

NIALS (INTERNATIONAL INVESTMENT & INVESTOR) RESEARCH PAPER

**“INTERNATIONAL INVESTMENT & THE SUSTAINABLE DEVELOPMENT OF THE POWER  
SECTOR IN NIGERIA: PROGNOSSES INTO THE FUTURE”**

A paper by

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### **Abstract**

In this paper, I initially examine how the Nigerian Power Sector could be put on the path of self sustenance and uninhibited growth that is attendant and correspondent to an expectedly ascending economy. The paper found that achieving this feat entails soliciting some externalities, which will transform the domestic operational and management landscape of power sector. The paper then went on to identify international investment as the central auspices via which the national power industry can attain these desired transformations.

I then moved on to explore the factors that are likely to positively or negatively influence international investment in the power sector of an emerging country such as Nigeria. I find first that though the fear of political and security risks are indeed key factors for prospective investors, they are not decisive considerations or deal breakers for serious investors. While higher levels of security and political risks discourage entry, impacts of these negative factors are rather significantly lower for renowned firms with greater levels of international experience. I also find that past experience is an important factor in explaining variations in investors’ market entry conditionality. Particularly, the paper

observes that investors might appear edgy and nervy in monopsony generation markets—where investors must still somewhat depend, even if indirectly, on governments for investment recoup. This leads to tedious contract negotiations, with demands for over-generous, onerous and even absurd conditions as risk mitigation measures, even when it is known that the state of monopsony is brief and transitional.

Overall, the paper observes that expanding into developing economies is actually highly beneficial to investors due to the potential of a virgin-market giving them a competitive and unassailable edge. The paper anticipatorily concludes by reviewing some key trajectories of the on-going Power Sector Reforms. It optimistically concludes that the future of the Nigerian Electricity Supply Industry is bright.

**A vibrant economy depends on a sustainably developed power sector:** The role of electricity in development has long been recognized. Wider access to electricity contributes to poverty reduction and economic growth. Almost all the problems Nigeria faces today are linked to the un-sustainable state of our public electricity supply. As the biggest ever global research<sup>2</sup>, the World Commission on Environment and Development (WCED) 1987 Brundtland Report<sup>3</sup> found, the state of energy services in a country is directly indexed to its state of economic development<sup>4</sup>. The WCED Report consequently started the Rio movement with its attendant Millennium Development Goals (MDGs) mark, which was set for only the third world or emerging economies as target for the provision of basic amenities which the West now take for granted<sup>5</sup>.

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<sup>2</sup> The Report is documented as the largest and most encompassing global survey ever conducted. It reached out to all the developmental needs of all the peoples of the world.

<sup>3</sup> UN Doc A/42/427. Our Common Future: Report of the World Commission on Environment and Development

<sup>4</sup> See “Our Common Future” Chapter 7.1. Energy, Economy, and Environment. Page 119 clearly states that “ Future development crucially depends on its (energy) long-term availability increasing quantities”.

<sup>5</sup> Functional health systems, good roads, basic compulsory education, good nutrition, manageable levels of unemployment, among others are indicators of the MDG. These are development measures that have been long surpassed in advanced countries.

The World Commission on Sustainable Development (WCSD) which the UN authorized to assist third world countries achieve the MDG's found sustainable electricity to be the missing link between developing countries and MDG's<sup>6</sup>. Often, the electric power sector has focused researches on its contribution to national economic development, with less emphasis on the social and environmental impacts. To redress this, the Asian-Pacific Expert Group Meeting<sup>7</sup> conducted a study which was aimed at monitoring the effectiveness and impact of the electric power sector in fostering social and environmental development. The outcome of these discussions revealed yet again, strong linkages between the electric power sector, social development and environmental sustainability.

