

Joint Planning Board & National Council on Development Planning

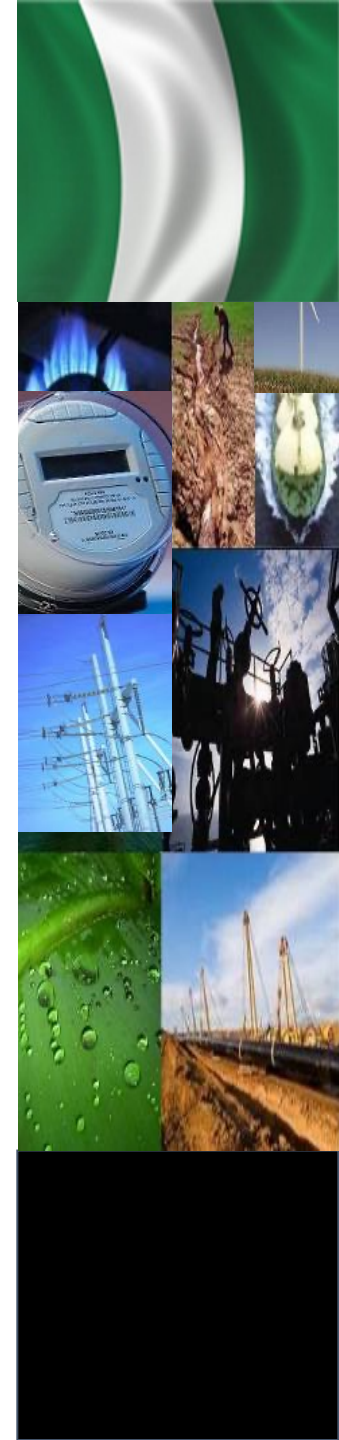
National Development Planning in Nigeria: Issues and Challenges

Power and Alternative Energy

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by

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PRESENTATION OUTLINE

- 1. MTNDP 2021-25: Power & Alternative Energy Team Composition**
- 2. Current Status Overview- Electricity Supply.**
- 3. Going Forward- Areas of Focus.**
- 4. Strategic Statements of the Future – 2025.**
- 5. Overview of Thematic Development Plan (2021- 2025)**
- 6. Key Targets – 2025**
- 7. Key Legislative and Policy Reform Highlights.**
- 8. MTNDP 2021-25 Funding**

Vision 2050: Power & Alternative Energy Team Composition

- | | | |
|-----|-------------------------|---|
| 1. | Engr. Belije Madu | – Coordinator (Nigeria Economic Summit Group) |
| 2. | Engr. James Okereke | – Deputy Coordinator (Chevron Nigeria) |
| 3. | Engr. Abdulwaheed Ahmed | (Energy Commission of Nigeria) |
| 4. | Mr. Ademremi Olawore | (Ministry of Finance Budget & National Planning) |
| 5. | Mallam Dahiru Moyi | (SA/HMFBNP-Energy) |
| 6. | Mr. Segun Adaju | (NESG Lead Renewable Energy Expt) |
| 7. | Alhaji Yusuf Yahaya | (Rural Electrification Agency) |
| 8. | Engr. Victor Amorha | (SAVIC Company Limited) |
| 9. | Mr. Benedict Ogbu | (TCN) |
| 10. | Mr. Murtala Aminu | (NNPC Gas Representative) |
| 11. | Mallam Haruna Sanni | (Kogi State Representative) |
| 12. | Mr. Victor Haruna Adamu | (Office of the Vice-President) |
| 13. | Mr. Toyin Akinosho | (Africa Oil & Gas Report) |
| 14. | Hasanna Bello (Ms.) | (NESG Technical Support) |
| 15. | Isaac Yarafa | (Ministry of Budget & Planning, Taraba State) |
| 16. | Musa Alhaji Dangana | (Niger State Planning Commission) |
| 17. | Prof. Paulinus Ugwuoke | (Energy Research and Development, UNN) |
| 18. | Martha Bona (Ms.) | (Technical Consultant) |
| 19. | Mr. Folarin Akinsomi | (Ministry of Finance Budget & National Planning) |
| 20. | Mr. Tope Yusuf | ((Ministry of Finance Budget & National Planning) |
| 21. | Mr. Ekom Umoren | ((Ministry of Finance Budget & National Planning) |

