A HIGH LEVEL "RED FLAG" REVIEW OF THE NIGERIAN ELECTRIC SUPPLY INDUSTRY

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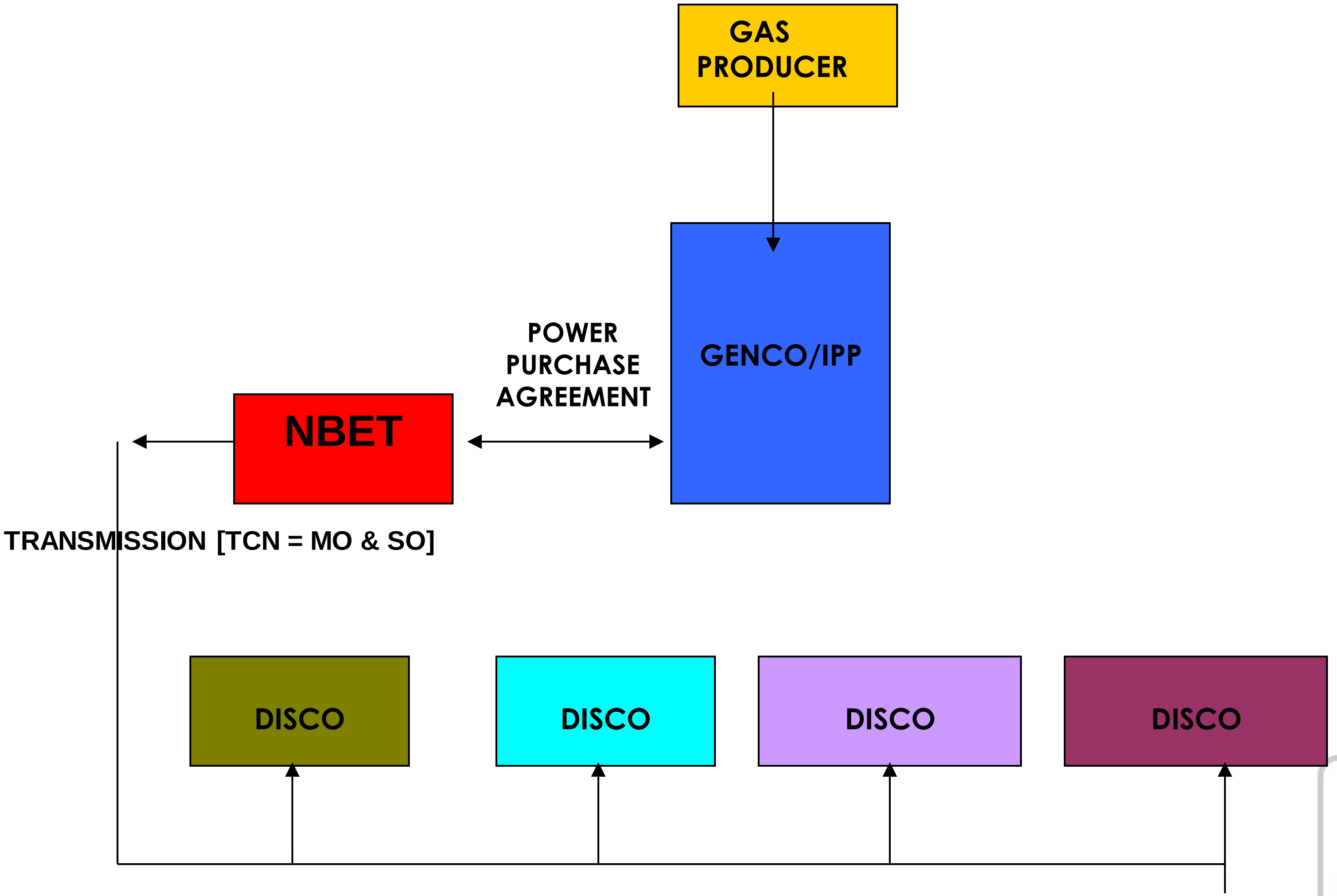
INTRODUCTION