Given that effective electricity services goes beyond the frontiers of economic development, to equally support social development and environmental sustainability, the provision of electricity services in a sustainably structured and managed manner thus becomes even multiple critical to the overall development of a nation state. The Nigerian Electricity Supply Industry (NESI) therefore must transit towards sustainability if it is to partner the nation in achieving social, environmental and economic growth. At this point, it becomes vital to get a working definition of the term, 'sustainable development'. The Brundtland Commission which coined the term defined it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

When contextualized, this means that a nation's power sector can only be said to be sustainably developing if it is effectively positioned to support and anchor the economic and human development needs of today's people, while primed to meet the energy needs

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<sup>6</sup> For more, please, see [www.unmillenniumproject.org/documents/MP\\_Energy\\_Low\\_Res.pdf](http://www.unmillenniumproject.org/documents/MP_Energy_Low_Res.pdf)

<sup>7</sup> The Ad hoc Expert Group Meeting (EGM) on Sustainable Development Indicators for the Power Sector held from 17 to 19 July 2007

of future generations. The power sector of almost every industrialized country<sup>8</sup> has been positioned to correspondently expand in the wake of an ever growing global reliance on electric power. On the other hand, the power sector of a 150 million peopled country like Nigeria is still abjectly stuck and hovering around 5000mw. Until the recent concerted efforts to reform, the Nigerian power sector in it then state, could never have been able to develop sustainably. The World Bank in Nigeria recently reiterated<sup>9</sup> the need for financial sustainability of the Nigerian power sector. The bank in issuing a \$400 million partial risk guaranty (PRG), noted that no amount of ‘guarantees’ or subsidies could in the long term prop a utility sector that is unable to generate enough revenue to fund its operations.

Textbook economics theory<sup>10</sup> argues that a combination of competitiveness and profit orientation result in production (internal) and market (external) efficiencies, and that the benefits are ultimately passed on to consumers and the economy at large in the form of lower prices and costs.

In this paper, this desirable premise is applied to the electricity supply industry (ESI). Tooraj and Pollitt<sup>11</sup> have supportively found that there are important physical characteristics that distinctively characterize the electricity industry, which in their opinion, leads to the industry’s particularly peculiar regulatory design. This they identified to include; (i) large sunk costs which limit entry possibilities, (ii) vertical stages (generation, transmission, distribution and retailing) of production with different optimal scales, and (iii) a non-storable good delivered via a network which requires instantaneous

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<sup>8</sup> This includes china, South Africa, Brazil, etc. There is a line between being an industrialized and being a developed country. A country can be industrialized without being developed, however, being developed is derived from being industrialized.

<sup>9</sup> Erik Fernstorm, Senior Energy Specialist for the World Bank, during a recent stakeholder’s forum on the Partial Risk Guarantee (PRG) in Abuja noted that the project is a cornerstone of the improvement that the World Bank and the government were trying to put in place for the Nigerian power sector. He added that the sector is a difficult problem to solve because it’s a chain of interlinked centres of activities.

<sup>10</sup> David Besank, D. Dranvoe, Mark Shanley. Economics of Strategy. New York, John Wiley & Sons Inc, 2000.

<sup>11</sup> Tooraj Jamasb, Michael Pollitt. Electricity Market Reform in the European Union: Review of Progress toward Liberalization & Integration. The Energy Journal, vol.26, special edition, pp. 11-41, 2005)

physical balance of supply and demand at all nodes. In effective, a close study will reveal that the liberalization of such an industry to market forces will entail the engendering of an amalgamation of competitive wholesale and retail markets, and a controlling regulatory and transmission activities.

Experience drawn from countries where the electricity industry has been opened up to international investments and market forces have generated some sort of template<sup>12</sup> on steps for achieving functional market-oriented industry. Competitive power market often requires the execution of one or more of the following inter-connected steps; sector restructuring, introduction of competition in wholesale generation and retail supply, incentive regulation of transmission and distribution networks, and most importantly, setting up an independent industry regulator.

