TRACKING THE EMERGING INVESTMENT OPPORTUNITIES IN NIGERIA'S REFORMED POWER SECTOR

A REGULATORY AND BUSINESS GUIDE

### An Overview

- THE CURRENT POWER SITUATION IN NIGERIA
- Understanding the Federal Government's Roadmap for Power Sector Reform
- EMERGING INVESTMENT OPPORTUNITIES
- RISK ANALYSIS
- SUGGESTED NEXT STEPS

# The Current Power Situation in Nigeria...1

- INSTALLED GENERATING CAPACITY IN NIGERIA IS ABOUT 6, 000MW.
- ACTUAL POWER GENERATION AS AT AUGUST 2010 IS ABOUT 3,804MW.
- ONLY ONE-THIRD OF NIGERIANS AT ANY TIME HAVE ELECTRICITY (COMPARE SOUTH AFRICA AND BRAZIL'S GENERATING CAPACITY)
- ABOUT 60 MILLION NIGERIANS RELY ON GENERATORS FOR ELECTRICITY SUPPLY AND SPEND ABOUT \$13BILLION YEARLY FUELLING THEM.
- Lack of stable power supply has led to countless/ avoidable deaths in hospitals.





# The Current Power Situation in Nigeria...2

- NIGERIA ADJUDGED ONE OF THE WORLD'S HIGHEST CONCENTRATION OF GENERATORS.
- NIGERIAN BUSINESSES ARE INTERNATIONALLY UNCOMPETITIVE ON ACCOUNT OF PROHIBITIVE COST OF POWER.
- A NUMBER OF NIGERIAN BUSINESSES HAVE CLOSED AND OR RELOCATED TO NEIGHBOURING AFRICAN COUNTRIES.

# The FG Roadmap for Power Sector Reform

- Goal is to achieve output of 14,000 MW by 2013 and 40,000MW by 2020.
- Unbundling and privatisation of PHCN successor companies; 6 power generation companies; power transmission company; and 11 distribution companies
- MANAGEMENT OF THE POWER GRID TO BE CONCESSIONED TO A PRIVATE MANAGER (TRANSMISSION COMPANY OF NIGERIA) FOR A PERIOD OF 5YEARS.
- THE CREATION OF A \$3.5 BILLION SUPER-GRID WHICH WILL BE FINANCED BY THE PRIVATE SECTOR AND DEVELOPMENT AGENCIES.
- ESTABLISHMENT OF A BULK PURCHASER COMPANY
- APPROPRIATE PRICING REGIME
- FEDERAL GOVERNMENT CREDIT ENHANCEMENT



IBADAM
Overhead (Ines: 314 v – 8,594km; overhead (Ines: 334 v – 8,688km; 114 v – 4,594km; over voltage ja – 11,401km
Cables:
INV – 464km; low voltage – 607km
Ground mounted transformers:
Dengy delivened: 2,8 GWhyt;
Turnouse (1985): 577,2m
Expected Investment: average of 331.4 mly for the read six years, then likely to 581.

Overhead times:
318V — 7,718ILm 11kV — 2,730km;
low workage lip — 25,742km
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Overhead fines:
38.V = 545km; 11kV = 2,347km;
low voltage lp = 3,800km;
Cabbes:
38.V = 171km; 11kV = 462km;
low voltage = 262km;
Ground mounted banaformers:
38/11kV; 38kV415V
Energy defirmed: 2,629 GM/hy
Tannower (2005): 5103 Im
for the next six years, then falling
Distribution because: 1981.

