

# NIGERIAN EXPERIENCE WITH COMPETITIVE ELECTRICITY MARKETS BY

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*Presented at the 2<sup>nd</sup> NERC/NARUC Training Program*

*At*

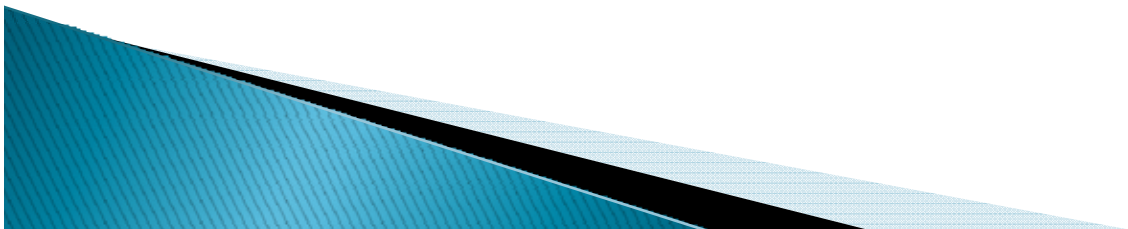
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NOVEMBER 2008



# OUTLINE

- INTRODUCTION
- DETERMINANTS OF COMPETITION IN ELECTRICITY INDUSTRY OF NIGERIA
- CURRENT EFFORTS TO PROMOTE COMPETITION IN NIGERIA
- CURRENT SITUATION OF ELECTRICITY COMPETITIVE MARKET
- DEVELOPMENT OF A COMPETITIVE ELECTRICITY MARKET
- CONSUMERS' METERING TECHNOLOGY
- PRICING AS KEY TO COMPETITION: MYTO
- PROPOSED MEASURES TO ENCOURAGE NEW ENTRANTS IN THE MARKET
- LICENSING AS KEY TO PROMOTE COMPETITION
- OPEN NETWORK ACCESS AS INSTRUMENT TO PROMOTE COMPETITION
- CRITICAL POLICY AND INSTITUTIONAL ISSUES

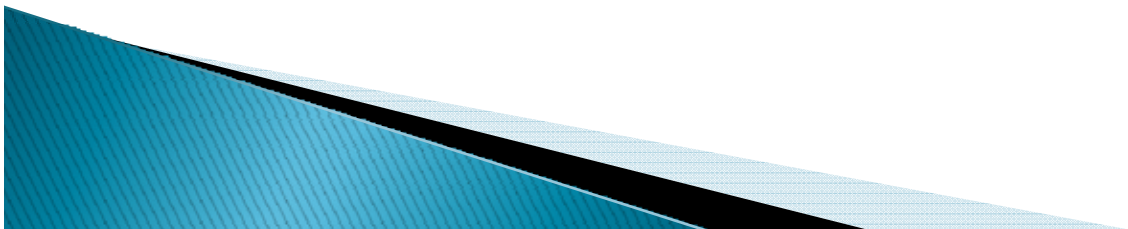


# Introduction

- The development of a competitive electricity market in Nigeria is expected to transit through a phased and systematic introduction of competition into the hitherto monopolistic industry.
- The Electric Power Sector Reform (EPSR) Act and the National Electric Power Policy (NEPP) have each used different time perspectives with respect to competition and development of the industry.
- The NEPP identified three phases, Transition period, Medium term, and Long-term.
- The Act, on the other hand, defines it in terms of the introduction of competition pre- and post- privatization. Similarly,
- NEPP outlines goals and objectives to be achieved in different time periods
- while the legislation looks at appropriate trading arrangement before and after privatization.

