

NATIONAL ENERGY BILL, 2021

A Bill

for

An Act to provide for a legal, fiscal and regulatory framework for sustainable energy development in Nigeria with the overall objective of providing clean, affordable, adequate and reliable energy with the active participation of the private sector and for other related matters, 2021 (SB. 81).

Sponsor: Sen. Ibrahim Abdullahi Gobir

() Commencement.

Enacted by the National Assembly of the Federal Republic of Nigeria –

PART I – OBJECTIVES

1 The objectives of this Bill is to-

Objectives

(a) ensure-

- (i) the development of the nation's energy resources, with diversified energy resources option, for the achievement of national energy security and an efficient energy delivery system with an optimal energy resource mix,
- (ii) comprehensive and up-to-date availability of energy sector data and information,
- (iii) effective coordination of national energy planning, programmes and policy implementation,
- (iv) a comprehensive, integrated and well-informed energy sector plans and programmes for effective development;

(b) guarantee-

- (i) increased contribution of energy productivity activities to national income,
- (ii) adequate, reliable and sustainable supply of energy at appropriate costs and in an environmentally friendly manner, to the various sectors of the economy, for national development,
- (iii) an efficient and cost effective consumption pattern of energy resources,

(c) promote-

- (i) increased investments and development of the energy sector industries with private sector leadership,
- (ii) research and development in, and adoption of, sustainable low carbon and clean energy technologies to mitigate environmental pollution and climate change,
- (iii) gender sensitivity and special attention to rural energy needs,
- (iv) efficiency, conservation and carbon management best practices in the nation's energy supply chain;
- (d) accelerate the process of acquisition and diffusion of technology and managerial expertise in the energy sector and indigenous participation in energy sector industries, for stability and self-reliance;
- (e) foster international co-operation in energy trade and projects development in both the African Region and the world at large; and
- (f) successfully use the nation's abundant energy resources to promote international cooperation.

PART II PETROLEUM PRODUCT

- 2 (1) The Government shall engage extensively in exploration and production of crude oil and associated liquid for economic growth.
- (2) To achieve desired self-sufficiency in crude oil and related liquid exploration and production, the government shall-
 - (a) place emphasis on internal self-sufficiency in processing and export of petroleum products;
 - (b) encourage the participation of indigenous and foreign companies in both upstream and downstream activities of the oil industry;
 - (c) encourage the adoption of environmentally friendly oil exploration, exploitation, handling and storage methods;
 - (d) complete deregulation and privatization of the oil industry; and
 - (e) aggressively pursue research and development studies and human capacity development to derive maximum economic benefit from its oil resources.
- 3 The Government shall-
 - (a) invest in and intensify crude oil exploration and production in all Nigerian sedimentary basins and ensure that acreages put up for bidding rounds are properly pre-estimated with minimal speculations;

Exploration and production of Crude oil.

Responsibilities of Government in Crude oil exploration.

- (b) invest in exploration, production and refining activities in other countries to promote national development and energy security;
- (c) maximize and expand the refining capacity in the country to cater fully for local consumption and export of petroleum products;
- (d) take appropriate measures to ensure that Nigerians are adequately involved in all sections of the oil industry;
- (e) provide appropriate incentives to attract investments and ensure reasonable returns;
- (f) encourage local engineering design and fabrication of equipment and spare parts in Nigeria;
- (g) ensure the use of locally available materials, for oil exploration, production and processing including refining;
- (h) update laws and regulations constantly to create the enabling environment for increased private sector participation in the oil industry, especially in the downstream sub-sector;
- (i) improve the living standards of people in oil producing communities through the provision of socio-economic infrastructure;
- (j) ensure that acreages put up for bidding rounds are properly pre-estimated with minimal speculations;
- (k) ensure adequate geographical coverage of oil refining and petroleum products distribution network;
- (l) ensure the availability of adequate strategic reserves of storage capacity for refined products for at least 90 days of forward consumption; and
- (m) periodically review and improve the short and medium term strategies.

4 (1) The Government shall eliminate routine gas flaring and prepare adequately for gas as a substitute for oil both for domestic needs and foreign exchange earnings.

Gas exploration and elimination of flaring.

(2) The primary objective of Government is to harness gas resources and optimally integrate into national economy, energy mix and industrial processes by-

- (a) intensifying in gas exploration and development through putting in place necessary infrastructure and incentives for-
 - (i) indigenous and foreign investors,
 - (ii) adequate geographical coverage of the gas transmission and distribution network;

- (b) promoting a competitive and efficient domestic market for natural gas and establishment of indigenous based natural gas facilities; and
- (c) aggressively pursuing research and development in human capacity development to derive maximum economic benefit from its gas resources.

5 To achieve sustainable gas exploration and usage in Nigeria, it is the duties of Government to-

Duties of Government in Gas exploration.

- (a) embark on deliberate exploration and development of gas reserves in all parts of the country;
- (b) encourage the-
 - (i) oil producing companies to gather and utilize associated gas in order to eliminate flaring,
 - (ii) establishment of the necessary infrastructure for effective gathering, transmission and distribution of gas nationwide;
- (c) provide incentives to encourage-
 - (i) industrial and domestic consumers to use gas or to convert to gas,
 - (ii) the introduction and use of LPG appliances in areas not accessible to natural gas so as to encourage the consumer preference for gas,
- (d) provide necessary incentives to indigenous and foreign entrepreneurs to facilitate their participation in the gas industry;
- (e) establish suitable infrastructure for the export of natural gas;
- (f) formulate and implement suitable urban and regional planning regulations needed for the effective distribution of natural gas to, and its utilization by, domestic and industrial consumers;
- (g) expand and promote gas related research and development outfits in the country;
- (h) ensure that the price of natural gas is cost effective;
- (i) impose appropriate and effective penalties to discourage gas flaring;
- (j) develop gas reserves in all parts of the country; and
- (k) periodically review and improve the short and medium term strategies.

6 For exploration and production of shale oil, the government shall-

Exploration and production of Shale Oil.

- (a) encourage-

- (i) coordinated baseline studies and research on shale hydrocarbon resources,
- (ii) indigenous and foreign companies to participate in exploration and exploitation of shale oil; and
- (b) put in place the mechanism for development of appropriate legal, fiscal, environmental and other regulations for the guidance and operation of the shale oil and gas industry.

7 The Government shall-

- (a) encourage and promote research and development by both public and private institutions for focused studies and geological mapping of shale oil and gas rich zones in all sedimentary basins;
- (b) set in motion appropriate legal and regulatory framework for creating enabling environment for exploration and exploitation of shale hydrocarbons in line with international best practices; and
- (c) ensure land reclamation and zero environmental degradation, including pollution of ground water resources from chemicals or other materials utilized in shale oil and gas production at project communities and locations;
- (d) delimit, chart and lease prospective blocks of sedimentary basins for shale gas exploration and exploitation by indigenous and foreign entrepreneurs as well as the national oil petroleum corporation;
- (e) make adequate provision to improve the living standards of people in shale oil and gas producing areas through provision of appropriate socio-economic infrastructure and other amenities;
- (f) encourage domestication of the technology for production, processing and utilization of shale hydrocarbon resources; and
- (g) periodically review and improve the short and medium term strategies.

Responsibilities
of Government
on Shale Oil.

PART III-COAL, TAR SANDS AND BITUMEN

8 For sustainable Coal exploration and production in Nigeria, the government shall-

- (a) pursue vigorously a comprehensive programme of resuscitation of the coal industry;
- (b) carry out extensive exploration activities to maintain a high level coal reserves;
- (c) actively promote private sector as well as local content input in the coal industry;
- (d) ensure-

Exploration and
production of
Coal.

- (i) exploitation and utilization of coal in line with global best practices,
- (ii) adequate supply of coal to meet the energy requirements of the country in a cost effective and sustainable manner;
- (iii) land reclamation and zero environmental degradation at project communities and location;
- (e) explore the techno-economic feasibility of new coal gasification and coal to liquid conversion; and
- (f) develop adequate infrastructure for handling and transportation of coal within and out of the country.

9 The Government shall-

- (a) intensify the drive for coal exploration and production activities;
- (b) provide adequate incentives-
 - (i) to indigenous and foreign entrepreneurs so as to attract investments in coal exploration and production ,
 - (ii) for the large scale production of coal stoves at affordable prices; and
- (c) organize awareness programmes for the use of smokeless coal briquettes as an alternative to fuel wood;
- (d) encourage research and development in the production, processing and utilization of coal;
- (e) undertake more detailed geological exploration for coal deposits in the country; and
- (f) periodically review and improve the short and medium term strategies.

Responsibilities of Government on Coal exploration and production.