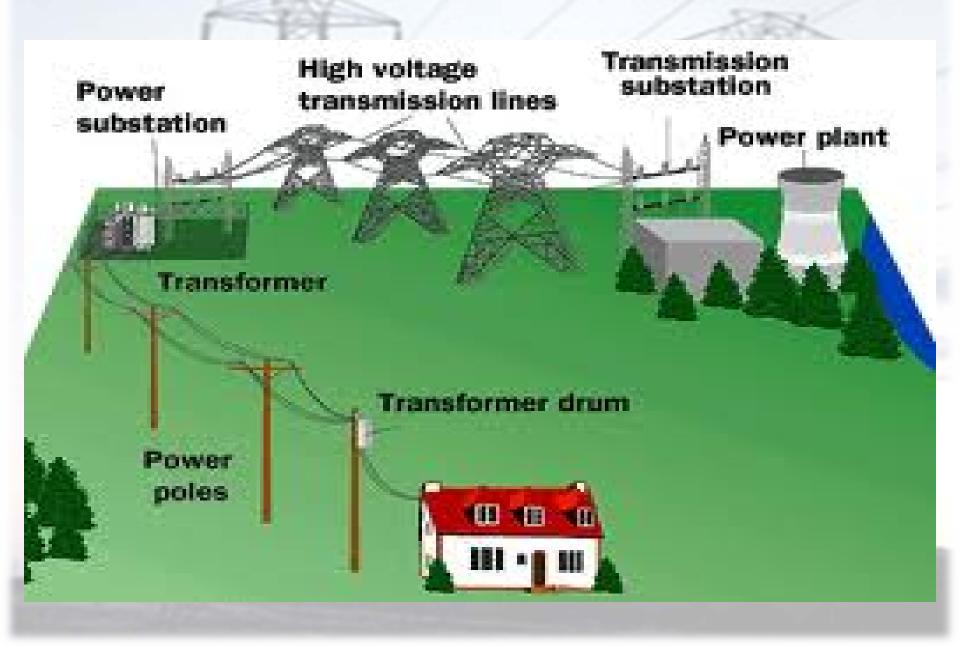
BENIN
Overhead Mess:
334V – 4,133km; 11kV – 5,168k;
low voltage lip – 12,878km
Cables:
JIKV – 11,348km; 11kV – 132km
Ground mounted transformers:
JUTIV: JUNINISV
Energy definemed: 438 Withly?
Pursoner: (2008) 59 5m
Expected inventment: say of 511

ENUGU
Overhead Anes:
38kV – 4,052km; 11kV – 3,210kr
low voltage 1g- 20,558km
(Sables)
18kV – 8km; 11kV – 178km;
low voltage 2 128km;
low voltage 2 128km;
low voltage 2 128km;
feround framsformers:
3011kV, 31kVM15V
ferover (2005) 512km;
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#### **EMERGING INVESTMENT OPPORTUNITIES 1**

- THE UNBUNDLED OR PHCN SUCCESSOR COMPANIES ARE TO BE PRIVATISED.
- POWER COMPANIES ARE NOW AT LIBERTY TO ELECT WHICH OF GENERATION AND/OR DISTRIBUTION THEY WISH TO INVEST IN.
- POWER COMPANIES ARE NOW AT LIBERTY TO ELECT WHICH OF GENERATION AND/OR DISTRIBUTION THEY WISH TO INVEST IN.
- POWER COMPANIES ARE FREE TO IDENTIFY THEIR NICHE MARKETS AND SERVICE SUCH MARKET'S ELECTRIC POWER NEEDS.
- NICHE MARKETS RANGE FROM RESIDENTIAL/INDUSTRIAL ESTATES, LOCAL GOVERNMENTS TO AN ENTIRE STATE (S).
- SECONDARY OPPORTUNITIES EXIST FOR SUPPLIERS OF ENGINEERING SERVICES, SPARE PARTS, BIOMASS, FOSSIL FUEL AND OTHER GOODS/SERVICES NECESSARY FOR GENERATION AND DISTRIBUTION OF POWER.

#### **EMERGING INVESTMENT OPPORTUNITIES 2**



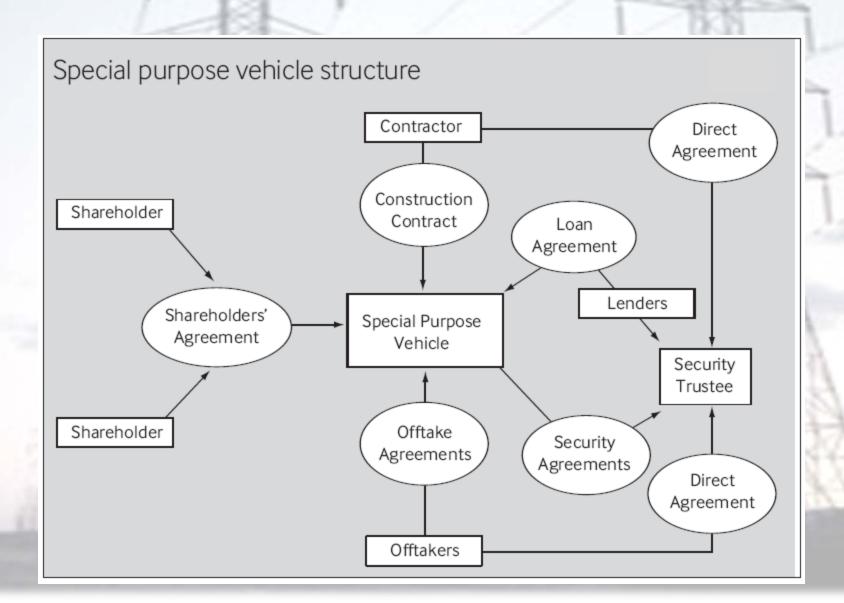
#### Investment Inc.