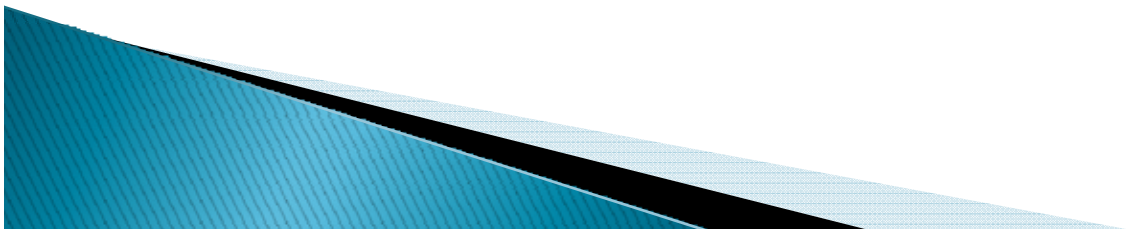
# Determinants of Competition in Electricity Industry of Nigeria

- Degree of privatization that has occurred in the market
- Existence of a sufficiently large number of potential competitive entries, so as to avoid the likelihood of an abusive market power; and
- Existence of other preconditions, including the necessary metering and information technology infrastructures required for the operation of a more competitive electricity market.



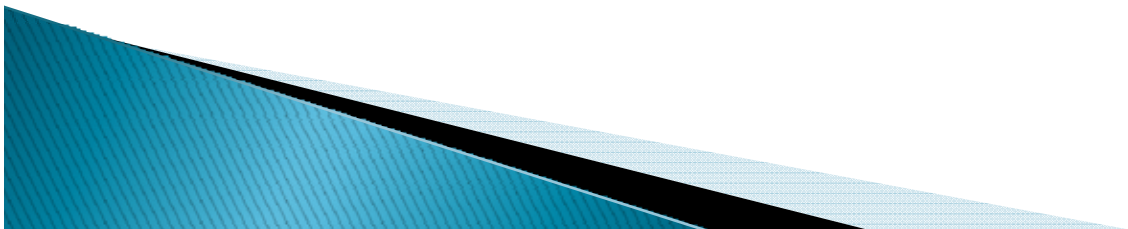
# Current Efforts to Promote Competition in Nigeria

- Unbundling of PHCN to 18 successor companies
- Licencing of 18 successor companies
- Operationalization of the Transmission System Provider (TSP), Market Operator (MO), and System Operator (SO) functions, within the Transmission Company
- Implementation of the Grid Code and the Market Rules (partial)
- Licensing of IPPs and other operators/service providers
- Development of an appropriate tariff regime
- Establishment of performance indicators, requirements and reporting formats for market monitoring ( in progress)
- Establishment of a trading arrangement and financial settlement system ( partial)
- Establishment of various panels for market monitoring and dispute resolution. ( in progress)



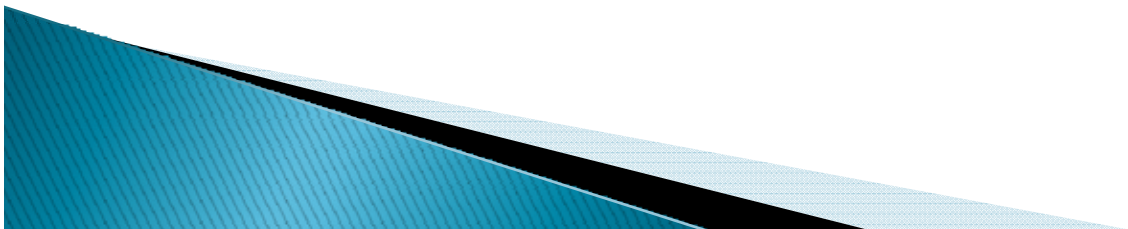
# Why Competitive Market?

- High degree of competition helps allocate resources to most efficient use
- Price = marginal costs
- Normal profit made in the long run
- Firms operate at maximum efficiency
- Consumers benefit
- Improve efficiency and reduce waste in the public sector
- Diversify the economy
- Strengthen the private sector as Nigeria's engine of growth.