10 For exploration and utilization of Bitumen and tar sands, government shall-

- (a) promote tar sands and bitumen exploration and exploitation;
- (b) actively promote private sector as well as local content input through small scale ventures in the exploitation of the tar sands and bitumen resources; and
- (c) encourage the adoption of environmentally friendly approach for exploration and exploitation of tar sands.

Exploration and exploitation of Tar Sands and Bitumen.

11 The Government shall-

- (a) provide appropriate incentives to facilitate investment in the exploration and exploitation of tar sands and bitumen;
- (b) establish an appropriate regulatory framework for the tar sands and bitumen exploration and processing, including

Responsibilities of Government on Tar Sands and Bitumen exploration.

- implementation of land reclamation and zero degradation activities at project communities and locations;
- (c) provide an appropriate finance facility to support indigenous investments in tar sands and bitumen development;
- (d) de-emphasize the importation of heavy crude oil as a way of encouraging the utilization of heavy oils from tar sands and bitumen;
- (e) undertake detailed geological exploration activities for tar sands and bitumen deposits in the country;
- (f) establish infrastructural facilities for the acquisition of the technology for harnessing tar sands and bitumen;
- (g) intensify research and development in the production of lubricants and other heavy oil products from tar sands and bitumen; and
- (g) periodically review and improve the short and medium term strategies.

PART IV- NUCLEAR ENERGY

- 12(1) The Government shall ensure the exploration and utilization of Nuclear Energy for peaceful application and economic growth.
- (2) In order to strengthen the existing institutional and regulatory framework for optimal exploration and utilization of Nuclear Energy in Nigeria, the government shall-
 - (a) promote the development of nuclear energy, and undertake all activities related to peaceful uses of nuclear energy in its entire ramification;
 - (b) pay adequate attention to safety, security and safeguard issues in the pursuit and operation of its nuclear programmes;
 - (c) encourage and fund the development of the requisite manpower, and provide the enabling environment for the Acquisition of competencies and skills needed for the design, construction and operation of the nation's nuclear facilities;
 - (d) strengthen all institutional and legal legislative framework , and ensure their operation;
 - (e) support research and infrastructural development necessary to enable rapid domestication, and encourage intellectual property right;
 - (f) cooperate with the International Atomic Energy Agency and other international organizations involved in the peaceful use of nuclear energy; and

Exploration and utilization of Nuclear Energy.

- (g) ensure that storage and disposal of nuclear waste is done in an environmentally friendly and sustainable manner.

13 The Government shall-

- (a) strengthen the institutional framework for the operational and regulatory aspects of the nuclear industry;
- (b) develop national capacity in all areas related to the use of nuclear energy and attaining self-sufficiency in human capacity development;
- (c) undertake public outreach and enlightenment campaigns on the applications and benefits of various nuclear application programmes, and how safety, security and safeguards issues are being addressed;
- (d) develop appropriate framework and mechanism necessary for environmental protection and management of wastes and spent fuel;
- (e) develop appropriate mechanism that will ensure adequate compensation for victims of nuclear accidents;
- (f) ensure that adequate sites are made available for the construction of nuclear facilities;
- (g) carry out research into all areas of peaceful uses of nuclear energy; institute adequate measures to ensure safety, security and safeguards;
- (h) make arrangements with institutions or individuals in Nigeria for the conduct of research into all aspects of nuclear energy;
- (i) collaborate with the International Atomic Energy Agency (IAEA), other development partners and friendly countries to develop nuclear energy for peaceful benefit;
- (j) establish appropriate mechanism for local participation in the supply of nuclear energy equipment;
- (k) construct and maintain nuclear facilities for the purpose of generating electricity and for other peaceful applications;
- (l) produce, acquire, treat, store, transport and dispose any radioactive substances; and
- (h) periodically review and improve the short and medium term strategies.

Responsibilities
of Government
on Nuclear
Energy

PART V- RENEWABLE ENERGY.

14(1) The Government shall fully harness the hydropower potential in Nigeria for sustainable electricity generation and economic growth.

Hydropower
Energy. .

- (2) To achieve the desire goal, the government shall-
 - (a) pay particular attention to the development of small, mini and micro hydropower schemes for the growth of the rural economy;
 - (b) exploit hydropower resources in an environmentally sustainable manner;
 - (c) actively promote private sector and indigenous participation in hydropower development;
 - (d) support research and development activities for local adaptation of hydropower plant technologies; and
 - (e) establish more hydro-meteorological stations across river basins.

15 The Government shall-

- (a) generate and update data on all rivers, by identifying possible locations for hydropower projects and facilitating detailed survey of the potential small hydropower sites;
- (b) introduce tax reductions, soft loans, grants, bilateral concessional funding to encourage private investments and public private partnerships in the development of hydropower projects;
- (c) put in place a framework for power purchase agreement;
- (d) exploit the multifunctional use of hydropower infrastructure e.g. flood control, water supply, electricity generation, recreation, etc.;
- (e) organize sensitization workshops, seminars and enlightenment programmes on the roles of small hydropower plants in rural development;
- (f) establish local training institutions to produce skilled manpower in hydropower technology;
- (g) ensure that State Rural Electricity Boards incorporate small scale hydropower projects in their agricultural, industrial and economic development; and
- (h) periodically review and improve the short and medium term strategies.

Responsibilities
of Government
on Hydropower
Energy.

16(1) The Government shall aggressively pursue the integration of solar energy into the nation's energy mix based on the established potentials and available technologies nationwide.

Solar Energy

- (2) In order to achieve the desire goal, the government shall-
 - (a) keep abreast of worldwide developments in solar energy technology and utilization to adopt global best practices;
 - (b) utilize solar energy resources where it is more cost effective and advantageous; and

(c) support the establishment of local manufacturing industries for solar energy conversion technologies and applications.

17 The Government shall-

(a) intensify-

- (i) research and development in solar technology and application,
- (ii) human and institutional capacity building in solar energy technologies and application;

(b) provide adequate incentives to-

- (i) suppliers of solar energy products and services,
- (ii) local manufacturers for the production of solar energy systems and accessories;

(c) introduce measures to fast-track the development of local solar energy industries;

(d) set up extension programmes to popularize solar energy technology and solutions to the rural and urban communities;

(e) pursue aggressive mass campaign and advocacy on the use of renewable energy as alternative energy sources;

(f) provide fiscal incentives for the installation of solar energy systems;

(g) develop and enforce standards for solar energy technologies, products, services and processes;

(h) set up and maintain a comprehensive information system on available solar energy resources and technologies;

(i) put in place measures to leverage funding from international agencies and countries that promote the use of solar energy; and

(j) periodically review and improve the short and medium term strategies.

Responsibilities
of Government
on Solar Energy

18(1) The Government shall commercially develop wind energy resources and integrate other energy resources into a balanced energy mix.

(2) To achieve the desire goal, the government shall-

(a) take necessary measures to ensure that the energy is harnessed at sustainable costs to both suppliers and consumers in the rural areas; and

(b) apply global best practices in the exploitation of wind energy resources.

Wind Energy

19 The Government shall-

(a) encourage research and development in wind energy utilization;

Responsibilities
of Government
on Wind Energy

- (b) develop skilled manpower for provision of basic engineering infrastructure for the local production of components and spare parts of wind power;
- (c) train skilled local craftsmen to ensure the operation and maintenance of wind energy systems;
- (d) intensify work in wind data acquisition and development of wind maps;
- (e) provide appropriate incentives to producers, developers and consumers of wind power system;
- (f) develop extension programmes to facilitate the general use of wind energy technology; and
- (g) periodically review and improve the short and medium term strategies.

20(1) The Government shall integrate hydrogen as an energy source in the energy mix of the country for use in fuel cells for the generation of electricity and other thermal energy conversion systems.

Hydrogen as an Energy source.

- (2) In order to achieve the desire goal, the government shall-
- (a) keep abreast of international trends in hydrogen production and application;
 - (b) develop local production capacity for hydrogen;
 - (c) provide incentives to popularize the use of hydrogen as an energy source; and
 - (h) periodically review and improve the short and medium term strategies.

21(1) The Government shall utilized and integrate other renewable energy source such as ocean waves, tidal energy, ocean thermal gradients and geothermal in the energy mix of the country for sufficient energy power. To achieve the desire goal, the government shall-

Other Renewable energy source

- (2)
- (a) maintain an interest in other emerging sources of renewal energy;
 - (b) develop a database on the potentials of these emerging energy resources;
 - (c) keep abreast of international trends in energy technology development;
 - (d) ensure incorporation of any proven cost effective energy resource into the energy mix;
 - (e) gather and disseminate information on the development these emerging technologies;

- (f) encourage research and development in the technologies of the exploitation of these emerging energy resources; and
- (g) periodically review and improve the short and medium term strategies.

