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November 20 - 21 Novembre
Banjul - The Gambia

Necessity for opening the national markets: Lessons and challenges, the case of Nigeria

Nigerian Electricity Regulatory Commission (NERC)

Dr. Abba A. Ibrahim



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Outline

- Introduction
- Legal framework
- Market Design
- Market Development
- Market Structure
- Transitional Electricity Market
- Privatisation
- Summary and Conclusion



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Introduction

- Inadequate investment in all sectors of the electricity value chain for a long time
- Tariffs were not cost reflective and regulatory functions were performed by the Ministry of Power and the utility itself
- The then vertically integrated state owned utility was grossly underperforming with high levels of losses
- The electricity market reform in Nigeria commenced in 2001 with the development of the National Electric Power Policy (NEPP)



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Legal Framework

- The NEPP, EPSRA, Roadmap and MR all require promotion of competition in the NESI
- Chapter 4 of the NEPP states the objective of the reform to be the creation of an efficient and competitive industry
- Similarly, one of the main reasons for the enactment of the EPSRA is the development of a competitive electricity market (see Part II of the Act and Section 32(2)(a))
- Also, the Roadmap (in paragraph 1.0) highlights the need to create a competitive electricity market in line with the Act
- Rule 2.1 states that the objectives of the Rules are to *“establish and govern an efficient, competitive, transparent and reliable market ...”*



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Legal framework

- **The law also provided for:**
 - **Unbundling of the state owned monopoly**
 - **Privatisation of the successor companies**
 - **Market Rules and orderly development of a competitive market**
 - **Price regulation**
 - **Consumer protection**
 - **Rural electrification**
 - **Technical Standards/Health & Safety Codes**



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Market Design

- Gradual process of increasing competition
- Different Market Stages:
 - Pre-Transitional Stage
 - Transitional Market Stage
 - Medium Term Stage
 - Long Term Stage
- General principles include:
 - Standard registration procedures
 - Centralised economic dispatch and settlement
 - Centralised processing of metering data
 - Participatory governance system



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Market Development Stages

	Model 1	Model 2	Model 3	Model 4
Characteristic	Vertically integrated monopoly	Principal Buyer	Multiple Buyer	Full Retail Competition
Definition	Monopoly at all levels	Competition in generation	Competition in generation <i>(with imbalances settled at a contract or spot market rates)</i>	Competition in generation and choice for final consumers
Competing GENCOS	NO	YES	YES	YES
Choice for Discos?	NO	NO	YES	YES
Choice for consumers?	NO	NO	NO	YES



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Market Development & Price Regulation

Market Stages	Pre Transition	Transition Stage	Medium Stage	Long Term
Generation	Regulated prices using Wholesale contracts based on life cycle costs of an efficient new entrant		Part unregulated (based on bilateral contracts)	Unregulated (based on bilateral contracts)
			Part regulated based on Wholesale contracts (matches the regulated load)	
Transmission	Regulated prices using building blocks		Regulated prices using building blocks	Regulated prices using building blocks
Distribution	Regulated prices using building blocks		Regulated prices using building blocks	Regulated prices using building blocks
Retailing	Regulated prices using building blocks		Regulated prices for the regulated load	Unregulated (all load is contestable)
			Unregulated prices for the contestable load	

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NESI Market Structure – Transitional Stage

GENERATION		NETWORK	LOAD CENTERS	
SUCCESSOR GENCOS	<ol style="list-style-type: none"> 1. Kainji 2. Shiroro 3. Delta 4. Sapele 5. Egbin 6. Afam 	TRANSMISSION COMPANY OF NIGERIA (TCN) Market Operator System Operator Transmission Service Provider	<ol style="list-style-type: none"> 1. Abuja 2. Benin 3. Eko 4. Enugu 5. Ibadan 6. Ikeja 7. Jos 8. Kaduna 9. Kano 10. Port Harcourt 11. Yola 	SUCCESSOR DISCOS
FG/NIPP STATIONS	<ol style="list-style-type: none"> 1. Geregu 2. Olorunsogo 3. Omotosho 			
IPPs	<ol style="list-style-type: none"> 1. Shell 2. AES 3. AGIP 4. NESCO 5. Ibom Power 6. New IPPs 		Special Trader (NBET Company)	<ol style="list-style-type: none"> 1. Ajaokuta Steel 2. CEB 3. Delta Steel 4. Nigerlec 5. Itakpe



