TARIFF SHORTFALL AND UNLOCKING LIQUIDITY

NIGERIAN ELECTRICITY LIABILITY MANAGEMENT COMPANY (NELMCO)

April 2022

OUTLINE

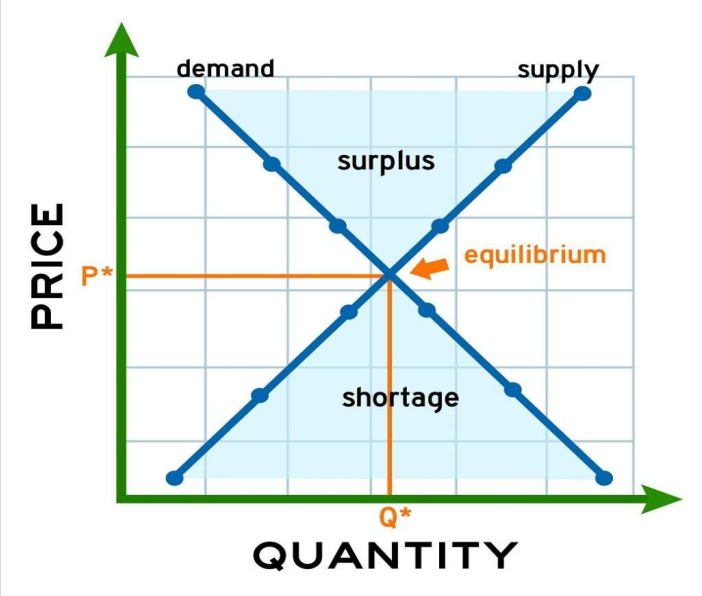
- Market Primer
- Nigeria Electricity Market Design
- Tariff and Shortfalls
- Liquidity vs Solvency
- Unlocking Liquidity

MARKETS PRIMER

NIGERIAN ELECTRICITY LIABILITY MANAGEMENT COMPANY (NELMCO)

What is Market?

- Arrangement whereby buyers and sellers come in close contact with each other directly or indirectly to sell and buy goods
- Any structure that allows buyers and sellers to exchange any type of goods, services and information
- A market is a place where parties can gather to facilitate the exchange of goods and services
- Legal and Illegal? Black market? Underground market, shadow market

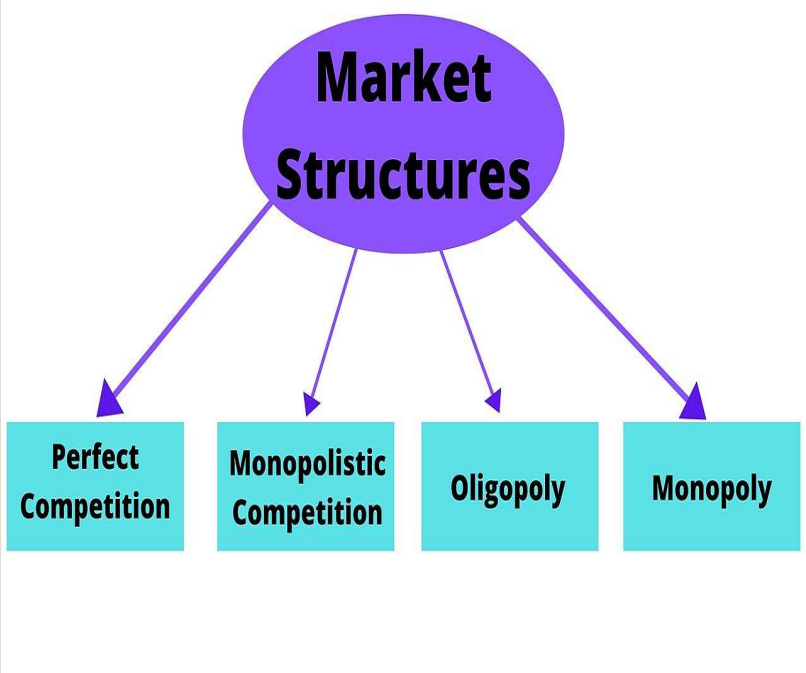


CHARACTERISTICS OF MARKET

- An Area:
- One Commodity:
- Buyers and Sellers:
- Free Competition:
- One Price

TYPES OF MARKET

- Labour Market
  - Laywers, Doctors, labourers etc
- Capital Market
- Financial Market
- Commodity Market
  - Oil and gas, precious stones etc
- Housing Market
- Auction Market
- Regulated Market
- **Electricity Market**



MARKET DESIGN

- Market design is a practical methodology for creation of markets of certain properties, which is partially based on mechanism design.
- What is the (new) place of NELMCO in the electricity market?