PART VI-BIO-ENERGY.

22(1) The Government shall effectively harness non-fuel wood biomass energy resources and integrate them with other energy resources. Biomass Energy.

In order to achieve the desire goal, the government shall-

- (2)
 - (a) promote the use of efficient biomass conversion technologies;
 - (b) improve measures required to support a greater degree of forest thinning and the enhance collection and use of forest residues;
 - (c) enhance the demand side measures that support the use of biomass for the production of renewal energy;
 - (d) set a limit on the amount of biomass use for energy, to ensure that overall demand can be accommodated alongside other demands for land;
 - (e) undertake the life cycle analysis of all biomass feedstock to determine their relative climate change benefit; and
 - (f) incorporate waste to energy strategy in its overall waste management framework.

23 The Government shall-

- (a) develop extension programmes to facilitate the general use of new biomass energy technologies;
- (b) promote research and development in biomass energy technology;
- (c) establish pilot projects for the production of biomass energy conversion devices and system;
- (d) provide adequate incentives to local entrepreneurs for the production of biomass energy conversion systems;
- (e) train skilled manpower for the maintenance of biomass energy conversion systems;
- (f) promote electricity and heat generation from biomass waste; and
- (g) periodically review and improve the short and medium term strategies.

Responsibilities
of Government
on Biomass
Energy

24(1) The Government shall promote the use of alternative energy sources to fuel wood. Fuel wood Energy

(2) In order to achieve the desire goal, the government shall-

- (a) de-emphasize the use of wood as a fuel in the nation's energy mix;
- (b) intensify efforts to increase the percentage of land mass covered by forests in the country;
- (c) ensure that harvested areas are regenerated;
- (d) promote -
 - (i) the commercial growing of fuel wood and improve energy efficiency in the use of fuel wood,
 - (ii) energy conservation, efficiency and use of alternative energy sources to fuel wood.

25 The Government shall-

- (a) cultivate fast growing tree species needed to accelerate the regeneration of forests;
- (b) develop appropriate -
 - (i) technologies for the utilization of alternative energy sources to fuel wood;
 - (ii) efficient wood stoves in the short term;
- (c) ensure-
 - (i) the availability and effective distribution of alternative energy sources to fuel wood at all times,
 - (ii) the existence of effective forestry laws to stop the willful felling of trees,
 - (iii) effective enforcement of the forestry laws;
- (d) organize systematic public enlightenment campaigns on the problems of desertification and soil erosion arising from deforestation;
- (e) encourage the establishment of private and community woodlots for supply of fuel wood in the short term;
- (f) establish-
 - (i) micro-credit facilities for entrepreneurs, especially for women groups, for the establishment and operation of commercial fuel wood lots and the production of renewable energy devices and systems,
 - (ii) training programmes on the use, maintenance and fabrication of efficient woodstoves and other alternative technologies;
- (g) periodically review and improve the short and medium term strategies.

Responsibilities
of Government
on Fuel wood
Energy.

- 26(1) The Government shall improve on the link between the agricultural sector and the energy sector by promoting the blending of biofuels as a component of fossil-based fuels in the country as required for all automotive use.
- (2) In order to achieve the desire goal, the government shall-
- (a) promote investments in the biofuels industry;
 - (b) grant biofuels pioneer status for an initial 10 years period with the possibility of extension of 5 years;
 - (c) support the emergence of an industry in which substantial portion of feedstock used by biofuel plants will be produced by large scale producers and out growers; and
 - (d) ensure that biofuel industry benefit from carbon credit.

- 27 The Government shall-
- (a) encourage integrated plants and plantations biofuels operators to set up agricultural service companies to support out growers scheme;
 - (b) mandate biofuel producers to establish public private partnership with biofuels feedstock out growers;
 - (c) facilitate easy market entry for intending biofuel operators through supportive regulations on biofuel activities;
 - (d) grant-
 - (i) pioneer status tax holiday to all registered businesses engaged in biofuels related activities;
 - (ii) 10 years import duty waiver for biofuels equipment not produced locally;
 - (iii) a single digit interest on a preferential loan to be made available to investors in the biofuels industry to aid the development of large scale out growers schemes and co-located power generating plants; and
 - (e) establish agro-allied industries capable of benefiting from the incentives put in place to foster the development of the agro-allied industry in addition to other incentives; and
 - (f) periodically review and improve the short and medium term strategies.

PART VII-ELECTRICITY ENERGY

28(1) The Government shall make steady and reliable electricity power available at all times, at economic rates, for industrial, economic and social activities of the country.

Electricity
Energy.

(2) In order to achieve the desire goal, the government shall-

- (a) continue to engage intensively in the development of electricity sub-sector;
- (b) promote private sector participation in the electricity sub-sector;
- (c) pursue measures to diversify energy sources for electricity generation;
- (d) encourage the state and local governments to provide access to electricity to the rural areas through off-grid and other rural electrification programmes; and
- (e) ensure-
 - (i) availability of local capacity along the electricity value chain,
 - (ii) a sustainable supply of gas for electricity generation.

29 The Government shall-

- (a) strengthen the institutional framework for the operational and regulatory aspects of the electricity industry;
- (b) establish a -
 - (i) viable cost reflective tariff that will encourage the private sector's investment in the power sector,
 - (ii) reduced tariff regime for the low income and especially physically challenged electricity consumers and a mechanism for funding the subsidy within cost reflective structure,
 - (iii) basic engineering infrastructure for the local manufacture of power systems components;
- (c) rehabilitate existing power plants in order to derive optimum power from the installed capacity;
- (d) complete on-going projects designed to enable Nigerian Electricity Supply Industry satisfy the national demand;
- (e) reinforce the transmission network and support the development of distribution network expansion to allow consumers to enjoy steady and reliable supply of electricity;
- (f) regulate import duties to be paid on generation, transmission and distribution materials and equipments utilized in the whole

Responsibilities
of Government
on Electricity
Energy

electricity supply chain, to encourage investment and local production of power components;

- (g) encourage-
 - (i) onshore training facilities as a primary source of human capital capacity development in the power sector,
 - (ii) off-grid generation and supply of power in remote or isolated areas;
- (h) provide-
 - (i) appropriate incentives and support to entrepreneurs to ensure adequate returns on investment,
 - (ii) enabling environment and encourage financial institutions to support indigenous investments in the electricity industry;
- (i) operate the Rural Electrification Fund to facilitate electrification in the rural areas; and
- (j) periodically review and improve the short and medium term strategies.

PART VIII- ENERGY UTILIZATION.

30(1) The Government shall pursue the optimal utilization of its available energy types for various industrial activities in an environmentally sustainable manner.

Industrial
Energy
Utilization

- (2) To achieve the desire goal, the government shall-
 - (a) ensure-
 - (i) that an adequate supply of energy is made available;
 - (ii) ensure energy efficiency and conservation in industry;
 - (b) place emphasis on local sourcing of all the energy types to be used by industries; and
 - (c) enhance the growth of cottage and small scale industries through adequate supply of energy for the production processes.

31 The Government shall-

- (a) establish a data bank on energy supply, demand and consumption in the industrial sector;
- (b) ensure-
 - (i) strict compliance with energy related environmental pollution standards,
 - (ii) the development of appropriate energy inputs for small scale rural industries;
- (c) strengthen institutional arrangements to ensure energy conservation and efficient use of energy in industries;

Responsibilities
of Government
on Industrial
Energy

- (d) provide adequate incentives to encourage industries to –
 - (i) switch over to more appropriate energy types through import custom waivers,
 - (ii) develop energy management capabilities;
- (e) intensify research and development efforts to determine the appropriate energy types for different industrial applications;
- (f) encourage industries to sell excess electricity generated to other users;
- (g) implement energy audits in the industrial sector to identify and quantify the structure of energy supply, demand, utilization patterns, efficiencies and substitution potentials for both small and large scale industrial enterprises;
- (h) periodically review and improve the short and medium term strategies.

32(1) The Government shall ensure that appropriate sources of energy are utilized judiciously and efficiently for the overall agricultural activities, with minimum harm to the environment.

Agricultural
Energy
Utilization

- (2) To achieve the desire goal, the government shall-
 - (a) ensure-
 - (i) adequate and reliable supply of energy to the agricultural sector,
 - (ii) sustainable storage facilities for agricultural products using energy efficient technologies; and
 - (b) emphasize the use of affordable, adaptable, reliable and sustainable agricultural technologies, possessing flexible energy utilization capabilities.