Building on what I might correctly term the deficiencies of studies on the impact of international investment in the power sector, this paper is dedicated to assessing the power investment climate in the West African major economy of Nigeria. Existing studies abound on this topic in other developing countries in the Asian and Latin Americas<sup>13</sup>. To this effect, this paper offers a firsthand account of this all important process in the sub-region.

## **International Operational & Managerial Competence Holds the Keys to a Sustainably Developed Power Sector**

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<sup>12</sup> For further studies on this, please see, Jamasb, T. 2002. "Reform and Regulation of the Electricity Sectors in Developing Countries" . DAE Working Paper, 0226 (CMI EP 08), Department of Applied Economics, University of Cambridge. See also, Newbery, D. 2002. "Issues and Options for Restructuring Electricity Supply Industries." Cambridge Working Papers in Economics 0210 / CMI Working Paper CMI EP 01, Department of Applied Economics, University of Cambridge ).

<sup>13</sup> See variously, La Porta, R. and F. López-de-Silanes. 1997. "Benefits of privatization: Evidence from Mexico" NBER Working Paper No 6215. National Bureau of Economic Research, Cambridge, Massachusetts. D'Souza, J. and W.L. Megginson. 1999. "The financial and operating performance of newly privatized firms during the 1990s". *Journal of Finance*, 54: 1397–438. Boubakri, N. and J. Cosset. 1998. "The financial and operating performance of newly privatized firms: Evidence from developing countries". *The Journal of Finance*, LIII (3): 1081–110. Adam, C., W. Cavendish and P. Mistry. 1992. *Adjusting Privatization. Case Studies from Developing Countries*. London: James Curry.

As I severally argued,<sup>14</sup> for several factors, State Operated Enterprises (SOEs) have traditionally notoriously delivered sporadic and second-rate services in Nigeria<sup>15</sup>. This is despite their consumption of obscene amounts of funds. In their classic research, Callaghy and Wilson<sup>16</sup> worryingly revealed that State owned industrial enterprises in in the sub continent operate at an abysmal average of 10–35% of capacity. The chances of profitability on these often expansive and gargantuan investments have been few and far between, irrespective of the hefty amount of capital injected in them. Eventually, they sadly mutate into sentimental national legacies, rather than purely economic concerns. They are often discussed and referenced in terms national pride and symbols rather than gauged on economic performances. As far back as 1988, it was projected<sup>17</sup> that Nigeria had pumped in well over US\$35 billion, consisting of US\$12.5 billion in equity, US\$10.2 billion in government loans, and another US\$11.5 billion in unstipulated and largely undocumented subventions to various State run enterprises. All these investments cumulatively yielded a derisory return of under US\$1.5 billion in dividends and loan repayments from 1980 to 1987.

This unsustainable situation was further aggravated by the fact that about 40% of non-wages recurrent overheads and 30% of capital expenditure were expended on yearly basis on these public enterprises. Net spending from the federal government to publicly run enterprises had been estimated at US\$2 billion annually<sup>18</sup>.

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<sup>14</sup> See the reasons in; Sam Amadi, “Energy Sector Contribution to Economic Growth” A Paper to the 2011 Nigeria Bar Association (NBA) Abuja Chapter Law Week. 6<sup>th</sup> Dec, 2011

<sup>15</sup> These include among others, the lack of residual shareholder claiming periodic profits, the presence of disparate and conflicting objectives set by politicians, and the prevalence of incomplete contracts and subsidies that mask inefficiencies and perpetrate soft budget constraints

<sup>16</sup> Callaghy, T.M. and Ernest J. Wilson III. 1988. “Africa: Policy, reality or ritual?” In Raymond Vernon, ed., *The Policy of Privatization: A Challenge for U.S. Foreign Policy*. New York: Council on Foreign Relations.

<sup>17</sup> See Federal Government of Nigeria, Economic Gazette 1986

<sup>18</sup> Callaghy and Wilson , 1988

The ugly side of these wastages was eventually revealed when the first batch of privatization of these poorly run State enterprises ensued. The depth of rot that was wrought upon these enterprises by incompetence, both innocent and deliberate, and persistent corruption, resulted in serious difficulties in carrying out what should have been routine sectoral reforms and liberalization. For instance, the aviation, railways, aluminum smelting, pulp and paper, insurance, fertilizer, sugar, steel industries and lately, telecoms and power sectors were all defying what should have been basic textbook routine reforms.

