



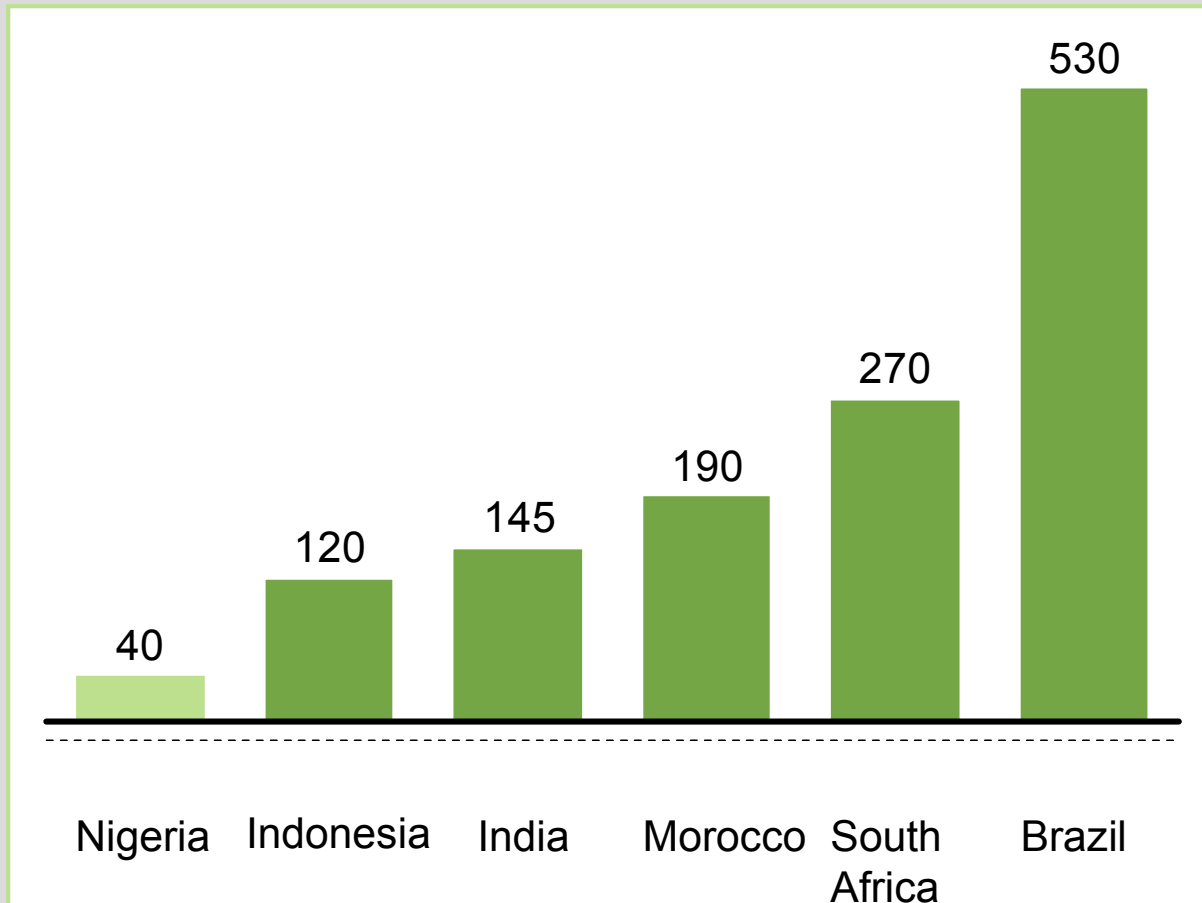
# Background

- The Nigerian Power Sector before the power sector reforms was
  - Vertically integrated government owned monopoly that was not commercially viable
  - Insufficient investment in gas, generation, transmission and distribution
  - Continued increase in load demand vs. virtual static generation level
  - High suppressed demand
- The Federal Government of Nigeria has a “Vision 20-2020”:  
40,000MW of power by the year 2020
- The Power Sector Roadmap was officially launched by Mr. President in August 2010