- 33 The Government shall-
- (a) support research and development activities for the evolvement of appropriate technologies that can use available and multiple energy sources;
 - (b) develop-
 - (i) improved crops, quick growing trees for afforestation and energy crop,
 - (ii) training , and disseminating adaptable storage technologies;
 - (c) disseminate the developed technologies through extension programmes in the farming communities;
 - (d) train the existing extension personnel in effective dissemination of the newly developed technologies;

Responsibilities
of Government
on Agricultural
Energy
Utilization

- (e) establish a databank on energy demand, supply and consumption in the agricultural sector;
- (f) promote the use of renewable energy resources for agriculture;
- (g) implement energy audits in the agricultural sector to identify and quantify the structure of energy supply, demand, utilization patterns, efficiencies and substitution potentials for both the small and large scale farming; and
- (h) periodically review and improve the short and medium term strategies.

34(1) The Government shall ensure regular and adequate availability of all commercially viable fuel types for the transport sectors.

Transportation
Energy
Utilization

(2) In order to achieve the desire goal, the government shall-

- (a) vigorously-
 - (i) pursue the development of an optimal energy mix for the transport sector with particular attention to gas,
 - (ii) promote the development of mass transit systems;
- (b) pursue the development of integrated transportation system through inter-modal transportation system; and
- (c) ensure the use of energy efficient and environmentally friendly technologies in the transport sector.

35 The Government shall -

- (a) establish a databank on the energy consumption pattern of the transport sector;
- (b) maintain adequate stocks of the various transport fuels at levels that will ensure internal fuel security;
- (c) pursue and encourage the establishment and use of inter-modal system that will ensure rational utilization of energy resources;
- (d) use more stringent traffic management and speed limits to reduce travelling speeds on motorways and thereby cutting fuel consumption and transport emissions;
- (e) encourage the use of –
 - (i) gas for commercial tricycles and private transportation,
 - (ii) petrol for private cars and low powered commercial transport,
 - (iii) electricity, gas and diesel for commercial mass transit by road and rail,
 - (iv) diesel for inland water, sea and other heavy powered engines;

Responsibilities
of Government
on
Transportation
Energy
Utilization.

- (f) maintain an active interest in emerging and potentially more energy efficient transport technologies;
 - (g) encourage a shift towards more energy efficient transport system such as electric cars; and
 - (h) periodically review and improve the short and medium term strategies.
- 36(1) The Government shall ensure regular and adequate availability of all fuel types for the household sectors. Household Energy
- (2) To achieve the desire goal, the government shall-
- (a) vigorously pursue the development of an optimal energy mix; and
 - (b) ensure the use of energy efficient and environmentally friendly technologies in the household sector.
- 37 The Government shall- Responsibilities of Government on Household Energy.
- (a) strengthen the databank on the energy consumption pattern of both urban and rural household sub-sector;
 - (b) establish an energy appliance labelling scheme;
 - (c) encourage-
 - (i) the use of liquefied petroleum gas or cooking gas , solar water heating systems in households,
 - (ii) extensive use of renewable energy through incentives to households;
 - (d) pursue the electrification programme for both urban and rural households; and
 - (e) periodically review and improve the short and medium term strategies
- 38(1) The Government shall ensure regular and adequate availability of all fuel types for the commercial and services sectors. Commercial and Services Energy
- (2) To achieve the desire goal, the government shall vigorously pursue the development of an optimal energy mix for the services sector.
- 39 The Government shall- Responsibilities of Government on Commercial and Services Energy
- (a) establish a databank on the energy consumption patter;
 - (b) develop-
 - (i) building codes and certification schemes for public and commercial building,
 - (ii) energy performance test standards and labeling; and
 - (c) phase out incandescent bulbs and adopting efficient lighting technology in public and commercial building;
 - (d) promote passive energy houses and zero-energy; and

- (e) periodically review and improve the short and medium term strategies.

PART IX- ENERGY EFFICIENCY AND CONSERVATION

40(1) The Government shall adopt and promote energy efficiency and conservation best practices in the exploration and utilization of the nation's energy resources.

Energy efficiency and conservation.

- (2) To achieve the desire goal, the government shall-
 - (a) mainstream energy efficiency and conservation best practices into all sectors of the economy;
 - (b) adopt appropriate energy pricing, metering, and billing mechanisms; and
 - (c) integrate energy efficiency and conservation studies into the curricula of educational institutions.

41 The Government shall-

Responsibilities of Government on Energy efficiency and conservation

- (a) strengthen-
 - (i) existing institutional and legal framework for the promotion of energy efficiency and conservation,
 - (ii) national, regional and international collaboration on energy efficiency and conservation;
- (b) promote-
 - (i) education, information and public awareness campaign on energy efficiency and conservation best practices,
 - (ii) the establishment of Energy Services Companies,
 - (iii) research, development and adaptation of internationally available energy efficient technologies and measures;
- (c) conduct comprehensive energy end use analysis in various sector of the economy;
- (d) introduce-
 - (i) energy audits in key sectors of the nation's economy,
 - (ii) energy efficiency awards in all sectors of the economy;
- (e) establish guidelines and regulations on energy efficiency, conservation, consumption, technology, fuel mix, and information gathering;
- (f) design and implement appropriate mandatory labelling for all energy consuming appliances;
- (g) ensure the certification and accreditation of energy auditors and energy efficiency practitioners;
- (h) integrate energy efficiency and conservation studies into the curricula of educational institution in Nigeria; and

- (i) periodically review and improve the short and medium term strategies.

42(1) The Government shall promote the use of energy efficient and environmentally friendly technologies through energy efficiency standards for heating and air conditioning systems, appliances, and other plug in loads in residential homes.

Residential
Sector

- (2) To achieve the desire goal, the government shall-
 - (a) promote the use of energy efficient domestic cook stoves,
 - (b) encourage-
 - (i) widespread adoption of energy saving lamps,
 - (ii) a shift towards modern energy services and more energy efficient household appliances through Demand Side Management (DSM) techniques;
 - (c) establish demonstration projects to encourage investment in energy efficiency measures in the residential sector;
 - (d) raise awareness on the cost benefits of energy efficiency in the home; and
 - (e) incorporate energy efficient standards into the National Building Code.

43(1) The Government shall promote the adoption, development and application of industrial energy efficiency and conservation best practices.

Industrial Sector

- (2) To achieve the desire goal, the government shall-
 - (a) require large, energy intensive industries and encourage other industrial energy users to implement cost effective energy savings best practices and mandatorily report annually to Energy Commission;
 - (b) adopt appropriate Minimum Energy Performance Standards (MEPS) for electric motors and other categories of industrial equipment;
 - (c) develop and implement a package of specially designed incentives and other measures to promote energy efficiency in small and medium scale enterprises; and
 - (d) remove energy subsidies and internalize environmental costs to encourage industrial energy efficiency practices.

44 The Government shall-

Responsibilities
of Government
on Industrial
Sector

- (a) mandate industries to provide information on equipment energy performance, training initiatives, audits, technical advice and documentation, and system assessment protocols;
- (b) encourage-
 - (i) effective operational use of information flow in power factor, reduction peak load management and use of energy efficient equipment and machinery,
 - (ii) investment in energy efficient industrial equipment and processes by putting in place targeted financial incentives such as tax incentives for energy efficient investments in industry;
- (c) set up-
 - (i) and promote Minimum Energy Performance Standards (MEPS) and labels for electric motors and other categories of industrial equipment such as distribution transformers, compressors, pumps and boilers,
 - (ii) guidelines for implementing energy efficiency projects in the industry, as well as guidelines for consumers and manufacturers;
- (d) strengthen-
 - (i) the existing testing laboratories to support national and regional labeling and standards programmes,
 - (ii) institutional framework to promote energy conservation and efficient use of energy in industries;
- (e) provide high quality and relevant information on proven practices for energy efficiency in industries;
- (f) make available energy performance benchmark information that can easily use by industries and structure to allow international and national economy comparisons;
- (g) foster public private financing of energy efficiency upgrades in industry through risk sharing or loan guarantees with private financial institutions and enabling market for energy performance contract;
- (h) reduce specific energy consumption of key industrial outfits within the range of international best practices;
- (i) ensure that energy audits are carried out by qualified personnel in industry, and the report is widely promoted and easily accessible;
- (j) periodically review and improve the short and medium term strategies.

45(1) The Government shall ensure the use of energy efficient and environmentally friendly technologies in the transportation sector.