# Constraints faced in Nigeria

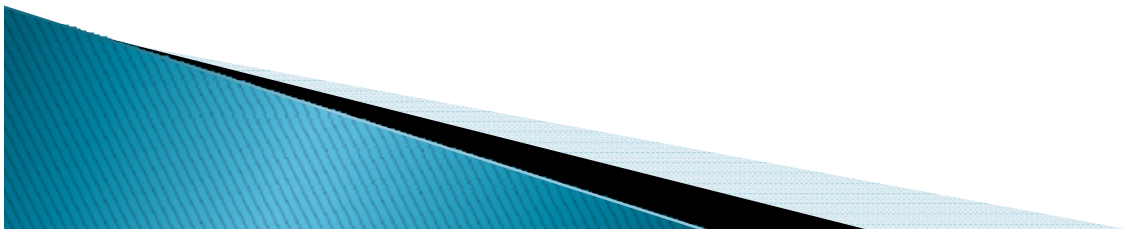
- Low incentives to potential investors
- Inadequate network/backbone infrastructure
- Corruption and delay in the implementation of government policies.
- Inadequate /Unreliable support infrastructure
- Lack of adequate domestic financial resources and high cost of capital locally
- Delay in privatizing the incumbent operators





# **Current Situation of Electricity Competitive Market**

- No Competition in electricity market
- No competitive market in Nigeria
- Attempt to create market
- Licensing of many operators
- Market pricing with incentives
- Open and unrestrictive access to network
- Non-market incentives
- Consumer (Metering and Protection)



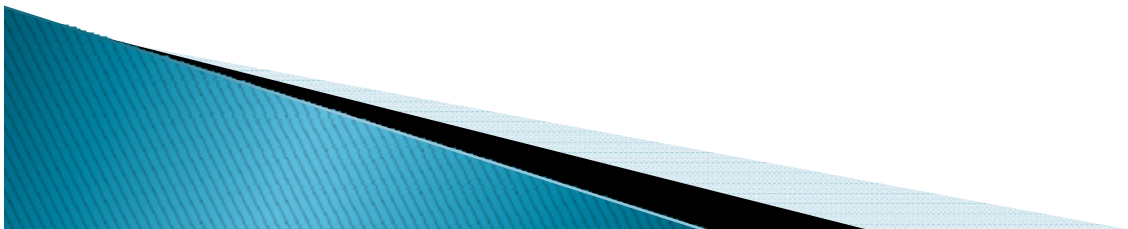


# Some Institutional Constraints

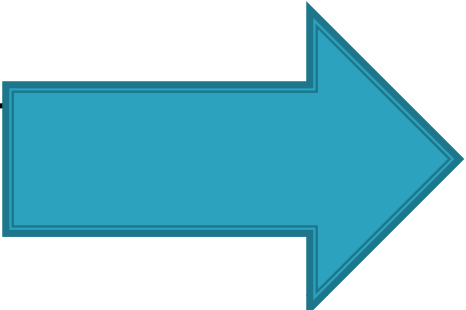
- ▶ Since the unbundling of the former PHCN into 18 companies there has been no further fundamental development.
- ▶ The unbundled companies have been unable to effectively perform as independent entities.
- ▶ The lack of a Board of Directors and enough authority to the CEO's for the successor companies has further limited the performances of the various units, (with delays in project execution and attendant consequence of poor service delivery).
- ▶ This has led to the recent decision by the Government to appoint a transitional board to coordinate the affairs of the PHCN units.
- ▶ Recent directives to established governance structure for the unbundled companies

# Number of Operators

- Although quite a number of license have been issued by the Commission for the establishment of generation plants most are still at the planning stage while few have commenced construction.
- To date, despite the unbundling and the licenses granted, competition has not yet taken off.
- The 18 companies operate like one single entity and are the dominant powers in the NESI.
- The industry is therefore still dominated by Government owned entities either as PHCN or joint venture major oil companies, the only exception being AES.