# Nigeria needs to dramatically increase its power generation to unlock the country's full economic potential

## Power generation installed capacity

kW / thousand inhabitants

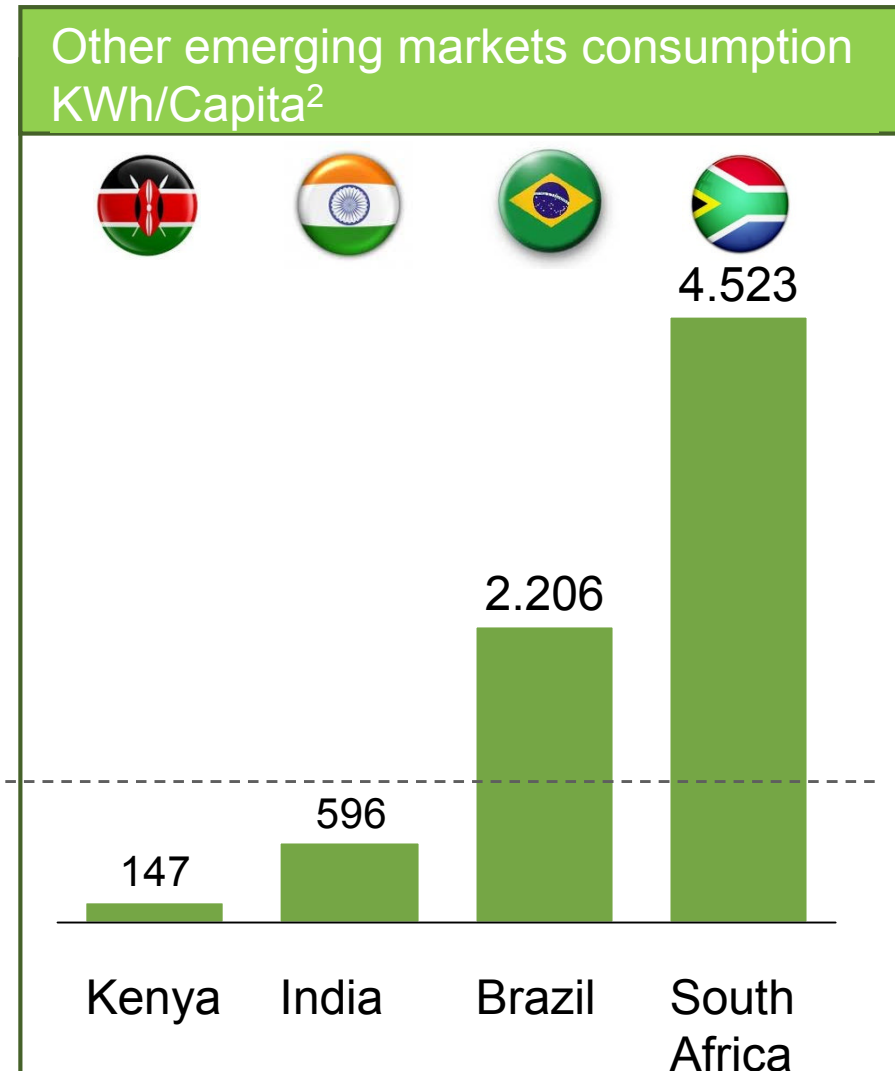
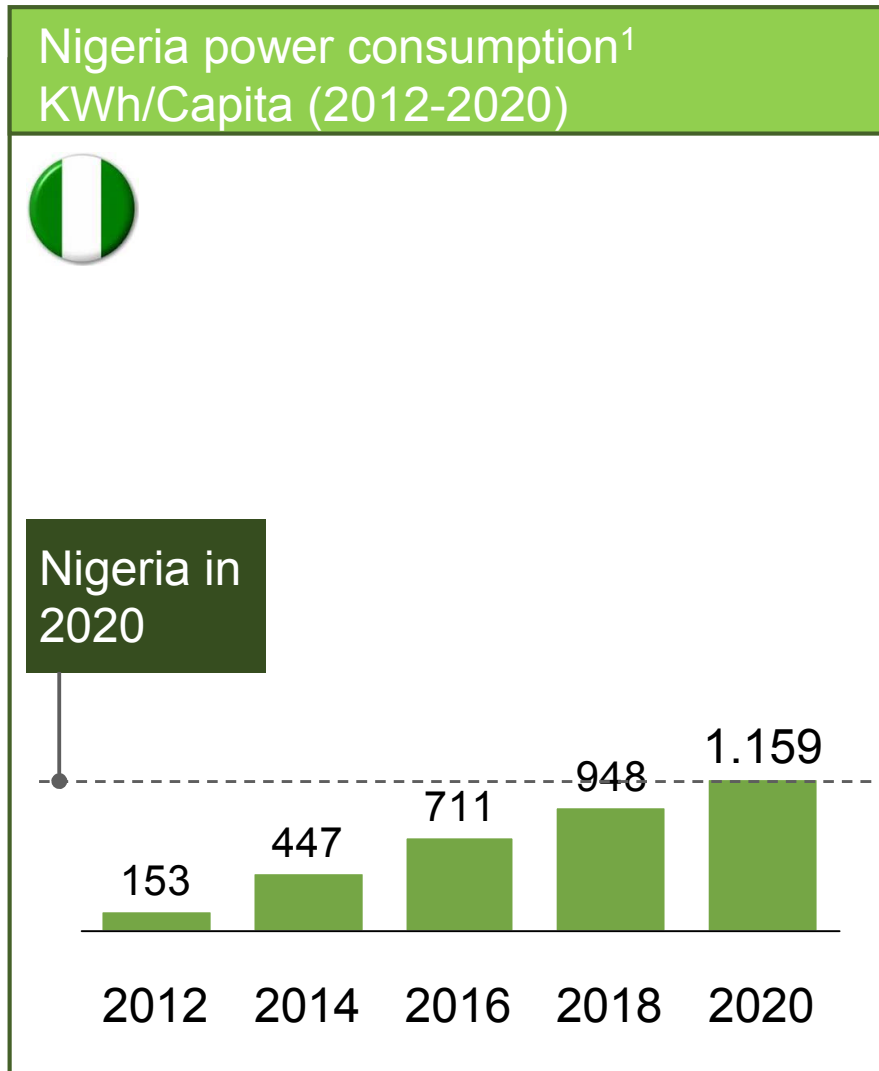