GAS PRODUCER
GENCO/IPP
POWER PURCHASE AGREEMENT
NBET
TRANSMISSION [TCN = MO & SO]
DISCO
DISCO
DISCO
DISCO

INDUSTRY CONTRACTS/REGULATORY INSTRUMENTS

- The MYTO
- The Market Rules
- The Grid Code
- The Metering Rules
- The NERC/NBET Template PPA
- The Market Participation Agreement
- The Agreement For The Use Of The Transmission Network System
- The Interface Agreement
- The Ancillary Services Agreement
- The Connection Agreement

THE MULTI – YEAR TARIFF ORDER

- Order for the determination of charges & tariffs for electricity Generation, Transmission, Systems Operation and Distribution
- MYTO pricing principles seeks to balance the interests of investors and consumers [cost reflectivity vs. affordability]
- MYTO I issued for 5 years in 2008
- MYTO II for Gencos – biannual reviews of tariffs to accommodate changes of +/- 5% in:
  - The delivered price of gas
  - U$D exchange rate
  - Nigerian inflation rate
  - Daily generation capacity & accompanying Capex + Opex.

THE MARKET OPERATOR

- The Market Operator is presently a department within the **Transmission Company of Nigeria** (TCN).
- Admits and registers market participants
- Administers the **the Settlement System** - payment issues amongst the various segments of the power sector
- Verify that each connection point Administers the market - implements the **Market Rules** and develop **Market Procedures**
- where a participant injects or extracts energy is properly metered
- **Note:** the MO does **not** purchase power.

FOUR STAGES OF MARKET DEVELOPMENT

- **Pre – transition Stage**
- **Transition market** [entry of new generation, and contract based arrangements for electricity trading and the introduction of competition]
- **Medium – term market**
- **Competitive market**

1. GAS ISSUES

THE GAS RISK

- Significant **gas supply** risks (availability and security of gas supply)
- **Gas Transportation** risk: inadequate gas infrastructure & prone to vandalisation
- "Gas Constraint" in the PPA should be an **Availability Event** which will ensure that Seller will still be entitled to capacity payments.
- The Gas Risk will be worse upon the enactment of the PIB – gas negative for the upstream.

2. “NBET”

NBET CREDIT RISK

- NBET is:

  - essentially an aggregator of electricity, and
  - a 100% Government – owned entity
- The creditworthiness of the offtaker under the PPA is key to both equity providers and lenders, moreso a 100% FGN – owned power purchaser
- Credit support required for NBET's day-to-day payment obligations **and** for termination payments
- Credit enhancement needs to be a **CP** to the effectiveness of the PPA & consistently maintained for its duration.

NBET CREDIT RISK – FGN's response

- Capitalisation of NBET by FGN [approx $800m]
- Requirement under the Vesting Contracts with Discos of a 3 month **Security Deposit** [approx $100/month = $300m]
- World Bank Partial Risk Guarantee
- ADB Partial Risk Guarantee

The Partial Risk Guarantee (PRG)

- World Bank guarantee – generally available to any country eligible for borrowing from the IBRD or IDA
- Risk mitigation instrument - covers private lenders against the risk of a public entity failing to perform its obligations with respect to a private project
- Reinforces obligations of the Government
- **Covers a range of risks relating to government performance including changes in law, expropriation, failure to meet contractual obligations, foreign currency availability and convertibility**
- Nigerian power sector PRGS designed to back-stop NBET's **payment obligations** in its PPAs with Gencos & IPPS.
- PRGS also issued to cover payment obligatiosn of Gencos for gas supply.

PRGs FOR IPPs

Country	Project	Risks covered
Bangladesh	Haripur Power Project	Non-payment
Jordan	Jordan-Amman East Power Project	Termination payment
Cote d'Ivoire	Azito Power Project	Breach of contract, Availability and Convertibility of Foreign Exchange, Changes in law, Political and Natural Force Majeure Events
Pakistan	Pakistan-Uch Power Project	Breach of contract, Convertibility and Availability of Foreign Exchange, Change in law, Force Majeure Events