It has always been my opinion that it is the failure to ensure the optimal performance and sustainable development of our electricity sector that has been at the core of our inability to make any state run enterprise profitable<sup>19</sup>. For example, the unreliable power supply from the National Electric Power Authority (NEPA) as at 1995 was estimated by World Bank<sup>20</sup> to be imposing an additional cost of around US\$1 billion annually on the nations fledgling economy.

Perhaps the key feature that is essential for a power sector to attain the desirable ‘sustainably developed’ status is the ability to attract international investment. International investment could now be safely argued to be the singular factor that unleashes the full potentials of a national power sector. It is international investment that enables the power industry to;

- attract private funds for expansion activities
- move towards complete self sustenance
- financially attract and retain best human capital available

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<sup>19</sup> See, “Sustaining 21st Century Engineering Infrastructure” paper by Dr. Sam Amadi to the University of Lagos IET 2011 International Conference. 8-10, Aug, 2011.

<sup>20</sup> The World Bank, country Report,1995.



- become transparently administered, so as to flush out corrupt tendencies.
- adopt international sectoral best practices
- generate, transmit and distribute sufficient and reliable electricity on demand.

### **Prerequisites for attracting international investment into the power sector**

Studies have shown that because the power sector is a very capital intensive industry with an occasioning long gestation period. And given that it is equally administratively complex and chain dependent<sup>21</sup>. There are therefore not many reputable international enterprises that engage in power business. Equally, the participating firms have from experience, evolved a standard ‘investment climate’ criteria, which a prospective country’s power sector must attain in order to attract international investors. Amongst these criteria are:

### **Public sector/ multilateral guarantees**

Upon the commencement of the sector reforms, the regulator inherited a rudimentary revenue recoup system<sup>22</sup>. In the larger proportion of cases, the apparatuses for gauging consumption (functional and fit for purpose meters) are non-existing. This problem is compounded by the fact that the subsidy-run monopoly that was NEPA, had a lethargic and lackluster attitude towards tariff collection<sup>23</sup>. This has mutated into a situation where the populace now require an entirely fresh orientation on the need to be proactive in paying their bills. This is a continental problem, and the investing community are very much aware of it. To indemnify themselves from the problem of revenue losses, they

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<sup>21</sup> There are several inter-woven activities in the sector, each independent unit has to be optimally performing for the others to be efficient. E.g., the gas supply end can undermine other progresses, likewise, Generational defects, Transmission shortfall or distribution undercuts.

<sup>22</sup> Lack of adequate Metering, translates to a lack of clear and predictable returns on investment.

<sup>23</sup> Non Technical Losses (NTL) is projected by WB to be as high as 53% in Nigeria, because MDAs, and a majority of private consumers were equally not paying. Also, in the wake of epileptic services, and very high customer dissatisfaction levels, NEPA totally lost the moral intergrity to enforce a strict revenue regime.

demand as conditionality<sup>24</sup> for investing in a developing economy like Nigeria, that State should guarantee payments prior to their financial commitment to projects until such a time when the transiting market finally evolves to a self sustaining status.

It is often very important that the regulator who is independent, transparent, and best practice oriented, is allowed to negotiate and enforce such financial guarantees on behalf of the country. Experiences from States in India, and Pakistan have shown that government officials do easily short change the industry when they handle these negotiations. Agreements have in the past been heavily influenced in the investors' favour by corrupt officials. This in turn often manifests in the form of unnecessary high sectoral reform costs. Inevitably, in the absence of carpet subsidies, the multiyear tariff order (MYTO) which is currently in place, will innocently capture these corruption engineered costs as part of actual transaction and operational costs, which must be recovered. Ultimately, this can lead to the imposition of a heavy, but unwarranted financial burden on the purchasing authority, its employees and consumers in general.

