As the privatization of the Nigerian power sector forge ahead, a new contracting regime will undoubtedly emerge for sector participants and for any new additional capacity that may be required in the future. The market participants of the new Nigerian Electricity Supply Industry (NESI) will therefore need to understand the inherent risks associated with the sector and how such risks can be best managed through contractual documentation.

The Bureau of Public Enterprises has with the aid of its consultants, provided certain standard industry documents that will serve as the contractual framework to govern the relationship of participants in the sector. These industry documents include the Gas Sales and Aggregation Agreement, Gas Transportation Agreement, Bulk Power Purchase Agreement, Grid Connection Agreement, Use of System Agreement and Ancillary Services Agreement. Though the agreements are standard in form, the terms of each may still require additional negotiation by the parties to the agreements.

It is instructive to note, that in addition to the above, there are other contractual documentation which are also of importance within the power contracting regime and these include the Engineering Procurement and Construction (EPC) contract, Fuel Supply Agreement (for feedstock other than gas which under the industry documents is already covered by the Gas Sales Aggregation Agreement and the Gas Transportation
Agreement) and the Operation and Maintenance Agreement (O&M). All these agreements must be consistent with each other to ensure the seamless sale and supply of electricity.

The purpose of each of these agreements and the risks they seek to address are discussed hereunder:

(1) **EPC Contracts:** Though these may not necessarily apply to the existing electricity supply infrastructure slated for privatization (save for those which are obsolete and or for new additional capacity post privatisation), EPC contracts are required for the design, engineering, construction as well as the procurement of all services and materials required for power infrastructure (either power plants or distribution infrastructure).

The main risk elements comprised in an EPC contract relate to:

- **Physical Works:** physical conditions of the ground; site preparation; artificial conditions causing obstructions; cost of tests and samples; inadequacy of staff labour, plant materials, defective materials or workmanship.

- **Delays and Disputes:** delays out of the control of contracting parties; inefficient execution of work. Provisions for the award of liquidated damages should be included for instances where the delay is caused by the contractor.

- **Payment:** delay in certifying and settling claims; legal limits in recovery of interest, insolvency of contractor or sub contractors, inflation and or exchange rate fluctuations.

- **Law and Arbitration:** resolution of disputes and enforcement of judgments, changes in legislation.

(2) **Operation and Maintenance Agreements:** Upon the sale of the successor companies under the privatization programme, the successful core investors of such companies may have to put in place operation and maintenance arrangements to ensure the power plants and the distribution assets bought are operated and maintained to guarantee compliance with the production of electricity required by the contractual arrangement under the Power Purchase Agreement.
The operator of an O&M Agreement would also seek to ensure compliance with the standards provided in the grid and distribution codes for the transmission and distribution of electricity respectively. The same may also be applicable to new owners of electricity infrastructure commissioned to provide additional capacity to the NESI.

The main risk elements comprised in an Operation and Maintenance Agreement relate to:

- **Operator’s Responsibilities:** Any designated operator must be able to perform its services efficiently and in accordance with any manual from the EPC contractor. The operator must also ensure its services are performed in conformity with the relevant warranties for the plant and or equipment and act in accordance with good industry practice and within the confines of the law.

- **Step in Rights:** The core investor in a successor company and or owner of additional capacity must be in a position to retain the rights to dismiss an operator for breach of contract and take over the running of the plant particularly in the event of breach of environmental laws. Step in Rights must also be considered and made to apply where the operator is declared bankrupt or there is a significant change in ownership. It is important to note that Step in Rights is an essential requirement for financiers in determining the bankability of a power project.

- **Operator Performance:** Provisions must be made for termination of the O & M Agreement upon evidence of the operator’s inability to perform. It is sometimes the case that incentives are provided to operators to ensure optimum performance through a bonus payment system. Account must be taken of force majeure provisions, planned outages and unplanned outages which may be through no fault of the operator.

- **Labour Disputes:** Core investors and owners of new additional capacity must ensure they are in a position to terminate the O&M Agreement where an operator is engaged in prolonged disputes with its employees as failure to do so could affect the production of electricity and lead to losses to the owner.

(3) **Fuel Supply Agreements:** The fundamental risk
to a prospective or existing power generating plant owner is fuel.

The following are the key risk elements in a Fuel Supply Agreement

• Availability of fuel supply: The availability of fuel supply on a long term and cost effective basis is of critical importance. There may already be in place fuel supply agreements for existing plants (it appears that gas supplied to most of the existing Federal Government power plants is supplied by the International Oil and Gas Companies on an “as is” basis). In the event that Fuel Supply Agreements do exist, there may be need for the core investors emerging from the privatization process to revisit such contracts, particularly as they relate to any take or pay obligations and or force majeure provisions for non-supply of fuel. Where there are no existing Fuel Supply Agreements, the industry documents, (i.e. Gas Sales Aggregation Agreement) would need to be negotiated by the proposed contracting parties.

• Take or Pay Provisions: Take or pay obligations is a contractual requirement under which an electricity supplier is required to take delivery of a quantity of fuel whether or not such fuel is utilised for power generation. If it declines to take delivery of the fuel, it will still be required to pay for such fuel. Given the new NESI that will emerge post privatisation, take or pay obligations under long term fuel supply agreements for existing plants slated for privatization will require careful consideration particularly where alternative sources of fuel may be available at cheaper prices.