Transportation
Sector

- (2) To achieve the desire goal, the government shall-
- (a) provide incentives for the purchase and use of higher efficient vehicles and disincentives for less efficient vehicles;
 - (b) encourage-
 - (i) modal shift to public transport or non-motorized modes, walking and cycling, from road to rail and waterways and urban mobility planning,
 - (ii) and establish an organize and reliable public transportation system;
 - (c) establish energy efficiency, fuel quality and emissions standards for vehicles;
 - (d) enforce regulations, standards and codes of practice which will stimulate the supply of energy efficient vehicle technologies;
 - (e) cap highway speed limit to 110km/h or lower to save fuel and reduce vehicle emission; and
 - (f) promote the development of mass transit system.

46 The Government shall-

Responsibilities
of Government
on
Transportation
Sector

- (a) embark on public education and information programmes on energy efficiency ;
- (b) introduce measures –
- (c) to encourage the use of cleaner vehicles like labelling, taxation and infrastructure charges, grants and subsidies and scrappage schemes,
- (d) such as labelling, incentives and taxes to boost vehicle efficiency and accelerate the market penetration of new efficient vehicle technologies;
- (e) mandate installation of pollution control devices such as catalytic converters in vehicular exhaust emission systems and the implementation of tougher legislations relating to exhaust emission;
- (f) implement monitoring and disseminating mandatory standards and regulations for vehicle efficiency; and
- (g) periodically review and improve the short and medium term strategies.

47(1) The Government shall promote the adoption and development of energy efficiency and conservation best practices in the commercial and services sector.

Commercial
and Services
Sector

- (2) To achieve the desire goal, the government shall-
- (a) ensure the use of energy efficient and environmentally friendly technologies in the commercial sector;
 - (b) develop and adopt appropriate energy codes and standards for horizontal technologies and machineries used in the commercial sector;
 - (c) promote energy efficiency standards for heating and air conditioning system, appliances, and other plug loads such as lighting and consumer electronics in commercial and services sector; and
 - (d) require large, energy intensive commercial and services companies, to implement cost effective energy savings best practices, and periodically report on their efforts to Energy Commission.

48 The Government shall-

- (a) establish minimum energy performance standards for energy related equipment and appliances for the sector;
- (b) encourage-
 - (i) a widespread adoption of light emitting diodes, compact fluorescent lamps and other high energy saving lamps for services sector lighting in order to reduce electricity demand,
 - (ii) a shift towards modern energy services and more energy efficient services sector appliances through utility end use energy efficiency schemes such as the Demand Side Management techniques;
- (c) upgrade the energy performance of existing public and commercial building stock; and
- (d) create framework for the adoption and installation of smart meters or pay as you consume meters.

Responsibilities
of Government
on Commercial
and Services
Sector.

49 The Government shall-

- (a) integrate and implement energy efficiency building designs and conservation techniques into the construction of new building and retrofitting existing ones to be more energy efficient; and
- (b) promote passive design techniques in building designs.

Energy Efficient
Building
Designs.

50 The Government shall-

Responsibilities
of Government

- (a) establish-
- (b) Building Energy Consumption Indicators and Benchmarks for building; and
- (c) Guidelines for energy efficient practices in all government building.
- (d) introduce energy audit programs in building;
- (e) build Energy Consumption and End Use Database;
- (f) initiate National Energy Efficiency Awards to draw public and professional attention and to encourage wider acceptance of the building energy efficiency and conservation codes; and
- (g) periodically review and improve the short and medium term strategies.

51(1) The Government shall promote the development and adoption of energy efficiency-

Agricultural
Sector and
government
responsibilities.

- (a) and conservation best practices in the agricultural value chain; and
- (b) codes and standards for farm machineries and equipment.

(2) The Government shall be responsible to-

- (a) improve the efficiency of irrigation pump set;
- (b) increase the efficiency of non-pumping farm machinery;
- (c) minimize the need for traction through low tillage agriculture;
- (d) use energy efficient equipment and machinery for post-harvest drying and storage; and
- (e) periodically review and improve the short and medium term strategies

PART X- ENVIRONMENT, CLIMATE CHANGE AND OTHER ENERGY ISSUES.

52 The Government shall ensure the exploitation, distribution and utilization of our energy resources in an environmentally friendly and sustainable manner in order to avoid deforestation and pollution.

Environmental
and Climate
Change

53 The Government shall-

- (a) ensure –
 - (i) the existence of adequate environmental standards for all major energy production, transportation, transmission and utilization operations;
 - (ii) monitoring of vital environmental parameters in the production, processing and utilization of energy;
- (b) strengthen the relevant regulatory agencies in order to ensure the enforcement and compliance of appropriate set standards;

Responsibilities
of Government
on
Environmental
and Climate
Change

- (c) set appropriate targets for attainment of definite progress in the mitigation and control of energy related environmental problems;
- (d) put in place appropriate programmes to ensure the attainment of set targets for the mitigation and control of energy related environmental problems;
- (e) encourage-
 - (i) research and development in the optimal utilization of various energy sources to minimize the associated adverse environmental impacts,
 - (ii) the utilization of environmentally friendly energy sources;
- (c) provide viable and affordable alternatives to fuel wood in order to minimize deforestation and decelerate the rate of desert encroachment and erosion;
- (d) utilize appropriate technologies in the exploitation, distribution and utilization of the various energy resources to minimize the harmful effects on the environmental impacts;
- (e) carry out environmental impact assessments of major energy projects; and
- (f) periodically review and improve the short and medium term strategies.

54(1) The Federal Government shall develop and utilize the nation energy resources on sustainable basis through research and development.

Research and
Development

- (2) To achieve the desire goal, the government shall-
 - (a) develop and promote local capability in the nation's energy centres, tertiary institutions and research institutes for the design and fabrication of efficient energy devices and technologies for the utilization of renewable energy resources;
 - (b) promote the demonstration and dissemination of renewable energy devices and technologies for adoption and marketing,
 - (c) monitor and assess international technological developments in all energy areas;
 - (d) initiate and promote energy educational programmes and research activities in tertiary and research institutes;
 - (e) encourage-
 - (i) result oriented research and development in the energy sector by making expenditure on such efforts tax deductible,

- (ii) the energy producing and processing companies to set up research and development outfits and to utilize research and development institutions; and
- (f) establish research and development training programmes for the development of specialized energy manpower.

55(1) The Government shall deploy nation's energy resources in promoting and enhancing regional and international co-operation for the overall economic and technological advancement of the nation.

Bilateral,
Regional and
International
Cooperation.

- (2) To achieve the desire goal, the government shall-
 - (a) lay emphasis on fostering and strengthening energy cooperation and integration within Economic Communities of West Africans States; and
 - (b) pursue international collaboration on energy.

56 The Government shall-

- (a) strengthen coordinated approach to regional and sub-regional energy planning based on co-operation and consultation among member countries of both Economic Communities of West Africans States and African Union;
- (b) promote the standardization and certification of energy related plants, machineries, spares parts and establishment of infrastructural facilities within the community for their production;
- (c) mobilize domestic capital and create a favourable investment climate to attract international financing for energy development projects;
- (d) pool available human resources through networking of national energy training and research centers; and
- (e) periodically review and improve the short and medium term strategies.

Responsibilities
of Government
on Bilateral,
Regional and
International
Cooperation.

57(1) The Government shall encourage the use of locally available resources in all aspects of the energy sector in Nigeria.

Local Content

- (2) To achieve the desire goal, the government shall-
 - (a) identify , quantify and qualify resources for use in energy sector;
 - (b) conduct studies on national demand and export possibilities of locally produced materials in the energy sector;
 - (c) provide incentives to encourage local manufacturing and production of equipment and consumables used in the energy sector;
 - (d) establish-

- (i) a common and comprehensive local content measurement for the entire energy sector,
- (ii) a financing mechanism which will support indigenous investments in the energy sector industries; and
- (e) put in place schemes to ensure broad based access by Nigerians to shares in privatized energy sector industries.

58(1) The Government shall promote manpower development and training in the nation's energy sector.

Manpower
Development
and Training.

- (2) To achieve the desire goal, the government shall-
 - (a) establish a national human resources data base in the energy sector;
 - (b) ensure-
 - (i) the integration of research, development and manpower training in the energy sector,
 - (ii) that energy producers make available certain percentage of their annual profit to support and fund manpower development and training;
 - (c) develop a national programme to meet energy manpower needs;
 - (d) determine periodically the manpower stock and needs; and
 - (e) integrate energy studies into the curricula of secondary and tertiary institutions.

59(1) The Government shall encourage and ensure gender mainstream in energy issues.

Gender Issues

- (2) To achieve the desire goal, the government shall-
 - (a) promote integrated approaches and various solutions that recognize the importance of wood energy and cooking for poor women and its health implication;
 - (b) ensure equal access to electricity for water pumping, agricultural processing, security, work productivity and health in the framework of sectoral development initiatives;
 - (c) provide equal access to credit facilities, extension support services and training in energy and electricity supplies for women's domestic tasks as well as their micro-enterprise activities are met;
 - (d) develop a reliable gender responsive statistical data; and
 - (e) monitor and evaluate the impacts of rural energy projects on poverty alleviation and gender equality.