### **Local finance is cheaper**

International investors are sought for the power sector principally because of their administrative and acumen and corporate discipline. As for capitalization, they often use their financial clout to obtain funding for power projects from financial institutions<sup>25</sup>. To this effect, I have often argued<sup>26</sup>, that domestic financial houses are best suited to provide loan facilities to international investors for local projects. This has multiple positives.

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<sup>24</sup> To meet this demand, NERC has licensed a Bulk Electricity Trading Company (NBET) who pays in bulk for service costs in the NESI. NBET draws vesting contracts which indemnifies investor at the generation and distribution ends. On the other hand, the WB partial Risk Guarantee indemnifies the upstream stakeholders, through guaranteeing the Gencos creditworthiness and general ability to pay for gas supplies. The credit structures will disappear with time. Their primary purpose is to enable the necessary conditions of investment attraction to be met, so as to allow the nations power industry transit from a subsidy driven state, to a fully competitive market.

<sup>25</sup> A key argument for privatization has been that multinationals will bring new finance into a country. In practice, this happens only to a small extent. Finance is invariably raised by the multinationals from a number of sources, including multilateral agencies (such as the World Bank, the African Development Bank, etc); international banks; and local banks inside the country itself.

<sup>26</sup> International investors remain guardedly interested in these markets and would prefer to see realistic return on investment plans in the sector before making serious financial commitments to it. (What International Investors Look For When Investing In Developing Countries WB may 2003) for further readings, see, Privatization and the Public Good, Dr. Sam Amadi, 2008. Nigerian Centre for Public Policy & Research.

First, it gives confidence to the international investor. Second, it makes the projects far cheaper by eliminating costly foreign interest and exchange rates, which cumulatively culminate in overall high cost of project execution. It must be noted that these costs these costs must be captured in the eventual tariff payable by the consumers. A World Bank report on the problems experienced with privatized power projects in Asia-pacific supports this view by finding that as a result of currency depreciation. One of the best protections against currency crisis is in to use a high proportion of local finance<sup>27</sup>. On the flip side, it has been argued<sup>28</sup> that the use of funds from domestic financial institutions does not in actual fact inject any new capital into a country. This school of thought went on to argue that finances going into power projects from multilateral agencies equally should not be seen as injection of foreign capital, since these bodies are themselves international public sector bodies, with statutory obligation to provide funds for these projects. The chart below buttresses our facts. It reveals the aggregate sources of funding for Turow, an Independent Power Plant that was built by a consortium in Poland.

### **Corruption and Ethics**

Central to concerns and considerations by international investors prior to investing in a county's power sector, are the issues of corruption, bribery, and ethical behaviour. This fact is heightened by the Transparency International<sup>29</sup> (TI) survey which found the engineering and construction industry to be the second largest source of global corruption. Ideally, investors must be guaranteed that corruption, political meddlesomeness and sundry unethical behaviours which characterized and marred the governments' era of electricity administration have been eliminated through open and transparent processes as driven by an independent regulator.

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<sup>27</sup> "The East Asian Financial Crisis—Fallout for Private Power Projects" by R. David Gray and John Schuster Note No. 146 August 1998 ([www.worldbank.org/html/fpd/notes/notelist.html](http://www.worldbank.org/html/fpd/notes/notelist.html)).

<sup>28</sup> Electricity restructuring, privatisation and liberalisation: some international experiences. Public Services International Research, University of Greenwich.

<sup>29</sup> [www.transparency.org/](http://www.transparency.org/). Note that the power sector is part of the engineering industry.