- To achieve Brazil GDP per capita level by 2030 (i.e., \$10,000), we will need 135GW<sup>1</sup> of capacity to supply a projected 230m Nigerians
- This is a 15 times capacity increase from today
- It also means we need to build power plants at 7 GW/year for the next 18 years.

<sup>1</sup> Capacity estimate based on consumption per capita average of Brazil and South Africa and with capacity utilization of 70%

# Power Growth Plan

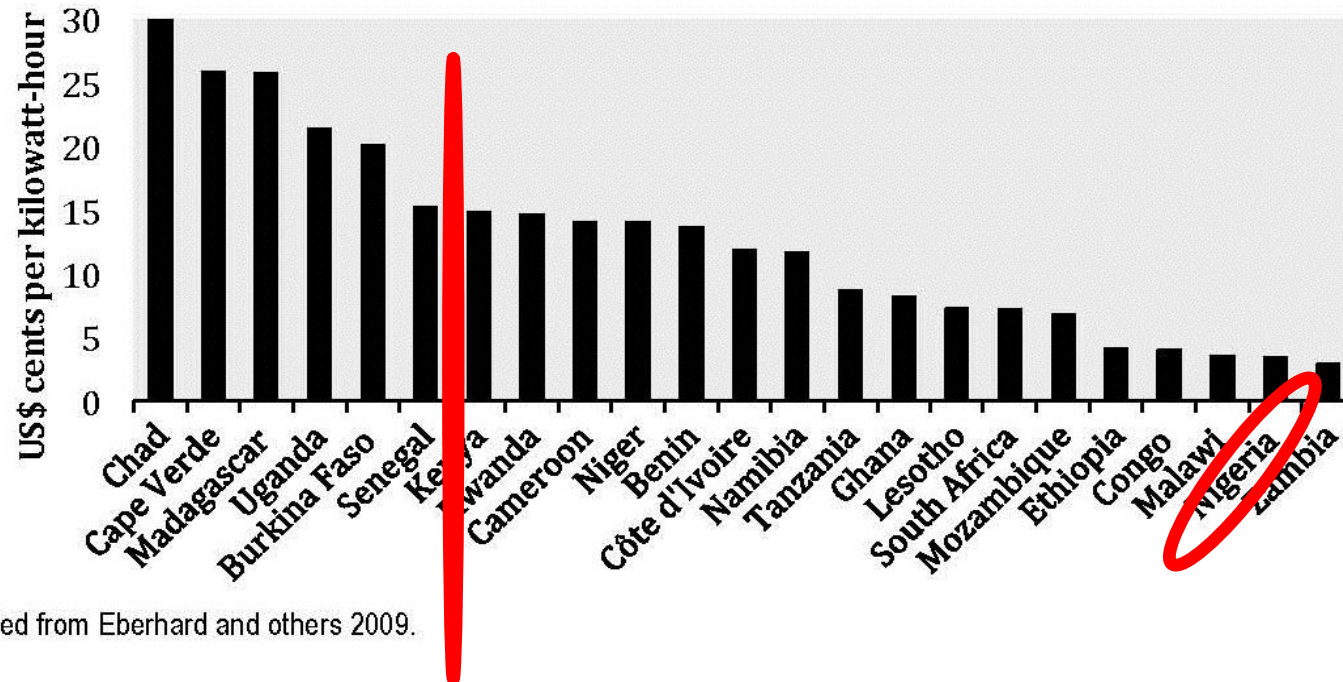
The aspiration of 40 GW by 2020 will move Nigeria to a much more stable socio-economic position