# Nigerian Power Sector

- ▶ Generation
  - ▶ Transmission
  - ▶ Distribution
- 
- PHCN ( about 90%)**
- ▶ Government ownership and control:
    - appointment and sanction of staff and management
    - repair and maintenance
    - fixing of uneconomic tariff
    - entry barriers
    - lack of competition

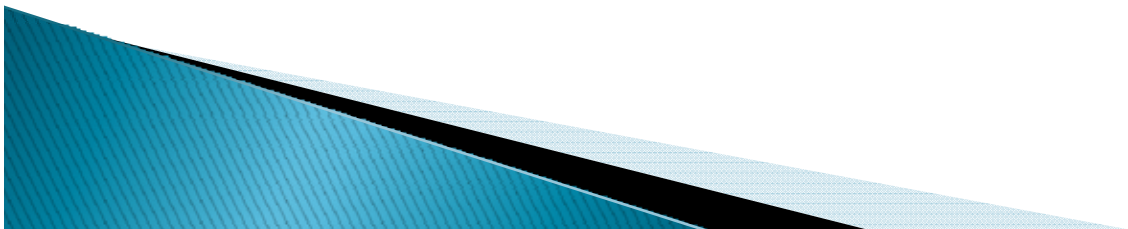
# Consumers' Metering Technology

- The availability of a robust metering and information technology infrastructure is the bedrock for a competitive electricity market development.
- In electricity, the wholesale market is traditionally settled on the basis of half hourly consumption. This requires sophisticated metering and information technology. Presently the country has not developed or deployed advanced or intelligent metering.
- In fact at the retail end of the industry metering is still a problem as less than 50% of customers are metered.
- The existing meters are also mainly analogue although efforts are on to substitute them with modern electronic meters, this is expected to take time.

# Pricing as Key to Competition: MYTO

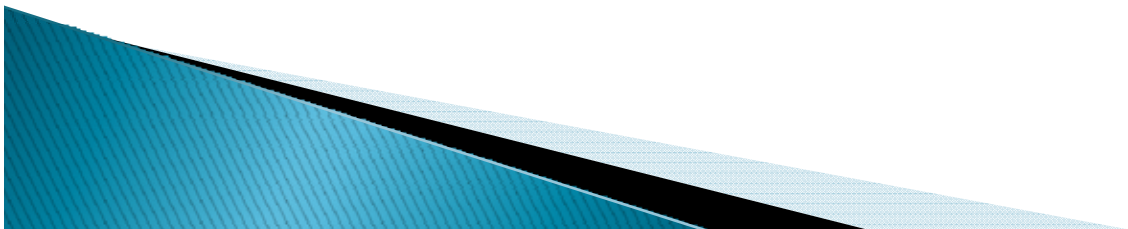
NERC adopted MYTO tariff methodology which :

- Allows recovery of efficient cost including reasonable rate of return
- Gives incentives to improve efficiency and quality
- Sends efficient signals to customers on imposed cost of use of service
- Industry viability and sustainability



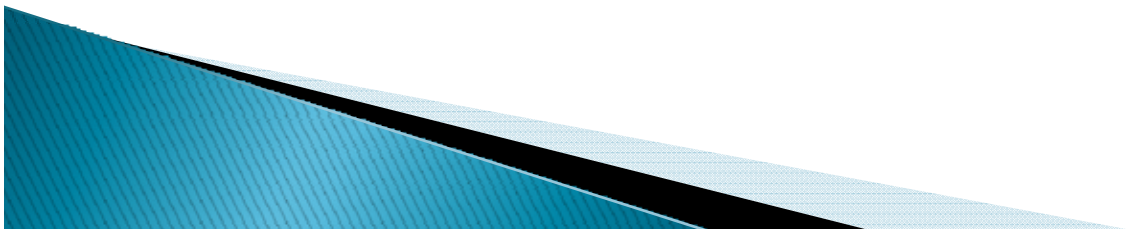
# Pricing as Key to Competition: MYTO

- Incentives to do better than the projected performance levels built into the model
- Each companies incentive is based on costs and productivity considerations on the following:
  - 70% capacity factor for new entrants
  - 1% internal use of stations
  - 34% sent out efficiency by generators
  - Higher level of technical and commercial losses (34.5%)



