WAPIC
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www.kiloscarinternational.com
Overview of the Regulation and Legal Frameworks

- Power sector reform has been the most complex transformation program ever undertaken in Nigeria, and still remains very difficult to understand the reasons for Nigeria's power failure after 115 year of power generation.

- We therefore reflect on successive and current reforms, the challenges, setbacks and potential failures; and best practices of the transformation framework without prejudice to the current policies on enhancing the performance of the Nigerian power sector.
## Road to Power Sector Transformation

<table>
<thead>
<tr>
<th>Date</th>
<th>Transformation Event</th>
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</thead>
<tbody>
<tr>
<td>1896</td>
<td>Electricity Generation began in Nigeria</td>
</tr>
<tr>
<td>1951</td>
<td>Electricity Corporation of Nigeria (ECN)</td>
</tr>
</tbody>
</table>
| 1962 | Niger Dams Authority (NDA)  
First 132KV line constructed |
| 1972 | NEPA Act: (ECN & NDA was merged) |
| 2000 | National Council on Privatization (NCP) formed the Electric Power Sector Implementation Committee (EPIC) |
Effect of an Ailing Power Sector
(1990 – 2010)

1. Gross economic downtime
2. Trans-national industrial migration
3. Generic loss in revenue
4. Infrastructure underdevelopment
5. Mass joblessness within productive age group
6. Poverty (direct and indirect effect)
7. Crisis at some critical sector
8. Corruption, & the “Up NEPA” monumental shame
<table>
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<tr>
<td>2002</td>
<td>National Electric Power Policy (NEPP) become official bylaw for the Sector Reform.</td>
</tr>
<tr>
<td>2005</td>
<td>Elec. Power Sector Reform (EPSR) Act created Power Holding Company (PHCN)</td>
</tr>
<tr>
<td></td>
<td>PHCN broken into four operating groups:-</td>
</tr>
<tr>
<td></td>
<td>6 Generation Companies (to be privatised)</td>
</tr>
<tr>
<td></td>
<td>1 Transmission Company</td>
</tr>
<tr>
<td></td>
<td>11 Distribution &amp; Marketing Companies</td>
</tr>
</tbody>
</table>
PHCN was unbundled into 11 Distribution/marketing entities in Nov. 2005.
<table>
<thead>
<tr>
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</tr>
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</table>
| 2005 | Nigeria Electricity Regulatory Commission (NERC) inaugurated for drawing regulatory framework:  
  - Sector Stability  
  - Attract Investor  
  - Licensing & Regulation  
  - Standardisation  
  ** Grid Codes, Distribution and Metering Codes |
| 2006 | Rural Electrification Agency (REA), establish. |
### Era of Legislative Framework and Power Sector Reform (cnt’d)

<table>
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<tr>
<th>Date</th>
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<tbody>
<tr>
<td>2008</td>
<td>NERC developed <strong>Multi-Year Tariff Order (MYTO)</strong> to:</td>
</tr>
<tr>
<td></td>
<td>1. Enable consumers pay cost reflective price/kw/hr of electricity consumed.</td>
</tr>
<tr>
<td></td>
<td>2. Manage Govt. price subsidy for initial 3 years to cushion the change effect</td>
</tr>
<tr>
<td></td>
<td>3. The Power Consumer Assistance Fund will also be activated to enable lower income consumers pay for power</td>
</tr>
</tbody>
</table>
### Era of Legislative Framework and Power Sector Reform (cnt’d)

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<td>2009</td>
<td>Presidency approved the Market Rules for the power industry</td>
</tr>
<tr>
<td></td>
<td>Govt. intensify search to attract &amp; nurture foreign investors</td>
</tr>
<tr>
<td>2010</td>
<td>July 2010 - Electricity tariff was increased to attract investors</td>
</tr>
</tbody>
</table>
Types of Power Systems

- Hydro Power Station
- Thermal Power Station
- Interconnection Substations (330KV / 132KV)

Existing: 3791
Proposed: 5513
Landmines in the Power Sector
Reform Implementation Process

1. Archaic project management ethics
2. Low technical dynamics & obsolete systems
3. Inadequate service plan – Water & Gas supply
4. Poor condition of facilities
5. Poor distribution & inefficient service
6. Vandalisation & economic sabotage
7. Non-scientific management approach
8. Massive evasion of ‘NEPA Bills’
Conflict and Synergy Sphere of the Leading Stakeholders

- **Federal Ministry of Energy (FME)**
  - Acts as sector REGULATOR
  - Act as sector REGULATOR, undertakes technical and economic regulation of the sector

- **Energy Comm. of Nigeria (ECN)**
  - Advises government on energy POLICY formulation

- **Rural Elect. Agency (REA)**
  - Raise fund to support & provide rural electrification programmes

- **Nigeria Electricity Regulatory Comm. (NERC)**

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Legislation for Policy Implementation using Controls Procedure

1. Drive performance by strengthen internal controls
2. Encourage efficient & transparent audit process
3. Make CEOs liable via bond-base responsibility
4. Create profit driven systems-reduce bureaucracy
5. Ensure full corporate-governance in plan formation
6. Align resources with development plans
7. Pay attention to enforcement and compliance
8. Allow private investors to scrutinize the development pattern
Legislation for Policy Implementation using Economic Realities

1. Raising electricity tariff, not critical to reform.
2. Logical revamp of active facilities attracts good ROIs.
3. Stop re-brandings that typify the reform cycle: from ECN – NEPA – PHCN.
4. Re-structure DISCOMs to global enterprise e.g. JV & PSC.
5. Have clear bounds between regulators and operators.
6. Use counterpart funding for Greenfield / renewable energy projects.
7. Publicity on use of low energy & power saving devices.
### Legislation for Energy Conservation