<sup>1</sup> Assumes 2.6% population growth per annum; 80% load factor on plants; approx 4.3 GW of new capacity per annum to achieve 40 GW by 2020

# Where we are coming from :

Figure 13. Comparison of electricity tariffs across Africa



Source: Derived from Eberhard and others 2009.

- Nigeria had one of the lowest low tariff levels in Sub-Saharan Africa making it uncompetitive for private sector participation.
- A new cost reflective tariff commenced June 1, 2012 to enable investors recover cost and push the tariff level to an average model

## Where we are coming from :

- Inefficient management of power supply systems
- High technical and non-technical losses in the power system
- Obsolete and inefficient power infrastructure owing to little or no maintenance
- Minimal investment in power
- Low tariff rates with low collection rates

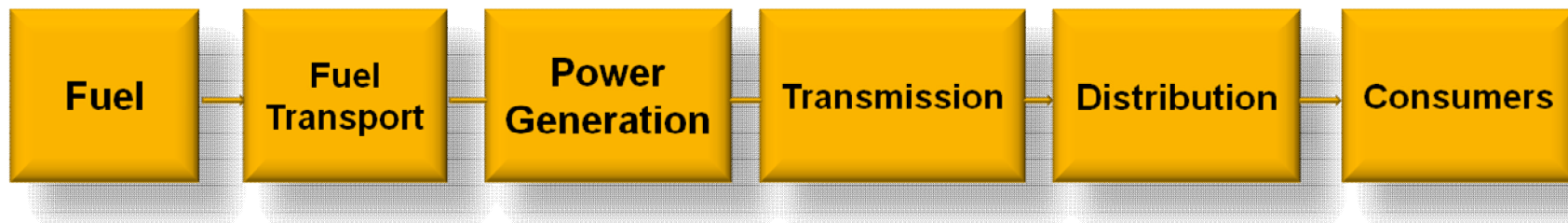
# Electricity Power Sector Reform Act of 2005 (EPSRA)

The objective is to reform the sector and introduce private sector participation;

- Creation of an independent sector regulator – Nigerian Electricity Regulatory Commission (NERC)
- Creation of a initial holding company (Power Holding Company of Nigeria) for the NEPA assets and liabilities
- Unbundling of PHCN into successor companies - 6 generating companies, 11 distribution companies, 1 transmission company,
- 2 special purpose entities: a liability management company and a bulk trader
- Privatization of generation and distribution companies
- Licensing of new entrants into the generation space

# The Reform Strategy

- ❖ Tight coupling of the entire value-chain
- ❖ Incentivizing each link in the value-chain to provide support to all others and motivate them to deliver on expectations



- ❖ Close monitoring of all projects and performance along the value-chain
- ❖ Targeting critical changes in ownership and control of the sector



# The Reform Strategy: Changes in ownership and control

## Current Configuration

	Gas Production	Gas Transmission	Power Production	Power Transmission	Power Distribution
Ownership	Mixed	FGN	Largely FGN	FGN	FGN
Operational Control	Largely Private	FGN	Largely FGN	FGN	FGN



## Required Configuration

	Gas Production	Gas Transmission	Power Production	Power Transmission	Power Distribution
Ownership	Mixed	Mixed	Largely Private	FGN	Fully Private
Operational Control	Largely Private	Largely Private	Fully Private	Fully Private	Fully Private