Investors must be assured that the emerging Nigerian power market will be regulated in a transparent and predictable manner. The regulator must inspire and exude confidence, discipline and rapid positioning towards the acquisition of sufficient human resources with the ability oversee a global multibillion dollar industry in an international best practice manner. The regulator must depict the ability to make sectoral laws that are responsive to Nigerian peculiarities. The regulator also has the duty to ensure that the government and consumers of electricity in Nigeria understand and attune themselves to the all important international practices in the emerging market based power sector. For instance, it is the regulators duty to insist on adherence to global rules on transparency and fighting corruption.

Government equally has a major role to play in incentivizing investors and their capital into the nation's power sector. Below are some conditions that government must put in place to attract and retain international investment in the power sector:

*Minimal interference* Series of political turbulence in sub Saharan Africa in the 80's and 90's did raise the level of apprehensiveness of would be regional electricity investors, because most of these power changes often lead to policy truncation. According to studies<sup>30</sup>, many power sector investment decisions in developed economies in the 1990s were based on basic positive assumptions—that collections would increase, that sectoral rules would be enforced and that government commitments would be constant. It is the inability of developing countries like Nigeria to satisfy these assumptions that undermine

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<sup>30</sup> World Bank 2003, What International Investors Look for When Investing in Developing Countries.

sectoral reforms in the sub Saharan continent.. To reassure investors and attract or retain their interest, governments need to focus attention on some of investors' basic priorities. To this effect, investors would seek guarantees that their installations are free from the risks of politicization, nationalization, re-nationalization, undue forced subsidies or any other form of government interference. Conducive investment atmosphere for the power sector is one where investors are allowed to exercise effective operational and management control over their investments. It should be the sole duty of the regulator to adjudicate on such operational and management remits, boundaries and excesses. To this effect, the greatest factor that a power sector investor would consider, before investing in a country, is the independence of regulatory processes from government interference.

Contrary to claims by critics of electricity sector privatization, Investors are not in a hurry to recover their capital from the power sector. It is only apprehensiveness over political uncertainty that can lead to investment panic. Power sector investors are knowledgeable enough in sectoral facts. Prior to fund commitment, they are aware of the long gestation periods required, and their business plans and fiscal regimes include provisions for such. Early signs are that IPP owners and other investors in the NESI are quite satisfied with their investments in the country, and this alludes to a vote of confidence in the regulator.

Therefore, upon being satisfied that the regulator is truly independent in decisions reaching, investors will work to ensure the long-term viability of power investments than in maximizing short-term returns. A World Bank<sup>31</sup> survey of multi-nationals investing in developing countries, reveal that overwhelmingly, sectoral investors are ready to do whatever is necessary to ensure that the "financial and technical performance" of the assets is improving. However, they equally expect governments to ensure that the operational environment considered necessary by international standards are in place.

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<sup>31</sup> The World Bank 2003 survey of power sector investment trend in Asia.

Therefore, in executing the reform of the NESI, government must respond to these concerns from investors.

**Stability, enforceability of rules and contracts.** Investors understand quite clearly that laws mean nothing without appropriate enforcement mechanisms in place. To this effect, clear and enforceable legal framework has also been identified among the top priorities for investors. They dread any attempt by the government to shift the goalposts after they have made investment decisions based on set rules. A government's should be keen rather than reluctant to honor its commitments.

Closely related to this condition, is the investor's desire that *adequate cash flow is maintained in the sector*. Setting cost-reflective tariffs, devising a workable collection methodology and ensuring collection discipline has been the albatross of the Nigerian power sector. Investors are unlikely to consider investing if these deficits are not adequately taken care of. In the absence of a clear indication that the twin problem of appropriate tariff and effective collection methodology have been solved, investors will continue to remain panicked, and this would result in *most investors seeking higher than average percentages of returns*. Experts have warned that investors would naturally seek higher returns in *less-predictable or riskier* markets and this should be hardly surprising. The above condition reiterates the criticality of improving our sectoral investment climate. Failure to address these legitimate concerns of investors may mean paying higher percentages of returns. That will in turn drive electricity tariffs higher than most average consumers can afford, which in turn may undermine the much sought sustainability of NESI. *Given that the national investment climate is yet to meet the desired international levels*, the smart thing and reasonable action that the present administration has taken to calm investor's worries is to deploy risk guarantee instruments to provide greater assurance that contractual agreements will be honoured. The Regulator on its part is using the instrument of the multiyear tariff order (MYTO) to create pricing building blocks and predictability.