3. ELECTRIC POWER TRANSMISSION

THE TRANSMISSION SYSTEM

- Inadequate power transmission infrastructure
- Capacity constrained: can only wheel approx 6,000 MW of power
- Under investment and poor maintenance
- Poor reliability resulting in frequent blackouts and regular load shedding
- Transmission losses and vandalisation are prevalent
- System Operator responsible for grid reliability
- The **Transmission Company of Nigeria** (TCN) is the S/O
- The S/O implements the **Grid Code**
- System now under private sector management
- A number of transmission projects are underway
- **The PPA allocates the risk of adverse grid conditions including transformer losses at the Delivery Point and transmission losses to NBET.**

PLANNED TCN CAPITAL REQUIREMENT AND POSSIBLE SOURCES OF FUNDING

PLANNED TCN CAPITAL REQUIREMENTS AND POSSIBLE SOURCES OF FUNDING IN ORDER OF CERTAINTY - MILLION US$

	Break down of funding requirements 2013-2017	2013	2014	2015	2016	2017	Totals
S/N	**Total Fund needed by Year**	**460**	**2,115**	**693**	**1178**	**1178**	5,624
1	African Development Bank - US$ 100.00M: **Projects in Appendix 1 (38)**	50	50				
	African Development Bank - US$ 50.00M : **Projects in Appendix 2 (5)**		50				
2	World Bank (NEGIP) - US$ 200.00M : **Projects in Appendix 3**		46	61 93			
	World Bank (NEGIP) - US$ 90.00M : **Projects in Appendix 4**		30	60			
3	Eurobond US$135.00M : **Projects in Appendix 5 (36)**		135				
4	FGN 2013 - 2017 Appropriation US$625M: **Projects in Appendix 6 (99)**	125	125	125	125	125	
5	Agence A FDB ($170 million): **Projects for FCT, Abuja in Appendix 7 (10)**		119	32	19		
6	MYTO Capex ($11 million): **Projects in Appendix 8 (17)**	11					
7	Niger Delta Power Holding Company Limited (NDPHC) US$1.6B: **(Assuming bridge financing based on NDPHC funding assurance)** **Projects in Appendix 9 (101)**		800	400	400		
8	Islamic Development Bank Load - US$150M: **Projects in Appendix 10**			150			
9	Chinese XD Loan ($500 million): **Projects in Appendix 11 (19)**		70	280	100	50	
	World Bank ($700 million): **Projects in Appendix 11**			294	196 94	46 70	
	Others; $2.5billion: JICA, etc **Projects in Appendix 11 (1)**					500	
	Possible Funding	**186**	**1425**	**1495**	**934**	**791**	**4831**
	Funding Deficit	**274**	**690**	**-802**	**244**	**387**	**793**

Note: It is assumed that NDPHC transmission assets will be transferred to TCN at no cost, and depreciated in accordance With TCN accounting policies, and $1.6 Billion from NDPHC Gencos will be invested in TCN shares

Potential additional funding sources: Bilateral funding, funding consortia, turnkey solution providers

ELECTRICITY DISTRIBUTION

ELECTRICITY DISTRIBUTION

- Capacity constrained
- Can only distribute approx 4,500 MW of power
- Replete with aged equipment and technical losses
- Under investment in infrastructure
- Poor maintenance culture
- Poor revenue collection
- Discos income insufficient to cover power purchase costs, capex and operational costs

DISCO CREDIT RISK

- Distribution - the weakest link in the chain
- Discos purchase power from NBET
- Revenue collection by Discos still a challenge
- A legacy of payment and collection indiscipline
- Required to install pre – paid meters in their distribution areas within 18 mo of commencement of business
- Discos must survive the early period, otherwise the market will be imperiled
- Discos income insufficient to cover power purchase costs, capex and operational costs
- NBET not earning enough from Discos and potentially could default in payment obligations to Gencos
- Weak revenue base of the Discos creates a **circular credit & sustainability risk** for the NESI.

FINALLY . . . . . .

COMPENSATION ON TERMINATION

- The PPA does not provide for any type of compensation in the event of an early termination of the PPA
- For lenders, a robust compensation regime for early termination is key to any financing e.g.:
  - ➢Seller right to offer the facilities for purchase.
  - ➢Buyout payments to the Seller upon Termination.

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THANK YOU

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