### Long Term Goals

- ✓ The Nigerian power market to have reached stability for **willing-buyer, willing-seller** mode
- ✓ To ensure that all aspects and stakeholders of the NESI are working together to deliver quality, reliable and efficient electricity to consumers at reasonable prices

# President's Jonathan Power Agenda: The Roadmap

- Power Sector Reform **Roadmap** was launched by President Goodluck Jonathan in **August 2010**: The Roadmap lays a definite plan setting timetable and guidelines for the implementation of the EPSR Act of 2005
- Reconstitute and strengthen the Nigerian Electricity Regulatory Commission (NERC)
- Establish the Nigeria Bulk Electricity Trading Company (Bulk Trader) as a credit-worthy off-taker
- Resuscitate the erstwhile comatose Rural Electrification Agency (REA)
- Develop and implement a cost reflective tariffs. **June 1<sup>st</sup> 2012 the revised tariff, Multi-Year Tariff Order 2**, took effect.
- Fast-track the privatization programme

# Early Signs Indicate that the Power Sector is Generating Strong Results

*For the first time, Nigerians...have been expressing subdued excitement that the power situation is improving.*  
–The Guardian

*Investor confidence in power reform up*  
–BusinessDay

*Unprecedented domestic and international investor confidence in the Nigerian power sector*  
–Vanguard.com

## Significant Recent Accomplishments in Service Delivery

### Generation

- Daily peak delivery up to 4300 MW
- Over 1000 MW in new capacity from NIPP has come on line (Olorunsogo ph.2, Sapele ph. 2 and Omotosho ph.2)

### Fuel-to-power

- Increased gas delivery by 180 MMscfd (650 MW equivalent) for power plants
- Completed 3 pipelines totalling over 200km (Itoki-Olorunsogo, Escravos-Warri and Oben to Geregu)

### Transmission

- System integrity has improved with new capacity delivered from completed projects
- 150MVA transformer capacity added at 330kV (Ikeja-West) and 270MVA transformer capacity added at 132kV (Ojo, Oworonshoki, Akangba, Ikorodu, Kaduna)

