and achieve a little value added. Surely, we should not continue to mock ourselves with failure in this sub-sector while Ghanaians, Ivoiriens, and Senegalese with less depth in the supply of indigenous highly trained manpower in petroleum and gas technology continue to manage their own refineries respectably.

It is important in this regard to allow the NNPC to continue to grow into a respectable diversified oil company belonging to the Nigerian public much like its counterparts in Malaysia, Brazil, Algeria, Iran, etc. All I said above regarding management and manpower in the power sector applies with equal force to NNPC.

Other Sources of Energy

I have spoken for long given our schedule. However, I should add a sentence that we must now finalize, publicize, and resolutely implement a National Energy Policy which assigns a larger and appropriate role to coal and lignite, as well as solar and wind energy and other renewable energy sources in developing a long term supporting energy infrastructure for the Vision 2020 now being articulated, and for the future milestone Visions to follow in our nation's progress to prosperity and greatness.

Conclusion

In conclusion, I should add that we are witnessing the political will on the part of the national leadership, that is, Mr. President and his close colleagues to move the nation forward. I must urge, in the light of our own history and the histories of many other nations, developed and developing, that for the Government to be able to deliver there is a critical need to resuscitate, restructure, re-motivate, strengthen its leadership and re-challenge the upper echelons of the Civil Service. They must become again competent, professional, honest, fearless, and patriotic facilitators of the process of modernization and national development.