



IMPROVING THE FUNCTIONALITY OF PRIMARY HEALTHCARE CENTRES IN NIGERIA

(Prioritizing Policy & Legislative Actions for Optimal Basic Healthcare Services beyond COVID19)



Good Governance Team Nigeria



With Support by

HEINRICH BÖLL STIFTUNG
ABUJA

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IMPROVING THE FUNCTIONALITY OF PRIMARY HEALTHCARE CENTRES IN NIGERIA:

(Prioritizing Policy & Legislative Actions for Optimal Basic Healthcare Services beyond COVID19)

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List of Abbreviation

AMR	Antimicrobial Resistance
AOP	Annual Operation Plan
BHCPF	Basic Health Care Provision Fund
COVID-19	Corona Virus Disease
ERGP	Economic Recovery and Growth Plan
FCT	Federal Capital Territory
FG	Federal Government
FMOH	Federal Ministry of Health
HBS	Heinrich-Boll Stiftung
IPC	Infection, Prevention, and Control
LGA	Local Government Area
MDAs	Ministry Department and Agencies
NANNM	National Association of Nigerian Nurses and Midwives
NAPHS	National Action Plan for Health Security
NCDC	National Centre for Disease Control
NHA	National Health Act 2014
NHIS	National Health Insurance Scheme
NHP	National Health Policy
NMA	Nigerian Medical Association
NPHCDA	National Primary Health Care Development Agency
NSHDP II	National Strategic Health Development Plan
PHCs	Primary Healthcare Centers
RE	Renewable Energy
REA	Rural Electrification Agency
SDGs	Sustainable Development Goals
SSSHDP II	Subnational State strategic Health Development Plans
UHC	Universal Health Coverage
WHO	World Health Organization
WMHCP	Ward Minimum Health Care Package

EXECUTIVE SUMMARY

Sustainable uninterrupted electricity supply plays an important role in the improvement of healthcare delivery and should be an integral component in the policy designs and operations of healthcare infrastructure. However, a review of key health sector policy strategies, plans, guidelines and laws in Nigeria, shows a lack of emphasis on the importance of uninterrupted electricity supply in the health sector. Existing policy and legislative frameworks gloss over the integration of sustainable energy solutions, despite compelling evidence that shows that clean sustainable energy alternatives can help to significantly improve healthcare services.

This policy review identifies key health sector legislation, policies, regulations and guidelines. It suggests ways to infuse sustainable constant energy supply to increase the functionality of primary healthcare facilities in Nigeria.

Some of these key health legislation, policies, regulations, and guidelines reviewed in this study include the following:

- ✚ National Health Act 2014 (including Guideline for Administration, Disbursement, Monitoring and Fund Management of Basic Health Care Provision Fund)
- ✚ National Human Resources for Health Policy 2015
- ✚ National Health Policy 2016
- ✚ Second National Strategic Health Development Plan 2018 – 2022
- ✚ Ward Minimum Healthcare Package 2007 (Minimum Standards for Primary Health Care in Nigeria 2007 – 2012)
- ✚ National Primary Health Care Development Agency [Cap N69] 2004
- ✚ Protocol for the Assessment of and Accreditation of COVID-19 Isolation Facilities
- ✚ National Action Plan for Health Security 2018 – 2022
- ✚ One Health Strategic Plan 2019 – 2023

The policy review takes cognisance of the current socioeconomic, technological and environmental realities such as technological breakthroughs in both the local and international energy space, issues of insecurity, the emerging public finance crisis, climate change, environmental pollution and the ongoing COVID-19 pandemic, as well as specific community factors such as ownership and gender power relations.

These factors and realities inform this policy analysis to call for the infusion and deployment of decentralised, clean, constant and sustainable energy (or a combination) in the electrification of primary health facilities across Nigeria. Such deployment should start with a holistic, multi-disciplinary, ambitious, and systemic thought process. The new National Minimum Operational Standard Guideline for PHCs in Nigeria, and the Basic Health Care Provision Fund (BHCPF) framework

should make robust provision for the electrification of all or some selected PHCs to improve their functionality.

This document strongly recommends that the Federal Ministry of Health, National Primary Health Care Development Agency (NPHCDA), Federal Ministry of Power, Rural Electrification Agency (REA), together with the donor community and civil society, should facilitate the roll-out of an action plan for the sustainable electrification of 10,000 PHCs across Nigeria in line with the goal of having at least one functional PHC per ward. This should include the signing of an MoU between relevant MDAs such as the Ministry of Power (REA), and the Ministry of Health (NPHCDA); and other legislative and funding entities, i.e. State governments, financial institutions, international organisations etc.