- Commodity Exchange
- Stock Exchange
  - Derivatives
  - Fixed income
  - Equities
- Online Market
- Electricity Market (wholesale & retail)
  - Generation
  - Transmission
  - Distribution

WHY MARKET DESIGN

- The need to understand market differences and the rules & procedures that make various kinds of markets work well or badly

- WHY
  - Fix market when broken (market failure)
  - Build new markets
  - Market makers (perfect the imperfect)

Nigeria Electricity Market Governance

- The Nigerian Electricity Market consists of two part;
  - **The Retail Market** – between distribution companies and end-user. Electricity sale is governed by the distribution code and retail contracts
  - **The Wholesale Market** – between the bulk purchases and the operators (GenCos and DisCos) at this stage of the market. Electricity sale is governed by the market rule, grid code, power purchase agreements and vesting contracts.

Nigeria Electricity Market Development Stages

- The Nigerian Electricity Market has been designed to develop through four stages depending on;
  - How much competition is introduced
  - How much monopoly is retained and
  - How much private sector participation is achieved in the market

	Pre-Transitional	Transitional	Medium Term	Long Term
Monopoly	Full	Restricted		
Private Sector Participation	Absent	Substantial		
Competiton	Absent	Minimal		

- **Pre-Transitional Stage:** This is the natural stage of the industry during early reform implementation.
- **Transitional Stage**: At this stage, it is expected that all trading is made through contracts. Existing power plants will be traded through vesting contracts. Transparent and competitive mechanisms for entering in the market (new PPAs).

Nigeria Electricity Market Development Stages

	Pre-Transitional	Transitional	Medium Term	Long Term
Monopoly			Restricted	Highly Restricted
Private Sector Participation			Very Substantial	Dominant
Competiton			Significant	Elaborate

- **Medium Term Stage:** There is competition in the market to supply the demand with introduction of bilateral contracts. There is a centralised merit order dispatch by the System Operator, where Generators must submit the dispatch nomination to be used in the security constrained economic dispatch. Generators submit to the Market Operator contract nomination.

- **Long Term Stage**: Similar to the medium-term stage but characterized by more competition in the industry.

Know Your Industry/Market

What stage of the market are we in at the moment?
What is the next stage?

MARKET FAILURE

- Inefficient allocation of resources (the true cost of a good is not reflected in the price)
  - undersupply or overdemand,
  - Where the cost, both internal and external, are not passed onto the final consumer.
  - Incomplete transaction

LOSSES IN ELECTRICITY MARKET

- COLLECTION LOSSES
- TECHNICAL AND COMMERCIAL LOSSES
- ATC&C

TECHNICAL LOSSES - CAUSES

- Transformation Losses (at various transformation levels)
- Poor repair and maintenance of equipment: Scheduled maintenance and routine checks
- Inadequate Planning Design: Poor Monitoring and Communication Systems like SCADA
- Overloading of existing lines and substation equipment
- Absence of upgradation of old lines and equipment

COMMERCIAL LOSSES - CAUSES

- Discrepancy in Meter Reading
- Untraceable consumers
- Stopped/defective meters
- **NEPA 2**
- Temporarily disconnected consumers continuing in billing solution
- Meter tampering
  - Bypassing of meters
  - Usage of different techniques to slow down the meters
  - Direct hooking – sometimes from underground

COLLECTION LOSSES - CAUSES

- Non paying unmetered and post-paid customers
  - MDAs
  - Military Formations
  - Street Lights
- Compromised Workforce

ATC&C LOSSES

- Aggregate Technical, Commercial and Collection (ATC&C) Loss is a major assumption used in determining the end user tariff
  - The ATC&C loss reduction commitment also served as a major parameter used in determining current owners of the distribution companies

- The ATC&C loss is a Regulated Parameter which decides the **minimum** proportion of energy the utility is expected to pass onto the end-