**Lesson from Kenya: What difference does it make to be an energy saver?**

<table>
<thead>
<tr>
<th></th>
<th>Incandescent Light Bulbs</th>
<th>Compact Fluorescents (CFLs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Span (average)</td>
<td>1,200 hours</td>
<td>6,800 hours</td>
</tr>
<tr>
<td>Watts of electricity used (equivalent to 60 watt bulb)</td>
<td>60 watts</td>
<td>45 watts</td>
</tr>
<tr>
<td>Kilo-watts of Electricity used (30 Incandescent Bulbs per year equivalent)</td>
<td>3,285 KWh/yr.</td>
<td>2,518 KWh/yr</td>
</tr>
<tr>
<td>Annual Operating Cost (30 Incandescent Bulbs per year equivalent)</td>
<td>$328.59/year</td>
<td>$251.94/yr</td>
</tr>
<tr>
<td>Carbon Dioxide Emissions (30 bulbs per year) Lower energy consumption decreases: CO2 emissions, sulphur oxide, and high-level nuclear waste</td>
<td>$4,500 /year</td>
<td>$3,449/yr</td>
</tr>
</tbody>
</table>

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- Generation: Max Cap.: 6,300MW
- Peak Cap: 3,774MW (Aug 2005)
- National Demand (Est.): 10,000MW
- Nat. Generation Deficit: 5,750MW

*Include PHCN & IPPs installations*

<table>
<thead>
<tr>
<th>Period</th>
<th>Generation</th>
<th>Demand</th>
<th>Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971 - 1981</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1981 - 1991</td>
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<td></td>
<td></td>
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<tr>
<td>1991 - 1999</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999 - 2005</td>
<td></td>
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</tr>
</tbody>
</table>

- Coal
- Fossil Fuels
- Geothermal/biomass
- Hydro
- Natural Gas
- Renewables
- Solar
- Nuclear
- Wind
A Policy on Power Decentralization in accordance with Energy Source

1. Current reform should enhance institutionalization of Specialised Energy Development Companies (SEDCOs)

2. The SEDCOs should develop utilization of other natural and man-made energy source.

3. Unlike the NIPP projects, the SEDCOs should be operated as JV counterpart funded organisations.
Role of Specialised Energy Development Companies (SEDCOs)

POLICY DRIVERS AND REGULATORS

- Federal Ministry of Energy (FME)
- Nigerian Electricity Regulatory Commission (NERC)
- Energy Commission of Nigeria (ECN)

IMPLEMENTATION COMPANIES

- Power Holding Company of Nigeria (PHCN)
- Nigerian Solar Energy Development Company (NISEDSCO)
- Nigerian Hydro Power Development Company (NHPDCO)
- Nigerian Coal Energy Development Company (NICEDCO)
- Nigerian Bio-Energy Company (NIBECO)
- Rural Electrification Agency (REA)
- Independent Power Producers (IPPs)
The Dynamics of Decentralization by Energy – Power Sources


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Constitutionality of Government stake in Energy Sector Reform

- Sections 14(b), 18, 17(2)(d), 19, 16(1),(2) & (4) – Govt. will uphold lead to manage & operate the major economic sectors: Lesson from Afam & OK NAG project (FGN/Shell).

- Public Enterprises (Privatization & Commercialisation) Act, 1999¹¹ is implied within the sense of section 315 of the 1999 Constitution¹² ¹³, but does not contain any provision that clearly refers to “privatization”.

- Effective enforcement of dynamic competition within the sector is a main catalysts for economic restructuring and require true corporate governance in the privatized entity.

- So whether government maintains public enterprises or privatises the sector is a matter of policy.
Stakeholders of the Resource based Energy Sector

- FME
- Supervising Ministry
- Regulators (ECN) + (NERC)
- Government SEDCOs (Operators)
- Investors / Development Partners
The role for corporate governance in the power sector reform process is very important to achieving vision 2020.

The reform calls for conscious legislative efforts to ensure proposition for energy divesture is made workable, and achieved.

Considerations that a sure supply and availability of electricity should precede the clamor for tariff change.

Establishing commercially driven SEDCOs will be the most rewarding option to success of the power sector.
Guide to Electric Power in Ghana
First Edition
Resource Center For Energy Economics And Regulation, Institute of Statistical, Social and Economic Research
University of Ghana

Resolving Nigeria’s Electric Power Crises: Role of the Legal and Regulatory Framework for the Nigerian Domestic Gas
Supply Obligations and Pricing Model Annotated Bibliography:
Compiled by Ayodele Gregory Oni - LL.M. Energy Law, University of Calgary

FG Raises Electricity Tariff To Attract Investors
Olusola Bello & Ameo Akpe,
businessdayonline.com FRIDAY, 24 JUNE 2011

Conceptual Framework for Corporate Governance in Nigeria – Challenges and Panaceas
By Habeeb A. Quadri; MSc Econs, MBA, PMP
PhD Program in Project Management - University of Maryland

Overview of the Nigerian Electricity Regulatory Commission
Dr. Alimi Abdul-Razaq
Executive Commissioner, Legal, Licensing & Enforcement Division, NERC - NARUC/NERC Workshop, July 14- 18 2008

Kenya Electricity Expansion Project-KPLC Distribution Component Environmental
Environmental And Social Management Framework
For KPLC Distribution Component
Second Revised Draft - January 11, 2010

Road Map to the Reform of the Electric Power Sector
Chudi Nelson Ojukwu
(Electric Power Utility Regulation Specialist)