NESI Market Structure – Medium Term Stage

GENERATION		NETWORK	LOAD CENTERS	
INDEPENDENT POWER PRODUCERS (IPPs)	1. Kainji 2. Shiroro 3. Delta 4. Sapele 5. Egbin 6. Afam	TRANSMISSION COMPANY OF NIGERIA (TCN) Transmission Service Provider	1. Abuja 2. Benin 3. Eko 4. Enugu 5. Ibadan 6. Ikeja 7. Jos 8. Kaduna 9. Kano 10. Port Harcourt 11. Yola	PRIVATELY OWNED DISCOS
	1. Geregu 2. Olorunsogo 3. Omotosho	INDEPENDENT SYSTEM OPERATOR System Operator	ELIGIBLE CONSUMERS (EC)	
	1. Shell 2. AES 3. AGIP 4. NESCO 5. Ibom Power 6. New IPPs	Market Operator		



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Transitional Electricity Market (TEM)

- TEM is a contract and rule based market where all trading is by contracts
- The Market Rules has clearly defined Conditions Precedent (CPs) for the commencement of TEM
- Cost reflective tariffs though not a defined CP are critical for a successful market



CPs for TEM and their Status

S/N	CPs FOR THE TRANSITIONAL STAGE	STATUS
1	Passage of the EPSR Act	DONE
2	Establish and operationalise NERC	DONE
3	Approval of Grid Code and Market Rules	DONE
4	Publication of the names and addresses of Licensees	DONE
5	Publication of the Transmission Charge	DONE
6	Publication of the SO and MO Charge	DONE
7	Constitution of iSAP	DONE



CPs for TEM and their Status

SN	CPs FOR THE TRANSITIONAL STAGE	STATUS
8	Formalization of trading arrangements (contracts)	DONE
9	Notification of the initial MO Payments Calendar	DONE
10	Constitution of the Dispute Resolution Counselor and the initial Dispute Resolution Panel	Almost Done
11	Development, implementation and testing by the MO, of the systems and procedures required to implement the MR	Almost Done
12	Development, implementation and testing by the SO, of the systems and procedures required to implement the GC	Almost Done
13	The satisfaction of such other conditions, if any, as are specified in the order approving the MR	None to date



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Successful Privatisation

- Clear path from the Act and the Roadmap for Power Sector Reform
- Inter agency collaboration (BPE, NERC, NBET, NELMCO, TCN, FMP)
 - RFP preparation
 - Data Room & Industry Documents
 - EOI & Bid Evaluation
- Privatisation approach:
 - GENCOS – capacity expansion
 - DISCOS – ATCC loss reduction
- Major challenge was the labour issue
- “Fit & Proper Persons” Regulation and Know Your Licensee (KYL) requirement



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Summary– Where we were

- Vertically integrated monopoly
- No trading arrangement, non-binding (even voluntary) market
- Public sector oriented
 - No profit motive
 - No incentives/disincentives to influence performance
- Inadequate/improper investment
- Inefficient operations with high losses
- Poor planning



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Summary – Where we are

- **Structurally unbundled NESI and recently privatized NESI**
- **Inefficient operations with high losses**
- **Unplanned investment**
- **Inadequate/improper investment**
- **Rules, Codes, Regulations developed & tested**
- **Settlement of Labour issues**
- **The need for Interim Market Rules**



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Summary– Where we want to be

- **Substantially privatized industry**
- **Transparent and Competitive market nationally and across the sub region**
- **Competitive power procurement and balancing/spot market**
- **Planned capacity expansion**
- **Efficient operations with low losses**
- **Adequate, safe, reliable and affordable electricity supply across ECOWAS**



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Conclusion

- **Baseline loss/Customer numbers validation and Tariff review**
- **Finalisation of Interim Market Rules**
- **Commencement of TEM and regional market integration**
- **Bulk Power Procurement and Embedded Generation**
- **Effective monitoring of Performance Agreements, KPIs (ATCC losses, Standards, H&S, etc.)**
- **Consumer Protection (Complaints handling, metering, estimated billing, etc.)**
- **Review of the National Electric Power Policy**



Conclusion

- **Sustained investment in Transmission and Gas**
- **Enhanced Corporate Governance**
- **Harmonised National Policy for Renewable Electricity Generation**
- **Robust Regulatory Framework and Feed-in-Tariffs (FIT) for Renewable Electricity Generation.**



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Thank You – Merci



Contact us at:

**Adamawa Plaza, Plot 1099 First Avenue,
Off Shehu Shagari Way,
Central Business District,
Abuja - Nigeria**

Website: www.nercng.org

E-mail: info@nercng.org