PART XI- ENERGY FINANCING

- 60(1) The Government shall accord high priority on investments in the nation's energy sector by providing financing policy frame work for achieving a sustainable development.
- (2) To achieve the desire goal, the government shall-
- (a) explore and adopt all viable financing options from local and international sources for cost effective exploitation of its energy resources;
 - (b) encourage increase in private investments both domestic and foreign in the energy sector;
 - (c) implement an Integrated Infrastructure Master Plan to enable cross sector harmony and financing framework; and
 - (d) create an investment friendly environment through improving real and perceived risk by private investors measure through Transparency International corruption index, World Bank doing business index and millennium challenge Corporation.

Financing
Requirements

- 61 The Government shall-
- (a) provide fiscal incentives for prospective investors in the energy sector;
 - (b) ensure periodic review of energy pricing to guarantee a reasonable return on investment;
 - (c) encourage-
 - (i) the inflow of offshore investment funds from international investments banks and brokerage firms,
 - (ii) energy firms to source development funds from the Nigerian capital market;
 - (d) employ the use of Public Private Partnership models to finance viable energy projects;
 - (e) establish a legal and regulatory framework for energy financing; and
 - (f) empower the fiscal and monetary authorities to execute energy financing.

Responsibilities
of Government
on Financing
Requirements

PART XII- PLANNING AND IMPLEMENTATION

- 62(1) The Government shall develop an integrated energy planning system involving the energy related programmes and activities of the various sectors of the economy.
- (2) To achieve the desire goal, the government shall-
- (a) provide a comprehensive energy planning system that will cover exploitation, processing, consumption and conservation activities

Planning and
Implementation

which shall be consistent with the overall national development goals; and

- (b) carried out energy planning process in collaboration with relevant ministries, department and agencies at both levels of government as well as stakeholders.

63 The Commission shall-

- (a) strengthen co-operation with other relevant stakeholders in the energy sector;
- (b) encourage-
 - (i) formal discussion and collaboration amongst institutions in the energy sector whose activities are inter related,
 - (ii) the establishment of energy planning and implementation units at state level and the assignment of responsibilities for energy related matters at local government level;
- (c) ensure that strategic plans and programmes of the energy sub-sectors are appropriately appraised for ensuring consistency with the overall national energy law ;
- (d) establish a national energy information management system which will involve consistent data gathering and processing of energy resource inventory, consumption pattern, energy technologies, and other relevant socio-economic parameters;
- (e) develop an energy master plan, which is based on the study of energy demand , energy supply, as well as energy economy;
- (f) put in place an effective programme for accelerated manpower development; and
- (g) provide a system for the development of indigenous capabilities in energy conversion technologies.

Responsibilities
of the
Commission.

64(1) The Commission shall be the nation's focal point for the coordination, monitoring and evaluation of the implementation of this Bill at the Federal, State and Local Government levels.

(2) To achieve the desire goal, the Commission shall-

- (a) ensure-
 - (i) the existence of a forum to provide opportunities for regular discussions among agencies and departments involved in the production or utilization of energy;
 - (ii) that approved fiscal measures, which are necessary for the achievement of set objectives of this Bill, are promptly carried out;

Implementation
and other
responsibilities
of the
Commission.

- (b) encourage private sector participation in the provision of energy services in the country;
- (c) create regular forum for public awareness, education and participation in the realization of the goals and objectives of this Bill;
- (d) prioritize the strategies for implementation, with the setting of realistic targets and effective monitoring and evaluation of the implementation process;
- (e) institute a system of carrying out regular checks and receives reports on the implementation by all actors in the energy sector; and
- (f) produce regularly publications on the state of the energy sector and create relevant and accessible website for effective dissemination of information.

65(1) The Minister may, on the recommendation of the Commission and subject to the approval of the President, make regulations generally for the purposes of this Bill. Regulations

(2) The Commission shall in the implementation process of this Bill, be guided by the provisions of the regulations and schedules to this Bill. Schedule

66 **In this Bill-** Interpretation

“**Bitumen**” means a black viscous mixture of hydrocarbons obtained naturally or as a residue from petroleum distillation;

“**Biofuel**” means fuels produced directly or indirectly from organic material – biomass – including plant materials and animal waste;

“**Biomass**” means renewable organic materials which include wood, agricultural crops or wastes, and municipal wastes, especially when used as a source of fuel or energy;

“**Commission**” means Energy Commission of Nigeria established under Section 1(1) of Cap. E10, Laws of the Federation of Nigeria, 2004;

“**Government**” means Federal, State or Local Government;

“**Minister**” means Minister in charge of Energy.

“**Tar Sand**” means a combination of clay, sand, water, and bitumen, a heavy black viscous oil;

“**Shale Oil**” means an organic-rich fine-grained sedimentary rock containing kerogen (a solid mixture of organic chemical compounds) from which liquid hydrocarbons called *shale oil* can be produced.

67 This Bill may be cited as the National Energy Bill, 2021 Citation

SCHEDULE

PRIORITIZATION OF STRATEGIES INTO SHORT, MEDIUM AND LONG TERM.

1. The implementation process of the Energy Bill requires strategies that allow for a number of factors including priority setting, policy continuity and a clear focus on key issues.
2. The strategies shall be based on realistic targets, a defined time frame as well as effective target evaluation. The advantages of this approach are-
 - (a) it will enable planners and implementing organs to include the cost of each strategy in their respective budgets, as they fall due; and
 - (b) it will aid monitoring organ to assess the progress of implementation of the various strategies.
3. The measure shall be as follows-
 - (a) short term measures may be evaluated within 3 to 5 years;
 - (b) medium term measures may be evaluated within 5 to 10 years; and
 - (c) long term measures may be over 10 years.
4. Note that, with the above perspective, the recommended activities are as indicated below-

A- SHORT TERM MEASURES

General.

1. Prioritizing strategies for implementation, with the setting of realistic targets and the effective monitoring and evaluation of the implementation process.
2. Developing and implementing-
 - (a) necessary machinery for constant monitoring of the implementation of the energy Bill and compliance with the guidelines and regulations on various energy matters by all sectors of the economy;
 - (b) appropriate packages to enhance the utilization of renewable energy to solve rural energy problems and to make possible the extension of commercial energy and the associated technology to the rural sector; and
 - (c) appropriate and dynamic pricing and tariff structures for petroleum products, gas, electricity and other energy types, which will encourage private sector participation, by ensuring a reasonable return on investments while giving due attention to the needs of the target markets.
3. Ensuring the implementation of fiscal measures necessary for the achievement of the set objectives of the energy Bill.

4. Rehabilitating refineries, petroleum products distribution infrastructure, power plants, transmission and distribution networks.
5. Promoting the establishment of local services companies for the oil, gas, electricity, etc sub-sectors and encouraging their patronage by the energy companies in the private and public sectors.
6. Strengthening –
 - (a) of all relevant regulatory agencies in order to ensure the enforcement of appropriate set of standards and procedures, including in particular standards and procedures on exploration, production and utilization of energy; and
 - (b) the programme on the liberalization and privatization of the energy sector.
7. Improving the-
 - (a) living standard of people in an energy resource producing communities through the provision of socio-economic infrastructure.
 - (b) effectiveness of energy planning and implementation by establishing energy planning and implementation units at state government levels and assigning responsibilities for energy related matters at local government levels.
8. Establishing-
 - (a) a national energy information system which will involve consistent data gathering and processing of energy resource inventory, consumption pattern, energy technologies and other relevant socio-economic parameters;
 - (b) a strategy for the public awareness, education and participation in the realization of the goals and objectives of the energy Bill; and
 - (c) a plan to encourage increased placement of Nigerians in all positions in the energy producing, service and processing companies, including especially in key decision making and technical positions in oil, gas, nuclear and other relevant energy industries.
9. Encouraging interaction within existing forum for formal discussions and collaboration between institutions in the energy sector.
10. Enabling private sector participation in the energy sub-sectors through the review of existing relevant laws and regulation.
11. Monitoring and assessment of technological developments in all energy areas and development of capabilities to apply them, as appropriate in the various sectors of the economy.

12. Increasing funding to appropriate agencies for the provision of energy related engineering infrastructure.
13. Easing constraints on the importation of essential but scarce materials for the manufacture of engineering equipment's and spares.
14. Submitting energy data and information, as may be required by the Commission to carry out its monitoring coordination and data banking functions, at specified intervals, by the sub-sectoral agencies that generate or collect the primary data.
15. Reviewing and ensuring the implementation of the existing energy master plan.