CURRENT STATUS OVERVIEW –ELECTRICITY SUPPLY

Installed Capacity

- 3 Hydro Plants
- 26 Gas Plants



>12,000_{MW}



Maintenance
and Repair issues



Available Capacity

- 25 Plants

>7,000_{MW}

Distributed Electricity

- Gas constraint.
- Water constraint.
- Grid Frequency.
- Distribution Constraints



>4,500_{MW}



Commercial Performance

Approximately 55%



Approximately 45% of Nigerians have limited or no access to the Grid.

45.7million small-scale off-grid fossil fuel-fired generators Generator Users by State for 2019-
NBS

Distrust among market
participants and
stakeholders

Customer dissatisfaction,
disaffection and
disloyalty

Liquidity Crises = CBN
Interventions

Equity + Investment
withdrawal

Tariff shortfall
and
Market shortfall

According to REA, Nigerians and their
businesses spend almost ₦5 trillion
annually on inefficient generation
(\$0.40/kWh or ₦140/kWh or more).

GOING FORWARD- AREAS OF FOCUS

- 1. Urban Area enumeration and proliferation of smart metering systems- revenue assurance.** (2019 Nigeria population projection - **212.8mln**; Generator population-**45.8mln**; Number of registered electricity customers- **10.5mln** , out of which approximately **4.1mln** have been metered.)
- 2. Successful and sustained Implementation of Cost-Reflective tariffs.**
- 3. Jump-starting the Off-Grid and On-Grid Renewable Energy Market.** (Continue REA Off-Grid Electrification Strategy- (i) Solar Home solutions (ii) Mini-grids (iii) Energizing Education and (iv) Energizing Economies.)
- 4. Execution of Transmission and Distribution Infrastructure projects/ Successful Implementation of Siemens PPI.**
- 5. Pro-active Gas to Power Interface Management and Planning.**
- 6. Centralised Data Management, Planning, Strategy and Coordination.** (The lack of NESI-wide planning & coordination of the NESI value chain, has produced inefficiencies and mismatches in network infrastructure development)
- 7. Workable Power Sector Governance.** (Politicization of Regulations and interference with tariff setting; Duplication of regulatory functions and responsibilities, unclear boundaries)
- 8. Successful Review of Power Sector Laws.**

STRATEGIC STATEMENTS OF THE FUTURE - 2025

Stablised Nigerian Electricity Market

No More Government Financial Support

Cost Reflective tariff, 100% Disco Remittance, Centralized data, data driven system and Contract-driven.

Increase human capacity through talent attraction, improved quality and quantity of training.

Rapidly growing Off-Grid Market driven by Alternative Energy-over 75% of rural and remote locations provided with power via renewable energy sources

Revamp and expanded transmission and distribution network to match capacity increase in generation

Power Sector Governance issues are resolved.

Siemens PPI is implemented successfully.

Successful consumer metering strategy is deployed. Market collections become transparent - Increase collection capacity via robust metering framework to match - 10GW

Grow generation capacity to ca. 10GW– ca. 70% gas, 30% other sources.

- ✓ **1,000,000 new semi-skilled + 10,000 skilled jobs.**
- ✓ **GDP Growth.**
- ✓ **Sustain Energy supply and payment for 10,000MW.**
- ✓ **Commence target 18hr power supply to key cities.**
- ✓ **Re-entry of Foreign Investors.**



OVERVIEW OF THE THEMATIC DEVELOPMENT PLAN 2021-2025

1. To **achieve grid efficiencies** by deploying network infrastructure such as customer, network metering, and grid management systems that will track network data in a centralized NESI database and **developing an independent standardized enumeration process** to increase the number of registered electricity customers.
2. To **increase customer meter penetration** by deregulating and liberalizing the meter market for urban areas.
3. To **achieve revenue assurance and availability of verifiable data** by establishing a centralized information database that will house all the NESI data and will be owned by all licensed participants.
4. To **improve sector governance** by ensuring the independence of the Regulator and improved effectiveness.
5. To **reduce gas constraints** by developing a gas-to-power framework by ensuring a contract driven market, and establishment of a Gas sector regulatory regime clearly differentiated from that for oil and tied to regulatory reforms implemented in the power sector.
6. To **diversify the energy mix** with renewable energy technologies and promote energy efficiency.
7. To **enhance the off-grid market** ;There is a need for the Federal Government to continue to improve the ease of doing business, continuous reduction of customs issues associated with importing renewable energy components and supporting finance development for local investors.