# Pricing as Key to Competition: MYTO

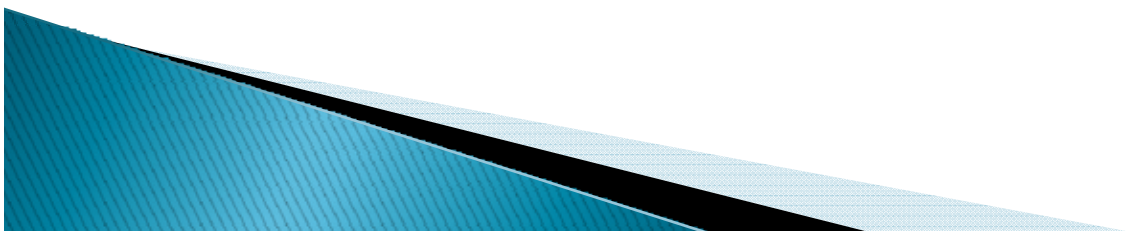
- Changes in exchange rates, prices of gas and inflation risks are eliminated through annual minor reviews
- Operators can keep gains or profits for at least five years before next major review
- Capacity payment for generators to cover capital cost and fixed O & M
- Energy payment for generators to cover gas cost and variable O & M





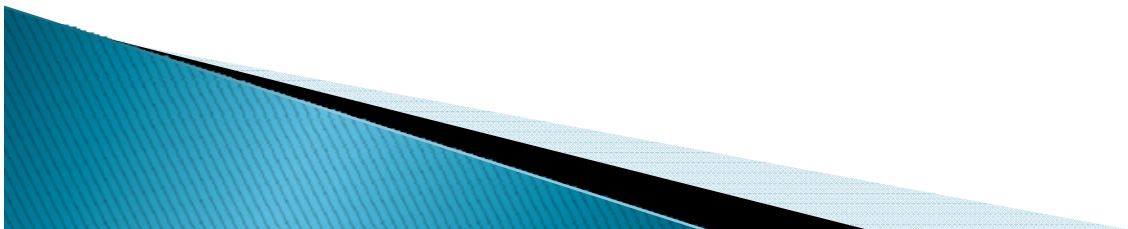
# Other Proposed Measures to Encourage new Entrants in the Market

- Tax holidays for specified number of years for investors in power sector
- Reduction in company tax for a period after the tax holiday
- Introduction of power sector-specific government bonds to encourage long term investment
- Concessionary interest on loans to IPPs and other power industry investors
- Government guarantees to lenders to encourage funding of power projects



# Licensing as Key to Promote Competition

- A key function of NERC is regulation and promoting of market participants via issuance of licenses and other regulatory tools - S.32(2)(d) EPSR Act
- NERC has issued:
  - Interim license to PHCN – S. 7 EPSR Act
  - Interim generation, transmission, distribution and trading licenses to 18 Successor Companies
    - 6 generation Licenses
    - 11 Distribution Licenses
    - 1 Transmission License
  - 24 generation licenses to IPPs
  - 2 Distribution Licenses to IPPs



# Licensing under EPSR Act 2005

Regular licences issued by NERC include:

- Generation licence
  - Grid connected
  - Off-Grid
  - Embedded Generation
- Transmission licence
- System Operations licence
- Distribution licence
  - Grid Connected
  - Off-Grid
- Trading licence
  - Temporary Bulk Purchase & Resale Licence



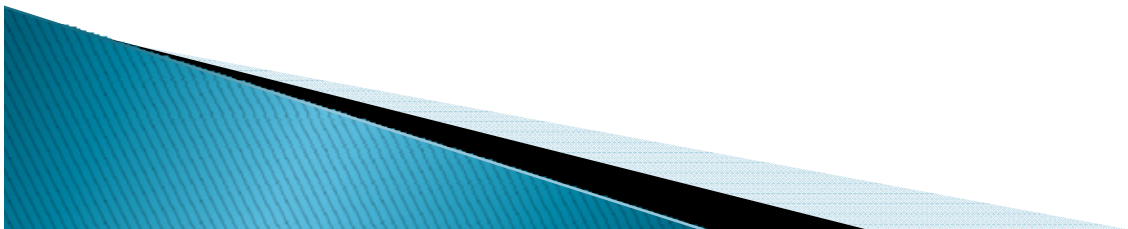
# Eligibility for License

- Every applicant for a licence must satisfy three broad eligibility criteria viz: Legal, Technical & Commercial
  