Oil:

16. Setting up medium term reserves and producing target.
17. Updating the memorandum of understanding to ensure that it contains appropriate incentives that will attract investments in intensified crude oil exploration and development.
18. Maximizing petroleum production and processing efficiencies.
19. Improving and promoting the provisions put in place for the establishment of export refineries.
20. Ensuring the use of locally available materials such as bentonite and barytes for oil drilling.

Natural Gas:

21. Reviewing and improving existing incentives to producing companies to encourage them to gather and utilize associated gas in order to maximize income from associated gas and eliminate gas flaring.
22. Establishing appropriate guidelines, regulations and incentives for the participation of indigenous and foreign entrepreneurs in the establishment of the infrastructure for, and business in, gas gathering, transmission and distribution.
23. Providing funding for the establishment of a nationwide infrastructure for gas gathering, transmission and distribution.
24. Reviewing and sustaining the implementation of incentives to industrial and domestic consumers to use gas or change over to gas.
25. Sustaining and expanding the measures presently in place for the establishment of infrastructure and markets for the export of natural gas.

26. Formulating suitable urban and regional planning regulations, which are needed for the effective distribution of natural gas to domestic and industrial consumers.

Tar Sands and Bitumen

27. Undertaking of more detailed geological studies, exploration and exploitation activities for the sands and bitumen deposits of the country.
28. Establishing an appropriate regulatory institution for the tar sands and bitumen sub-sector.
29. Putting in place necessary regulations and guidelines for the exploitation of tar sands and bitumen deposits.
30. Providing appropriate incentives to facilitate investments in the exploration and exploitation of tar sands and bitumen resources.

Coal:

31. Developing and implementing appropriate measures for large scale production of coal stoves at affordable prices and for the establishment of coal based industries, by local entrepreneurs.
32. Providing adequate funding to enable intensified coal exploration and production activities.
33. Re- introducing the use of coal for power generation.
34. Providing adequate incentives to indigenous and foreign entrepreneurs so as to attract investments in coal exploration and production.

Nuclear:

35. Intensifying research, development and training in nuclear science and technology for peaceful applications.
36. Encouraging a rational nuclear development programme and institutional arrangements.
37. Strengthening of the Nigerian Nuclear Regulatory Authority to ensure nuclear safety and radiation protection.
38. Regular public enlightenment campaigns on peaceful applications of nuclear technology.
39. Intensifying the exploration activities for nuclear mineral resources.
40. Strengthening existing co-operation with the International Atomic Energy Agency (IAEA) and actively participating in all its programmes.

41. Providing adequate resources to the Nigerian Nuclear Regulatory Agency (NNRA) for the enforcement of nuclear laws and regulation.

Hydropower:

42. Reviewing and improving constantly the multilateral agreements for monitoring and regulating the use of water in international rivers flowing through the country.

43. Increasing patronage of indigenous entrepreneurs involved in the planning, design and construction of hydropower plants

44. Establishing appropriate-

(i) fiscal measures as incentives to indigenous and foreign entrepreneurs for the local production of hydropower plants and accessories,

(ii) institutional arrangements, regulations and guidelines for the development of small scale hydropower plants.

Fuel wood:

45. Cultivating fast growing tree species needed to accelerate the regeneration of forests.

46. Developing smokeless coal, sawdust, biogas and other energy technologies as alternatives to fuel wood.

47. Improving the efficiencies and performances of existing improved woodstoves and ovens.

48. Encouraging the establishment of private and community woodlots for the supply of fuel wood.

49. Ensuring the availability and effective distribution of kerosene as an Alternative to fuel wood in the interim.

50. Establishing-

(i) training programmes on the use, maintenance and fabrication of efficient wood stoves and other alternatives technologies,

(ii) micro-credit facilities for entrepreneurs, especially women groups, for the establishment and operation of commercial fuel wood lots and the production of renewable energy devices and system;

51. Promoting activities, such as extension and pilot projects, to disseminate solar, biogas and other alternatives to fuel wood.

Environment:

52. Organizing system public enlightenment campaigns on the problems of desertification and soil erosion arising from deforestation.
53. Reviewing and enforcing forestry laws to effectively stop the willful felling of trees in prohibited zones.
54. Disseminating information on existing energy efficient and environmentally friendly technologies in the exploitation of various energy resources.
55. Strengthening existing guidelines and regulations on appropriate technologies for the exploitation of energy resources to minimize harmful environmental effects.
56. Intensifying research and development in more efficient and environmentally friendly utilization of various energy sources.
57. Encouraging the utilization of environmentally friendly energy resources and technologies.
58. Setting appropriate targets for the attainment of definite progress in the mitigation and control of major energy related environmental problems.
59. Putting in place appropriate programmes to ensure the attainment of the set targets for the mitigation and control of the major energy related environmental problems.
60. Reviewing the existing penalties for gas flaring and ensuring that they achieve the desired effect.
61. Establishing appropriate arrangements to ensure the implementation of the incentives and penalties to discourage gas flaring.

Solar, Biomass and Wind:

62. Establishing-
 - (i) demonstration and pilot projects as well as holding workshops and public education campaigns on solar energy, biomass, biogas, wind and other renewable energy resources to ensure their adoption and market penetration,
 - (ii) appropriate fiscal measures as incentives for the utilization of solar, wind and other renewable energy systems,
 - (iii) a set of regulations and guidelines to promote and sustain the local solar, biomass and other renewable energy industries;
63. Developing and implementing training packages for skilled craftsmen and technicians on the production, operation and maintenance of solar, wind biomass and other renewable energy system.

64. Providing adequate incentives to producers, developers and suppliers of solar, wind and biomass energy products and services.

Other Renewable Energy Resources:

65. Gathering information on the advances in less developed renewable energy resources, extension of the energy information acquisition, storage and dissemination activities to them.

Electricity:

66. Completing on-going short term projects designed to satisfy national demand for electricity.

67. Expanding of the existing electricity transmission and distribution networks.

68. Intensifying research, development and training in alternative sources of energy for the generation of electricity.

69. Reviewing and strengthening of existing incentives for the encouragement of local manufacture of electrical equipment and devices.

70. Establishing effective measures to ensure the security of electrical installations and improving the operational efficiency of the electricity sub-sector, particularly the distribution activities.

71. Providing appropriate financing facilities to support indigenous investments in the electricity industry.

Industry:

72. Developing and implementing appropriate measures to encourage fuel substitution in industries.

Agriculture:

73. Promoting the utilization of renewable energy in agriculture through demonstration, pilot projects, workshops, etc.

74. Intensifying research and development activities for appropriate agricultural technologies that can use available and multiple energy resources, including animal traction.

Transport:

75. Reviewing periodically transport fuel storage capacity, in accordance with developments in the transport sector, with a view to updating the storage capacity guidelines and storage infrastructure.

76. Comprehensive study of the transport fuel distribution systems and development of recommendations for their improvement.
77. Initiating discussion with relevant institutions in the transport sector to identify appropriate energy efficient transport system, strategies and equipment that should be introduced.
78. Encouraging relevant agencies to-
 - (i) Introduce fuel efficient transport management system,
 - (ii) Improve and expand mass transportation and communication systems countrywide.

Energy Efficiency and Conservation:

79. Developing codes, standards, regulations and guidelines on energy conservation and use of energy efficient methods, equipment, machinery and technologies in agriculture, industry, building design and construction.
80. Establishing appropriate institutional arrangements and incentives for the promotion and monitoring of energy conservation and use of energy efficient methods.

Research, Development and Training:

81. Providing increased funding to research institutes, centers and tertiary institutions, who are undertaking research and development work on renewable, nuclear, coal and other energy resources to ensure productive research and development and the establishment of appropriate infrastructure.
82. Developing and implementing research and development programme in energy conservation and efficiency, including the development and manufacture of energy efficient equipment and machinery.
83. Promoting the development and introduction of integrated energy and environment curricula and disciplines into the programmes of tertiary institutions.
84. Taking measures to ensure adequate institutional capacity for the production of adequate numbers and quality of high level and skilled technical and managerial manpower for the energy sector.
85. Establishing the necessary machinery to provide adequate funding from conventional energy sub-sectors, such as the dedication of a certain percentage of the nation's income from such sectors, to support research, development, demonstration and training in energy.

86. Developing and initiating of the implementation of an accelerated and effective manpower development programme for the energy sector.

Finance:

87. Providing appropriate measures to encourage prospective investors in the energy sector.

88. Expanding the scope of venture capital financing (national risk fund plc) to embrace investments in the energy sector.