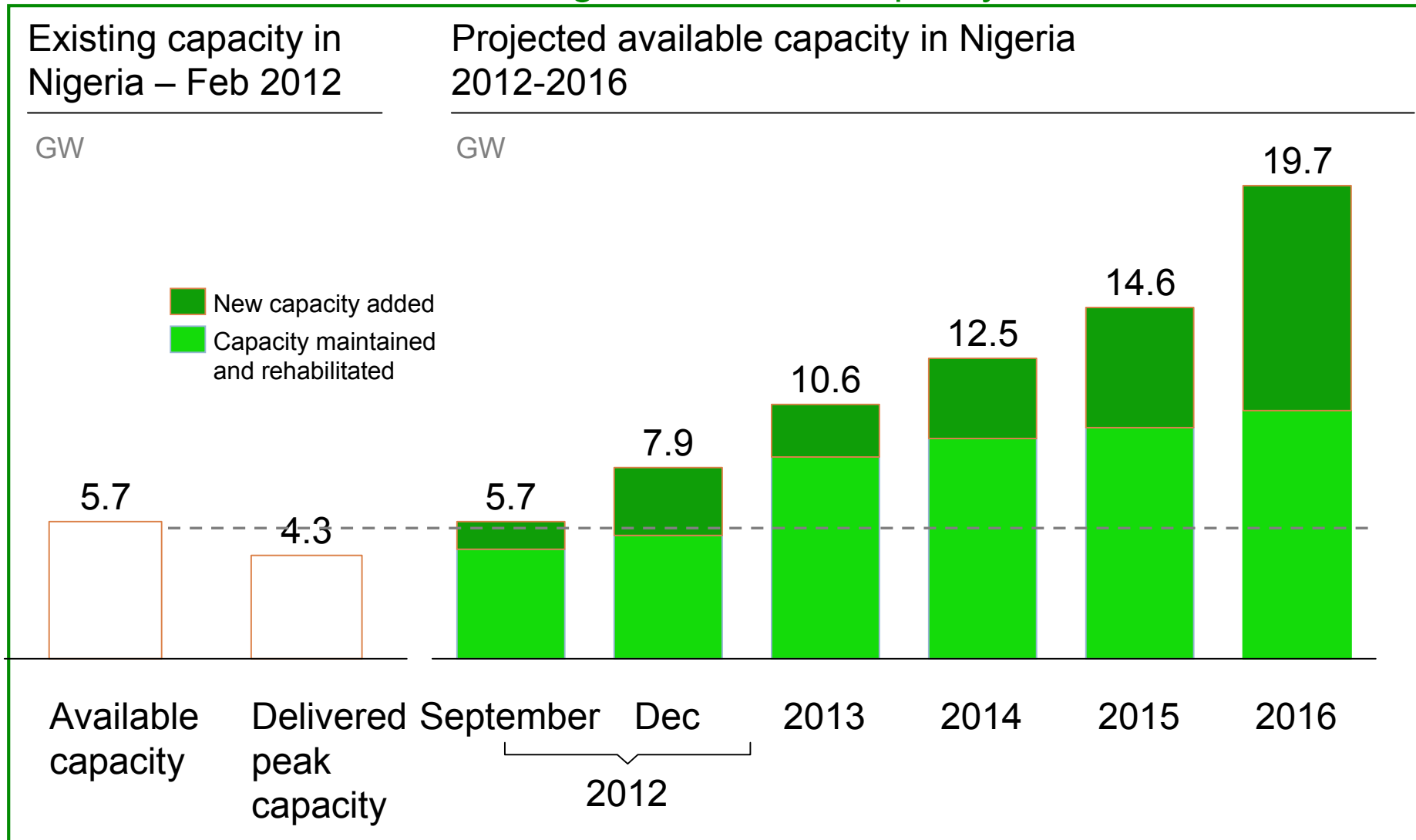
### Distribution

- Urban areas are receiving more power (e.g. Lagos 15 hrs, Abuja 16hrs, Kano 11hrs, Port Harcourt 12hrs, Kaduna 12hrs, Aba 11 hrs)
- Launched web-based customer care portal
- Launched energy efficiency initiative

**Policy and program continuity and synergy within the sector has been essential in sustaining and increasing momentum**

# Power Growth Plan : We Intend to Rapidly Grow Power Supply

We need to continue increasing our available capacity



# Private Sector Participation

- Privatization of generation/distribution companies in progress:
  - Hydro Power Plants - concession
  - Thermal Power Plants - privatization
  
- The Transmission Company of Nigeria on July 23, 2012, signed a Management Contract with Manitoba Hydro International of Canada who will be responsible for managing the transmission network and the national grid.
  
- Tremendous response from international investors
  - **331** bids submitted, **207** prequalified
  - **25** Bids received for the **6** Generation Companies as at **July 17, 2012**
  - Bids for the **11** Distribution Companies submitted on **July 31, 2012**
  - Emergence of winning investor groups in **4<sup>th</sup> Quarter of 2012**

# Private Sector Participation

- Manitoba Hydro International taken over as Management Contractors for the Transmission Company of Nigeria
- Evaluation of technical bids for Genco and Discos completed
- 8 bidders qualified for the Gencos
- 25 bidders qualified for the Discos
- Financial bid opening for the Gencos – September 25, 2012
- Financial bid opening for the Discos – October 15, 2012
- Handover to preferred bidders – Quarter 1, 2013

# Transformational Leadership

- Investor confidence boosted by
  - Executive Political-Will with policy stability and consistency
  - Rule of Law (sanctity of contracts)
  - Regulatory certainty (regulatory independence)
  - Institutional Capacity (Ministries, Departments and Agencies driving the change)
  - Proper project development (Proper feasibility/EIA Studies)
  - Ensuring credit worthiness of market participants (Bulk Trader)
  - Long-term planning

# Evidence of Investor Confidence

- General Electric MOU
- Siemens AG MOU
- Daewoo E&C
- Eletrobras
- EDF/ETDE

These companies have all signed Memorandums of Understanding with the Nigerian Government to support Power Projects with a new approach of providing equity in the investment



SIEMENS



Eletrobras



EDF

ETDE

Investors from all over the world have shown commitment and keen interest in Nigeria's Power sector owing to the clearly defined programme set out by its government