• Fuel Quality: Power plants are extremely sensitive structures; therefore the fuel to run them must be within the prescribed tolerance levels and right calorific value. Thus, the quality of fuel must be specifically and precisely provided for any Fuel Supply Agreement. Also of importance must be provisions for rejection of bad quality fuel and the consequences of supplying same.

• Fuel Quantity: Quantity of fuel required to run the plants needs to be specified precisely, though where possible, flexibility as to the quantity required must be allowed and should be negotiated. Transportation of
fuel often times correlates with the supply of the quantity of fuel required under a Fuel Supply Agreement. In view of this, it is imperative that the scheduling of delivery of the fuel meets the electricity generation requirements as set out in any Power Purchase Agreement.

- Force Majeure: Given the long term nature of Fuel Supply Agreements, it is important to make provisions for unforeseeable future events. Force Majeure provisions seeks to address this concern in such contracts. Force Majeure is usually termed as an event beyond the reasonable control of one or more parties to a contract. Upon notification of a force majeure event, a period of time is provided for its resolution. However, if after this period the event continues, then termination rights to end the contractual relationship can accrue. This provision is important in ensuring a generator of electricity does not suffer loss in a situation where a transmission company and or distribution company shuts down their system.

4. Power Purchase Agreements (PPA): The most important contractual documentation in any power contracting regime is the Power Purchase Agreement (PPA). This is the contract regulating the sale and purchase of electricity.

The key risk factors under a PPA are:

- Term: Typically, Power Purchase and Fuel Supply Agreements will seek to extract the longest possible period for fuel supply and the sale of power. It is not uncommon for power stations and or gas processing plants to have a life span of 25 years or more. However, regulation in some jurisdictions to remove entry barriers into the generation market has seen the term of PPA’s limited to 15 years.

In Nigeria, under the Electric Power Sector Reform Act (ESPR) and the Regulations for the application for Licences (Generation, Transmission, Systems Operations, Distribution & Trading) 2010, Generation Licences are issued for a period of 10 years with the possibility of applying for tenure extension. It is important to note that the grant of the tenure extension is at the discretion of Nigerian Electricity Regulatory Commission (NERC) the regulatory agency, though there is the possibility of appealing an unfavourable
decision. It may be suggested from the above, that the Government has through legislation effectively limited the term of a PPA in Nigeria as you cannot contract to generate and supply power beyond the term of the licence unless its tenure is extended subsequent to the commencement of operations. It will be interesting to see how this issue is negotiated under the privatization programme given the position of the law and the provisions of the draft industry PPA.

- Payment: Payment is perhaps the most difficult area to negotiate in a PPA as the running of the power plant cannot be guaranteed at all times. Therefore payment for electricity under a PPA will need to reflect any loss of efficiency or higher operating costs that may be as a result of a dispatcher’s or system operator’s orders.

Payment for the sale of electricity is calculated by reference to the following:

(i) Capacity Charge: This is a charge indexed to the producer and purchasers fixed costs in any given year. Any change in circumstances such as changes in laws or taxation regime is also subsumed under this charge.

(ii) Energy Charge: This is indexed to fuel costs, other variable costs and to actual and targeted efficiency levels. In the alternative, the energy charge can be simply determined through a fixed fee for each kilowatt per hour of electricity generated.

5. Connection and Use of System Agreement: A power producer should only bear the risk of its power supply up to the “point of sale,” usually the transmission side of the busbars by which the power plant is connected to the transmission system.

Where a power producer is selling to an end consumer, it will be necessary to enter into a Connection Agreement and to execute a Use of Transmission System Agreement (termed Grid Connection Agreement under NESI industry documents) with the transmission company (Transmission Company of Nigeria). Similarly, where the supply of electricity requires passage through a distribution network, a connection and use of system agreement would also be required. The correlation of
these agreements to each other requires monitoring to ensure consistency in the allocation of risks.

6. Ancillary services: In any electricity system, it is a technical requirement that the system be kept balanced and stable. For every Megawatt produced, a balancing charge known as reactive power (measured in Megavars) is required to achieve the required balance and stability of the system. Where there is an imbalance, additional reactive power capability will be required. Power plants are usually required to generate this reactive power. In addition to reactive power, the system also requires frequency response. This is a service provided to the transmission system to maintain stability in the event of sudden load or generation changes.

Black start capability is the ability to start and synchronise a unit instantaneously from cold. Usually, generating units take several hours to be fired up and synchronised to the transmission system and this is usually provided for in the declarations of availability by the power producer. Black start capability is usually invaluable at times of peak demand or total loss of power to the electricity system and is usually in the form of diesel powered generators or gas turbines providing electricity required to start up large units to re-energise the electricity system. Contracts for ancillary services are entered into with the systems operator.

The above provides an insight into the contracting regime that will emerge from the privatization of the electricity sector in Nigeria. Kindly note that the information provided herein must not be considered and relied upon as formal legal advice.