KEY TARGETS FOR 2025

Establishment of a Centralized Power Sector Integrated Information and Data Management System for NESI

A cumulative of 475MW realised from 50no. Off-Grid Renewable energy projects at 10MW each

Available Generation capacity of 10GW, consisting of 70% gas operated plant and 30% other sources.

Several distribution projects aimed at resolving Interface challenges and expanding distribution capacity to 10GW in 2025 completed

Develop and successfully implement a standardized Independent Urban Enumeration process.

NERC, REA, and DISCOs to clearly demarcate areas throughout the country to be powered by off-grid renewable energy solutions

Realisation of 1,125MW from 14nos Solar IPP Projects that have existing licenses and PPAs with NBET

Ensure adequate Domestic Gas Supply availability in Nigeria. Establish a gas-to-power investment plan aligned to power sector's development trajectory

Expand distribution and transmission infrastructure- Successful implementation of Siemens PPI

Diversify Energy sources through introduction and/or proliferation of solar, wind, small hydro, and biomass plants.

Ensure the independence and autonomy of the Regulator and streamlining agencies were needed

Deregulation and liberalization of the Customer Meter Market for Urban areas.

KEY LEGISLATIVE AND POLICY REFORM ACTIONS

FEDERAL RESPONSIBILITY

1. Revision of the EPSR Act 2005 to streamline the post privatization model.
2. Revision of the National Energy Policy 2003 to provide for strengthening of the regulatory agencies.
3. Revision of the NNPC Act 2004 as captured in the yet-to-be passed Petroleum Industry Bill (PIB).
4. Revision of the DGSO Regulations 2008 to give priority to gas-to power.
5. Allow tax and duty exemptions and reduce import delays
6. NERC to increase the 1 MW limit to 10MW for mini-grid systems permitted under existing regulations
7. Promulgation of strong and enforceable laws that will effectively deal with energy thieves. Criminalize Grid connections without the installation of Smart Pre-paid meter. Deregulation of metering sector to mandate purchase of meters by Estate developers and landlords.
8. Operationalisation and expand the Rural Electrification Fund's implementation framework, to include the creation of a project finance consortium, providing concessional and other appropriate financing instruments.
9. Revision of the National Renewable Electricity Policy Guidelines (2006) to include critical manpower development targets.

KEY LEGISLATIVE AND POLICY REFORM ACTIONS

10. Repeal/Amend the NEMSA Act 2015 and incorporate the agency into NERC.
11. Assign a % of VAT revenue as funding for the Regulator
12. Implementation of FEC Approved Gas Infrastructure Blueprint.
13. NNPC/NGC to ensure availability of up to 2500KM of Gas Transportation Infrastructure
14. Expand the import waivers on renewable energy equipment

STATE RESPONSIBILITY

1. Increase state and local government involvement in Off-Grid Renewable energy projects.
2. Creation of one-stop investment centers at State level for off-grid project development where private sector investors can access all permits and approvals.
3. Set up a committee on alternative energy under the Nigeria Governors Forum that is tasked solely with rural energy access through renewable energy technologies.
4. Promulgation of strong and enforceable laws that will effectively deal with energy thieves. Criminalize Grid connections without the installation of Smart Pre-paid meter. Deregulation of metering sector to mandate purchase of meters by Estate developers and landlords.

FUNDING OF 2021-2025 MTNDP

It is envisaged that the funding of the 2021-2025 MTNDP will be via 4 sources :

- (i) Appropriations**
- (ii) NESI Market revenue accruing to Services**
- (iii) Loans from Development Banks**
- (iv) Funding from Donor Agencies.**
- (v) Electricity Sector Taxes**

THANK YOU