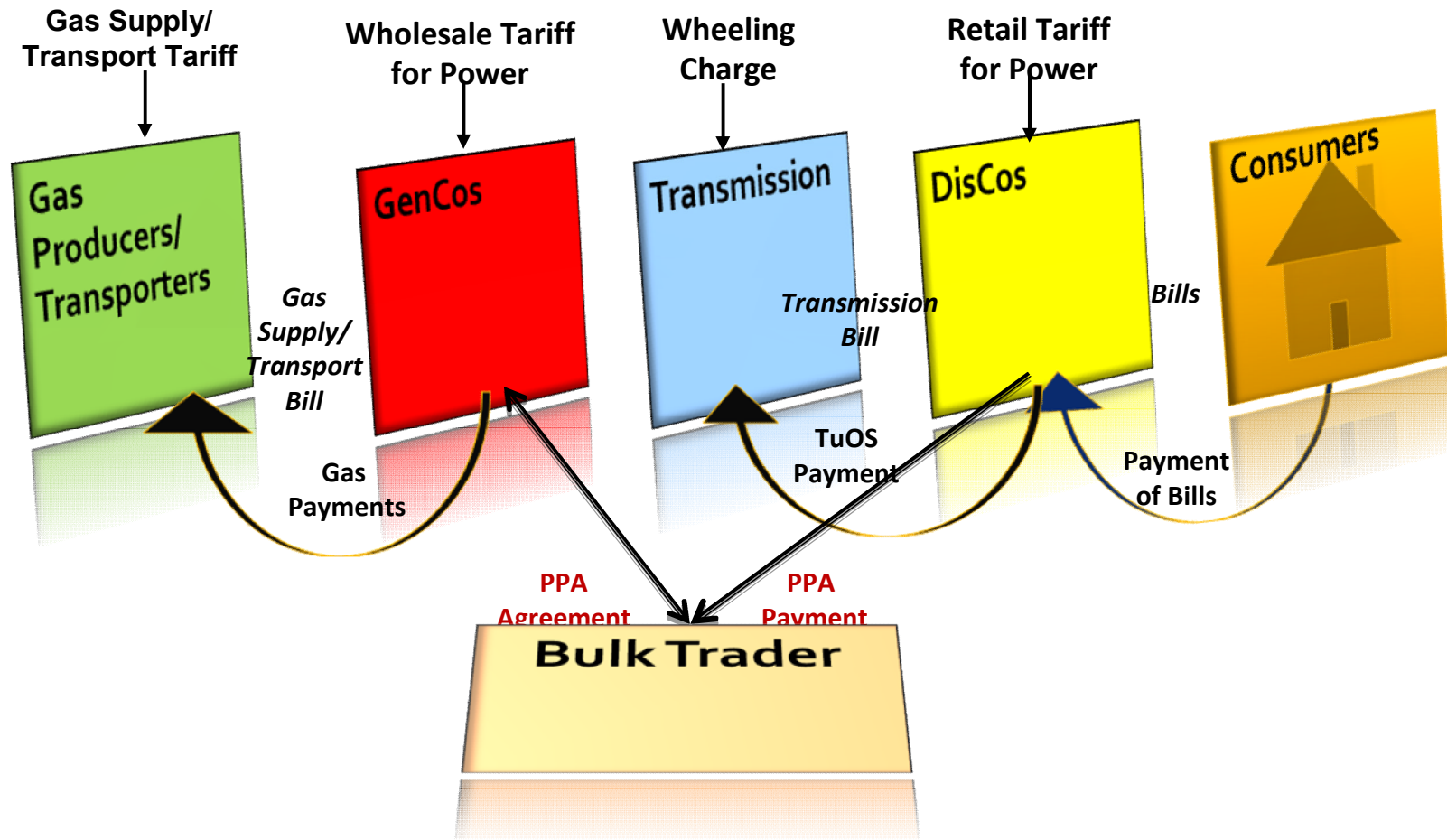
- Asia (China, India, South Korea)
- Europe (Germany, Nordic Countries, UK)
- The Americas (United States, Canada)
- Africa
- South America (Brazil)
- Nigeria, etc