- **LEGAL REQUIREMENTS**
  - Incorporation of Company in Nigeria
  - Submission of Audited Company reports for the last three years for existing companies
  - Submission of Company Tax Clearance Certificate
  - Objects of the company must include the licensed business being applied for.
  - Legal Due Diligence carried out on company and major shareholders to ensure suitability



# Technical and Commercial Requirements

1. **A five year Business Plan** is required to determine project viability and financing plans
2. **Technical experience in the electricity industry**
  - Knowledge of the electricity industry
  - Area of expertise (Generation, Transmission, Distribution, Marketing, Equipment Manufacturing)
  - Skills and knowledge of Directors and top management
3. **Environmental Impact Assessment Certification**
4. **Agreement / MoU with third Parties**
  - Network Connection (TCN or Disco)
  - Fuel Supply Agreement (NNPC/NGC)



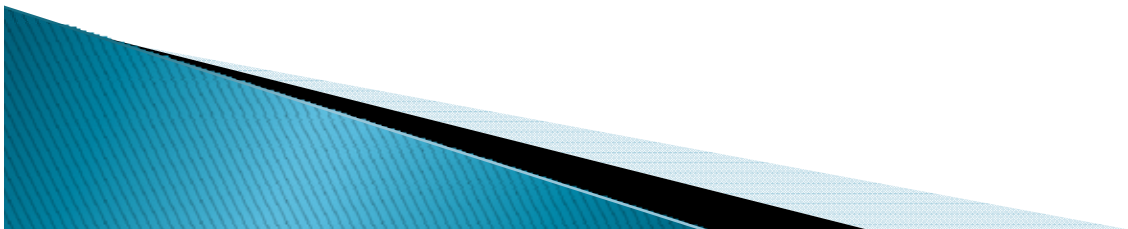
# Key Consideration and Grounds for Refusal of Licence

## 1. Key issues

- Suitability of station to Nigerian Condition
- Ability of station to perform in Nigeria
- Competency of project sponsor and technical partners
- Realistic and achievable project timeline

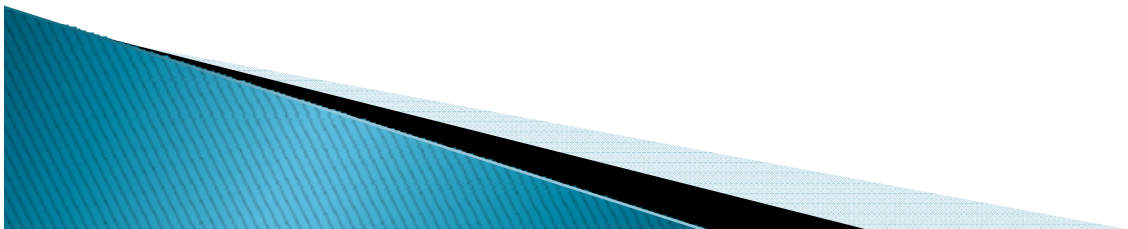
## 2. Ground for rejection

- Applicant fails to meet the required criteria
  - Legal
  - Technical
  - Commercial
- Applicant fails to produce upon request additional information within the time specified by NERC
- NERC is of the opinion that the information provided by the applicant is false or misleading



# Open Network Access As Instrument to Promote Competition

- In an attempt to ensure level playing field , NERC has published a set of operational codes for the efficient management of the Nigerian Electricity Supply and Distribution Network.
- The Network Codes which came into force in August 2007 are:-
  - The Grid Code;
  - The Distribution Code; and
  - The Metering Code.
- The Grid Code contains the day – to – day operating procedures and principles governing the development, maintenance and operation of an effective, well coordinated and economic Transmission System for the electricity sector in Nigeria.