- MULTI YEAR TARIFF ORDER (MYTO): TARIFFS WILL BE SET FOR 15 YEARS WITH ANNUAL ADJUSTMENTS AND COMPREHENSIVE REVIEW AFTER EVERY 5 YEARS.
- SECURITY OF PAYMENT: THE NIGERIAN BULK ELECTRICITY TRADING COMPANY (NBETC) TO ACT AS BULK PURCHASER.
- SECURITY OF SALE/SUPPLY: NBETC WILL ENTER INTO LONG TERM POWER PURCHASE AGREEMENTS WITH EACH OF THE POWER GENERATION COMPANIES.
- TERM OF LICENSE TO NOW BE BETWEEN 20-25 YEARS FOR INVESTORS TO RECOVER.
- SWIFT IMPLEMENTATION OF GAS MASTER PLAN. [TO IMPOSE DOMESTIC SUPPLY OBLIGATION ON ALL UPSTREAM PRODUCERS, PREDOMINANTLY FOR POWER GENERATION]
- CBN to provide \$2b in funding to stimulate investment in the Sector.
- FGN CREDIT ENHANCEMENT: WORLD BANK PARTIAL RISK GUARANTEE/FGN INDEMNITY
- AFC COUNTERPART FUNDING SCHEME
- FG WAIVER OF CUSTOM/IMPORT DUTIES

### What next? Business Models.

- DECIDING WHICH AREA OF POWER TO INVEST; GENERATION; RANSMISSION; DISTRIBUTION.
- WHETHER TO ACQUIRE A PRIVATISED SUCCESSOR COMPANY OR INCORPORATE A NEW COMPANY ALTOGETHER.
- INCORPORATE AN SPV IN A JV WITH A FOREIGN TECHNICAL PARTNER FOR A NICHE MARKET.
- CONCENTRATE ON SUPPLYING SECONDARY GOODS AND SERVICES.

### Possible Model



## Making it work!!! (Company registration requirement)

- 2 SUGGESTED COMPANY NAMES (IN ORDER OF PREFERENCE)
- DETAILS OF 2 OR MORE DIRECTORS (WITH AT LEAST 1 HAVING A CERTIFICATE OF PROFICIENCY IN THE POWER SECTOR).
- - AUTHORISED SHARE CAPITAL OF THE COMPANY
- THE INITIAL SHAREHOLDERS AND THE ALLOTMENT OF THE SHARES BETWEEN THEM (AT LEAST 25% HAS TO BE ALLOTTED AT THE ONSET)
- - THE ADDRESS OF THE COMPANY (THIS COULD BE ANYWHERE IN NIGERIA AND MUST NOT BE A POSTAL ADDRESS).
- DRAWING UP A SHAREHOLDER'S AGREEMENT.

## Making it work!!! (NERC requirements for generation licenses)

- COMPLETED APPLICATION FORM.
- CERTIFICATE OF INCORPORATION AND MEMORANDUM AND ARTICLES OF ASSOCIATION, OR DEED OF PARTNERSHIP, OR DEED OF TRUST.
- REGISTERED TITLE DEED TO SITE, OR SALE AGREEMENT, OR DEED OF ASSIGNMENT/GIFT, OR EVIDENCE OF SUBMISSION OF A TITLE DEED TO A RELEVANT LAND PROCESSING AGENCY (AS APPLICABLE).
- TAX CLEARANCE CERTIFICATE FOR IMMEDIATE PAST THREE (3) YEARS.
- TEN-YEAR BUSINESS PLAN.
- OFF-TAKE AGREEMENT OR ARRANGEMENT.