# Enabling Environment

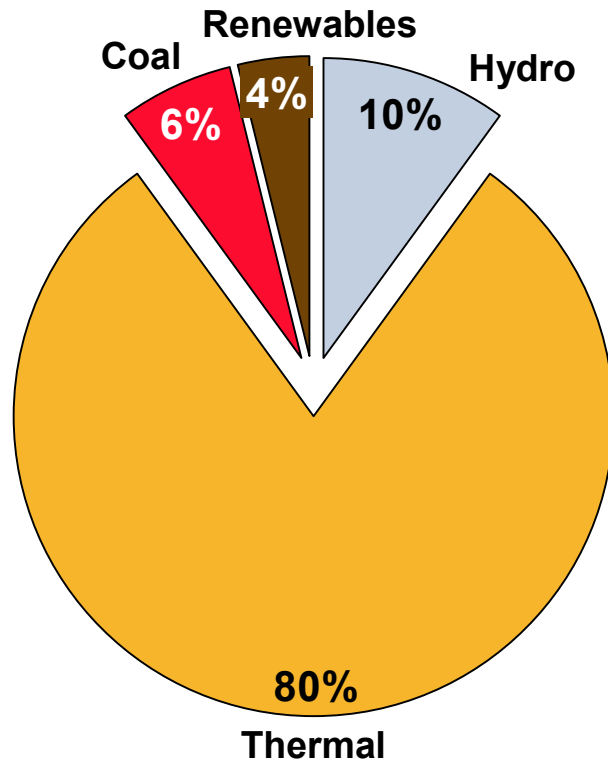
- The presence of a strong, independent regulator: **Nigerian Electricity Regulatory Commission.**
- Institution of a **cost reflective tariff** effective June 1<sup>st</sup> 2012 with Major reviews of Multi Year Tariff Order (MYTO) to occur after every 5 years
- Institutionalization of commercial frameworks in Power Purchase Agreements (PPAs), Gas Supply Agreements (GSAs) and Gas Transport Agreements (GTAs)
- Presence of a credit—worthy off taker for power: **Nigeria Bulk Electricity Trading Company Plc.** (also known as the Bulk Trader)
- World Bank Partial Risk Guarantee for power generation
- US EXIM Bank has provided an investment window of more than US\$1.5bn for investment in the Nigerian Power Sector

# The Nigerian Power Sector value-chain: How it works



# Projected energy mix /Opportunities for Investment

## Projected Energy Mix by 2020



Renewables will account for 4% of the energy mix by 2020

## Opportunities for Investment

- **Development of Independent Power Projects**
- **Signing and Implementation of MoU's for Transmission infrastructure**
- **Funding and Building of Transmission Lines and Sub-station.**
- **Providing Repair and Rehabilitation facilities for specialized electric equipment.**
- **Provision of specialized electrical training.**
- **Provision of support services for the emerging Nigerian Power Industry.**

## Opportunities 2

- Investment in developing large hydro power as well as small and medium-scale hydro power projects; we have identified 370 sites for development of small hydro projects.
- Renewable energy portfolio standards to drive generation from renewable sources such as wind, solar and
- Proposed expansion of the existing 132kV and 330kV power transmission network and development of a 765 KV super grid loop across the country
- A growing electricity market means an opportunity for the manufacturing of power equipment and components

# Opportunities 3

- Development of Emergency and off-grid power projects to serve communities without access to the grid
- Power related training, management consultancy services and capacity development such as legal, power engineering and financial services
- It is estimated that an average of US\$10b/year will be required for investment in the power sector in order to meet projected targets, this is a big opportunity for investors and financiers.
- Finally, avoiding the *Vodacom Mistake*

# Benefits of Power Reform

- The reform is expected to lead to
  - Efficient, reliable power supply
  - Job Creation leading to reduction in restiveness and criminality and boost economic growth
  - Lower production costs and more competitive manufacturing sector.
  - Reduction of Government expenditure on power provision and subsequent application of funds to to other social needs.
  - Empowerment of SMEs and improvement of social and educational services.
  - *Power is the highway upon which all development must travel on!*



# Summary of Benefits and Effects of Power Reform



**Power sustainability, reliability and stability**



**Fundamental engine for job creation leading to significant reduction in youth restiveness**



**Achieving telecoms' position: Taking power availability for granted**



**Empowering other economic and social service activities such as call centers, healthcare delivery systems, educational institutions**



**Lowers production cost and makes Nigeria's manufacturing sector more competitive internationally**



**Rapid growth in power while at the same time significant reduction in FGN's expenditure**



**Empowering SMEs: welders, hair-dressers/barbers, printing presses, tailors, small food processors, etc.**



**Children in rural areas are able to study at night without using kerosene lanterns or candles.**





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# Thank you

[www.nigeriapowerreform.org](http://www.nigeriapowerreform.org)

[www.power.gov.ng](http://www.power.gov.ng)