The survey by World Bank of experiences by power investors in Asia, emphatically allude to international investors being desirous of a “good legal framework”. They interpret good legal framework to be that which is clear, makes provisions for easy enforceability of contracts therein, particularly contracts with government agencies. Investor’s resolution to invest in the long-term is based on the consistency, applicability, and enforceability of laws and contracts. To be assured of the chances of success for the investments, investors want to be absolutely certain that the rights and obligations of international investors are undoubtedly stipulated. Indeed, the World Bank warns that investors identify a legal framework that has clarity and defines their rights and obligations as by far the most important factor in decisions to invest in a developing country.

Finally, the governments of developing countries are advised to note that international investors are less likely than domestic investors to continue to put up with the costs of administrative inefficiency.

Investors ranked government unresponsiveness to their legitimate concerns, amongst their worst investment experiences.

### **Regulating the Public and Private Interests**

This sector is unique in the sense that each stake-holding community holds a peculiar and distinctive position relative to the risk elements that is characteristic of the sector. It is equally the regulators duties to ensure that such respective interest group assumes obligations as assigned to it under the charters rules and codes it would design for participants to the sector. for instance, while the regulators rules guides investors; returns on capital, industry capital re-injection, asset divestiture, mergers and acquisitions, etc, for the consumers, the regulator stipulates connections, health and safety, system abuses, customer care, tariff, customer bands etc. For the federal and participating state governments, the regulator directs guides and implements; targeted subsidy

disbursement, transmission matters, renewable energy and its attendant feed in tariffs, (REFIT), feed stock, interest rate, tax holiday, duty waivers and like matters. To earn the confidence of these various actors with diverse interests, the regulator must ensure that the rules of engagement are transparent. The regulator also ensures that these rules are clear and understood. When these attributes are achieved, predictability of processes and outcomes will ensue.

### **Predictability of Regulators Actions**

Being a highly capital intensive sector with gestation periods spanning over 30 years, investors will inevitably pay detailed attention to risk management. An essential factor that must guide risk allocation from the perspectives of the investors, governments and contractors is the predictability of outcomes. The predictability factor helps sector participants in long and short term planning of the various aspects and stages of operations, and most importantly, the associated risks and possible ensuing scenarios. Since engineering, procurement, construction, commissioning and operational activities occur over long periods, participants require a sense of predictability so as to know how to react and manage the risks that they face. Predictability underlies all aspects of project execution, from decisions on project financing to engineering, procurement, construction, and operation. To establish an atmosphere of predictability, regulatory instruments are deployed. Contracts are the primary means of providing such predictability. Through contracts, risks are allocated between the stakeholders. This process requires identification, allocation options, and management plans under various contracting strategies. For instance, the regulator has licensed the bulk trader to ensure prompt settling of transactions through the vesting contracts it enters into with investors.

### **Highlights of the future of the Nigerian power sector**

- A lot more capacity in the system



- A lot more investment – by 2017, the NESI will be averaging \$20bn invested per annum (7,500MW) and rising
- Competitive entry for embedded and on-grid generation
- A huge amount of project planning, engineering, construction and financing will be generated
- A lot more disputes within daily operations and in the rest of the market generally
- Cross – sectional disaggregation
  - Discos will break up along local lines
  - Regional power pools with their own independent System Operator's will evolve
  - Regulatory capacity will be more wide spread
  - State governments will have to develop capacity to regulate market operations

carried on purely within their boundaries

NERC to remain relevant, will evolve into managing a framework that relies on its capacity to identify, anticipate and eliminate potential harm either directly but probably more often through industry panels, committees and prudent and judicious use of its portfolio of regulatory instruments.