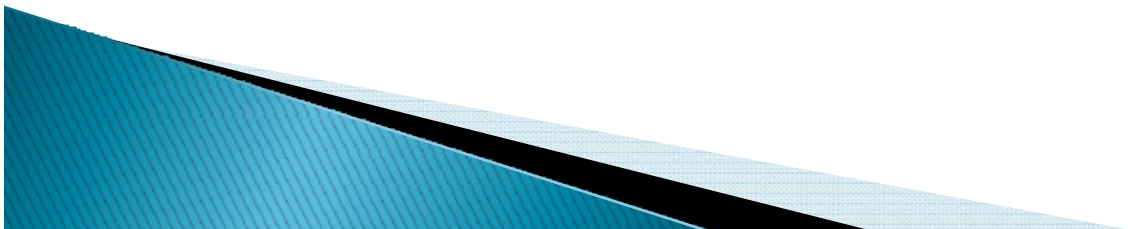




# Open Network Access As Instrument to Promote Competition

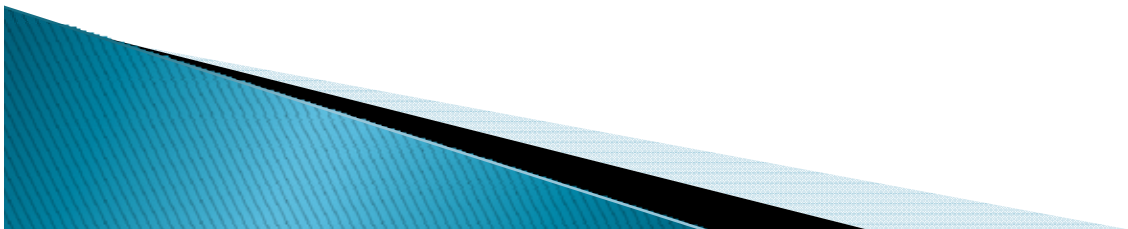
The Grid Code is designed to:-

- Facilitate an efficient production and supply of electricity for all Users of the Transmission System and the Transmission Company itself without any act of discrimination between classes of Users;
- Facilitate competition in the generation and supply of electricity in the country;
- Manage the day to day technical situations on the Transmission Network, taking into account a wide range of operational conditions likely to be encountered under both normal and abnormal conditions.



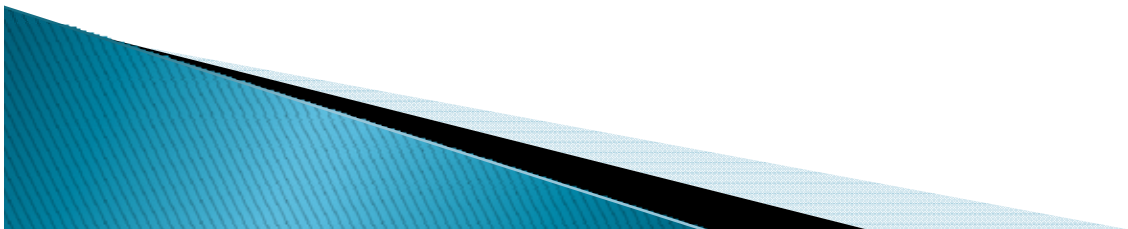
# Final Destination

- Attainment of competition through Cost reflective tariff and removal of all barriers to competition
- Attainment of sustainable growth through aggressive increase in capacity.
- Massive expansion of transmission and distribution infrastructures in Nigeria



# Critical Policy and Institutional Issues

- Regulatory stability
- Fear of policy inconsistency and reversal
- Privatization of successor companies
- Will MYTO be allowed to continue to guarantee reasonable return on investment.
- Is there willingness on the consumer to pay for MYTO increases.
- What about Government subsidy on electricity, will it be sustained, If not what happens?
- Gas policy:
  - - Gas availability and pricing policy
- Will Gas subsidy be sustained in the long run?
- Financial Incentives
- Tax and import duty waivers on power equipment and materials



THANK YOU