89. Encouraging energy firms to source development funds from the Nigerian capital market.

90. Establishing guaranteed and dependable repayment scheme for loans invested in energy projects.

Indigenous Participation:

91. Establishing a financing mechanism which will support indigenous investments in energy sector industries.

92. Creating appropriate motivation through the memorandum of understanding and operating license in the energy sector, for increasing the local content of value added in the activities of energy sector industries.

93. Setting aside significant percentages of the shares of privatized energy sector industries for acquisition by Nigerians.

94. Putting in place schemes to ensure broad based access by Nigerians to shares in privatized energy sector industries.

B-MEDIUM TERM MEASURES

General

1. Reviewing and continuation of short term activities.

2. Ensuring that the strategic plans and programmes of the energy sub-sectors are appropriately appraised with a view to ensuring consistency with the overall national energy Bill and plans and resolving conflicts arising from sub-sectoral plans and programmes.

3. Developing other potential sites for hydropower, gas and coal plants for electricity generation.

4. Monitoring and ensuring the progress of the plan for achieving the placement of Nigerians in key decision making positions and other responsibilities in the energy industries.

5. Establishing and sustaining the implementation of a national energy master plan.

Oil

6. Ensuring the attainment of a reserve target of 35 billion barrels and a production capacity of 3.5 mbpd.
7. Commercializing the operations of existing refineries while taking steps to promote private sector participation in the refining business.
8. Expanding the transmission and storage facilities for petroleum products to achieve the 45 days strategic reserves.
9. Ensuring adequate geographic coverage of petroleum products distribution network.

Natural Gas

10. Terminating gas flaring.
11. Sustaining funding for the expansion of the infrastructure for gas gathering, transmission and distribution nationwide.
12. Intensifying promotional activities for the use of gas and change over to gas by industrial and domestic consumers.
13. Implementing urban and regional planning regulations for effective distribution of natural gas.
14. Embarking on deliberate exploration for gas in all parts of the country.

Tar Sands and Bitumen

15. Continuing detailed exploration activities and mapping and exploitation of the Tar Sands and Bitumen deposits in the country.
16. Providing appropriate financing facilities to support indigenous investment in tar sands and bitumen development.

Coal:

17. Reviewing, improving and effectively implementing measures for the production of coal stoves and the establishment of coal based industries.
18. Establishing smokeless coal pilot projects for the promotion of the use of smokeless coal as an alternative to fuel wood.
19. Introducing clean coal technologies into coal utilization.

Nuclear:

20. Acquiring additional nuclear research facilities and expansion of their applications in manpower training, agriculture, medicine and industry.
21. Commencing the exploitation of the nuclear mineral resource deposits in Nigeria.
22. Enforcing Nuclear Safety and Radiation Protection Regulation.
23. Establishing a nuclear surveillance programme for the protection of the environment.

Hydropower:

24. Introducing alternative technological options to reduce the impact of water shortage on hydropower plants.
25. Encouraging the private sector in the establishment and operation of hydropower plants.
26. Establishing-
 - (i) basic engineering infrastructure for the production of hydropower plants equipment and accessories,
 - (ii) mini and micro-hydropower plants.

Fuel wood:

27. Ensuring the availability and effective distribution of kerosene and other viable alternatives to fuel wood.
28. Conferring reserve status on greater acreage of forest and establishment of an effective system of forest regeneration.
29. Developing appropriate pricing structure to encourage substitution from fuel wood to alternative fuel types.

Environment:

30. Implementing programmes for the attainment of set targets for the mitigation and control of major energy related environmental problems.

Solar, Biomass and Wind:

31. Continuing the establishment and monitoring of renewable energy pilot projects and other overflow short term activities.
32. Establishing of pilot projects to assist local entrepreneurs in the manufacture of biomass energy conversion devices.

33. Enabling the establishment of facilities for the manufacture of renewable energy equipment and devices such as solar cells, PV panels and systems, wind energy equipment and biogas generators, etc.

Other Renewables:

34. Continuing data gathering, storage and dissemination activities while encouraging research and development activities in the less developed renewables with a view to possible exploitation.
35. Prioritizing the level of need, technological developments and viability of emerging renewable energy resources.

Electricity:

36. Implementing the programme for the liberalisation and privatisation of the electricity sub-sector.
37. Encouraging off-grid generation and supply of power in remote or isolated areas.
38. Establishing a Rural Electrification Fund to facilitate electrification in the rural areas.

Agriculture:

39. Ensuring wider adoption of animal traction and simple agricultural technologies that can use multiple energy resources.
40. Training of existing extension personnel in the effective dissemination of the newly developed energy technologies for agriculture.

Transport:

41. Rehabilitating and expanding the road, rail and river transport networks as well as port facilities for the handling of coal.
42. Developing and implementing appropriate strategies to attract investments in natural gas pipeline networks and to promote conversion to natural gas for road, river and rail transportation.
43. Encouraging the building of natural gas filling stations as part of road, river and rail network.
44. Implementing the approved recommendations of the study of the transport fuel distribution system.
45. Implementing the approved recommendations from the investigations on the appropriate energy efficient transport systems, strategies and equipment.

Energy Efficiency and Conservation:

46. Implementing the codes, standards, regulations and guidelines on energy conservation and use of energy efficient methods, equipment, machineries and technologies in agriculture, industry, building design and construction, etc.
47. Establishing the expanded use of energy efficient mass transportation and communication systems.

Research, Development and Training:

48. Strengthening the existing National Electricity Research, Development and Training Institute to undertake Research, Development and Training activities in generation, transmission and distribution of electricity, and Zonal Training Centres for the training of various cadres of professional and skilled manpower for the electricity sub sector.
49. Developing, through adequate funding, of the capabilities of the petroleum training institutions to include Research and Development activities on oil and gas related issues and on tar sands for the production of lubricants and other heavy oil products.
50. Providing equipment for energy related research, development and training institutes and centres to enable them provide the necessary facilities and services needed by enterprises involved in the development of the energy sector.
51. Establishing training programmes for the development of specialized energy manpower.

Finance;

52. Establishing special risk fund scheme for the commercialization of new and emerging energy technologies, such as renewable energy technologies.
53. Encouraging the attraction of long term financing from international finance institutions comprising international capital markets and brokerage firms and allowing international brokerage firms to establish and operate in Nigeria.
54. Encouraging the establishment of offshore banking units to attract regular inflow of offshore funds.

Indigenous Participation:

55. Putting in place other incentives, appropriate to each energy sub sector, which will promote indigenous private sector participation and competitiveness in the sub sector.

56. Encouraging the establishment of energy sector production and service industries by indigenous investors.

C-LONG TERM MEASURES

General:

1. Reviewing, improving and sustaining the medium term measures.
2. Effective Nigerianization of the personnel in the energy industries.
3. Reviewing, strengthening and sustaining the implementation of the national energy masters plan.
4. Integrating fully, renewable, nuclear and conventional energy resources into an optimal energy mix.

Oil:

5. Ensuring the attainment and maintenance of a minimum crude oil and condensate reserve of 40 billion barrels and a production capacity of at least 4 mbpd.
6. Completing the privatization of the petroleum processing industries.
7. Furthering expansion of the transmission and storage facilities for petroleum products to achieve at least 90 days strategic reserves.

Natural Gas:

8. Putting in place an effective nationwide infrastructure for gas gathering, transmission and distribution, and for the export of natural gas.

Tar Sands and Bitumen:

9. Continuing the exploration activities to identify and quantify areas with tar sands and bitumen deposits in Nigeria.
10. Establishing tar sands and bitumen production and processing industry in the country.
11. Developing and implementing a strategy for discouraging the importation of heavy crude oil.

Nuclear:

12. Planning the introduction of nuclear power into the national energy mix.
13. Designing, constructing and commissioning of nuclear power plants.

Hydropower:

14. Encouraging the wide spread construction of mini and micro hydropower plants.

Solar, Biomass and Wind:

15. Encouraging the wide spread production and installation of renewable energy systems.

Electricity:

16. Establishing the infrastructure for the local manufacture of electrical equipment, devices and materials.

Finance:

17. Internationalizing Nigeria's capital market to enable Nigerian corporate units stocks, listed in the international stock exchanges to attract inflow of foreign investment capital.

Environment:

18. Ensuring adequate environmental standards for all energy production and utilization processes.

NATIONAL ENERGY BILL, 2021

EXPLANATORY MEMORANDUM

This Bill seeks to provide for a legal, fiscal and regulatory framework for sustainable energy development in Nigeria with the overall objective of providing clean, affordable, adequate and reliable energy with the active participation of the private sector.

NATIONAL ENERGY BILL, 2021
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