- ENVIRONMENTAL IMPACT ASSESSMENT (EIA) APPROVAL CERTIFICATE, OR PROOF OF SUBMISSION AND ACCEPTANCE FOR PROCESSING OF THE REPORT ON EIA TO THE MINISTRY OF ENVIRONMENT, OR DETAILS ON HOW EFFLUENTS AND DISCHARGES WILL BE MANAGED (IF PROPOSED CAPACITY IS LESS THAN 10MW).
- FUEL SUPPLY AGREEMENT, OR A LETTER FROM A FUEL SUPPLIER AND TRANSPORTER INDICATING THE INCLUSION OF THE FUEL NEEDS OF THE APPLICANT IN THE SUPPLY PLANS OF THE FUEL SUPPLIER AND TRANSPORTER.
- MOU WITH OR LETTER OF INTENT FROM ENGINEERING PROCUREMENT CONTRACT (EPC) CONTRACTOR (IF APPLICABLE).
- MOU WITH OR LETTER OF INTENT FROM THE TECHNICAL PARTNER (IF APPLICABLE).
- FINANCING AGREEMENTS OR LETTER TO FUND THE PROJECT FROM FINANCIAL INSTITUTION(S).
- TIMELINES FOR COMMISSIONING OF THE POWER PLANT AND ON THE DATE WHEN DIFFERENT CAPACITIES OF THE PLANT WILL COME INTO OPERATION.

## Making it work!!! (NERC requirements for Transmission license)

- COMPLETED APPLICATION FORM.
- CERTIFICATE OF INCORPORATION AND MEMORANDUM AND ARTICLES OF ASSOCIATION, OR DEED OF PARTNERSHIP, OR DEED OF TRUST.
- REGISTERED TITLE DEED TO SITE, OR SALE AGREEMENT, OR DEED OF ASSIGNMENT/GIFT, OR EVIDENCE OF SUBMISSION OF A TITLE DEED TO A RELEVANT LAND PROCESSING AGENCY (AS APPLICABLE).
- TAX CLEARANCE CERTIFICATE FOR IMMEDIATE PAST THREE (3) YEARS.
- TEN-YEAR BUSINESS PLAN.
- POWER PURCHASE AGREEMENT WITH GENERATING LICENSEE OR RESALE AGREEMENT WITH TRADING LICENSEE.
- NETWORK AGREEMENT WITH TRANSMISSION LICENSEE
- RETAIL AGREEMENT WITH END-USER FOR SUPPLY OF POWER
- MOU WITH OR LETTER OF INTENT FROM ENGINEERING PROCUREMENT CONTRACT (EPC) CONTRACTOR (IF APPLICABLE).

## Making it work!!! (NERC requirements for Distribution licenses)

- CONNECTION POINT(S)
- POLE TYPE (WOOD, CONCRETE, STEEL, ETC)
- INSTALLATION METHOD (OVERHEAD, UNDERGROUND, ETC)
- DETAILED PROJECT DESIGN:
  - SITE MAP
  - SINGLE LINE DIAGRAM
  - CONTROL ROOMS
  - SUB-STATIONS
  - LINE LENGTH
- DISTRIBUTION ENVIRONMENTAL IMPACT ASSESSMENT
- TRANSFORMER(S) TYPE & DATA (ATTACH NAMEPLATE DATA OF ALL TRANSFORMERS)
- CONNECTION AGREEMENT WITH TCN
- IMPACT OF CONNECTING THE DISTRIBUTION SYSTEM TO TCN NETWORKS

### Contd.....

- PROJECTED PEAK LOAD TO BE CONNECTED
- MAXIMUM CAPACITY OF NETWORK (MW, MVAR)
- BILL OF ENGINEERING MEASUREMENT AND EVALUATION (BEME) OF THE PROJECT
- DETAILS OF PROTECTION EQUIPMENT
- HEALTH AND SAFETY POLICY

### Risk analysis

- Policy inconsistency
- Political instability
- Tariff increase
- Vandalism
- Corruption
- Labour Unions

- 2011 Elections.
- Excellent service delivery.
- The Presidential Task Force on Power.
- FGN to ensure success of power roadmap by limiting corruption
- On-going talks on 'transferred liabilities' to successor companies.( e.g Recent meeting with power labour stakeholders).

#### What Next.

- COMPOSE A PROFESSIONAL ADVISORY TEAM
- DECIDING WHAT AREA OF POWER TO INVEST IN.
- DECIDING WHAT BUSINESS/INVESTMENT MODEL TO ADOPT.
- ACQUISITION OF A PRIVATISED COMPANY/ INCORPORATION OF A NEW COMPANY.
- ESTABLISHING RELATIONSHIP WITH BOTH TECHNICAL AND FINANCIAL PARTNERS.
- COMPLIANCE WITH NERC REQUIREMENTS IN THE CHOSEN AREA OF POWER INVESTMENT.
- APPLICATION FOR POWER LICENSE.