Furthermore, the NPHCDA and REA should ensure that the Nigerian Governors Forum (NGF) and Association of Local Government of Nigeria (ALGON) take ownership of the initiative for sustainability. The buy in of development partners such as the African Development Bank and World Bank as well as of legislative and regulatory bodies such as National and State Houses of Assembly and Nigerian Health Insurance Scheme (NHIS) need to be cultivated to guarantee short and long term funding for energising basic healthcare facilities in the country.

More importantly, renewable energy solution providers, technical partners and donors should develop a generic sustainable business plan for the electrification of PHCs with renewable energy options. Such comprehensive plan should inform stakeholders, especially the Ministry of Health, the NPHCDA, NHIS and State governors to guide their policy decisions and commitments. This process should draw lessons from successful models in states like Kaduna, Lagos and Edo that have executed (in part) similar electrification program for PHCs facilities in their states.

Finally, PHC electrification models should stem from rich engagements with community members. This inclusive and participatory process must clearly show mutual beneficial ownership (socio-economic and direct financial gains) between community and energy solution providers. By this, the safety and security of infrastructure is assured.

ACKNOWLEDGEMENT

Good Governance Team (GGT) Nigeria is grateful to the ALMIGHTY GOD for His Divine support and stability to push through this policy research and advocacy project amidst COVID-19 pandemic.

We also express our profound appreciations to the Heinrich Boell Stiftung (HBS) Nigeria Office for her sustained technical and funding support to actualise this important project. For us at GGT, the HBS support is catalysing conversations and multi stakeholders' policy engagements on intersection between clean electricity and quality healthcare delivery in Nigeria.

Our sincere gratitude to all the partners under the auspices of Coalition for Sustainable Electrification of Primary Healthcare Centres in Nigeria; a loose coalition with membership cutting across relevant government agencies, development partners and donor agencies, renewable energy solutions providers, civil society organizations, as well as health and energy related professional association amongst others.

While recognising the commitment of all the members, we specially thank individual members such as Tunde Salman; Convener, Donald Ikenna Ofoegbu; Programme Coordinator HBS, Marta Levitt; Chief of Party USAID Integrated Health Programme Nigeria, Lundin Kyle; Off-Grid Advisor Nigeria Power Sector Programme (Deloitte Consulting LLP), Aanu Rotimi; Programme Manager, Health Reform Foundation of Nigeria.

Finally, GGT duly acknowledges the tremendous support of its team members particularly Rasheed Shuaib, Project Assistant, for his invaluable contributions toward the successful implementation of this policy research project.

Tunde Salman

Convener: GGT

Nigeria

Preamble:

“Is there any reason why a public health institution in the 21st century Nigeria, should be utterly dependent on the National Grid for Power Supply when there are so many alternative power supply?”

- Rt. Gen. Yakubu Gowon at the opening ceremony of the Nigerian Medical Association (NMA) 2nd National Health Summit at the International Conference Centre, Abuja on November 5, 2019.



“...About 90 per cent of ailments can be taken care of at primary and secondary healthcare centers; ONLY IF THEY ARE FUNCTIONAL. 70% of Nigerians who require healthcare needs are supposed to go to Primary Healthcare Centers (PHCs), 20% are to go to secondary healthcare centers and only 10 per cent of Nigerians with referrals and complicated cases are supposed to go to a tertiary teaching [health] institution...part of this functionality depends largely on access to reliable power supply”



– Prof, Isaac Adewole, past Minister of Health, on the floor of the Senate’s Chamber, National Assembly, on May 21, 2019.

“We must prioritize and the first thing we need to prioritize is the issue of health... if we appreciate that, the allocation in terms of budget for health will be much more than what it is at the moment... The next thing is giving priority to Primary Healthcare. The figures that we have in infant mortality, in maternal mortality, a lot of the issues related can be handled at the primary care level if we have functional primary health centres, where all the basic services can be rendered and where all basic services in terms of infrastructure are available – water, electricity supply.”

- The Minister for Health, Dr. Osagie Ehanire, speaking at 2-day multisectoral Conference on COVID-19, with the theme: ‘Building Back Better, with Resilience’ in Abuja on 9-10 November 2020, organised by Hon. Zakari Yau Galadima-headed House committee on Interparliamentary Relations and Hon. Haruna Msheila led House ad-hoc committee on Covid-19.



POINTER

Why constructing new primary health centres, if the functionality of existing PHCs cannot be guaranteed overtime.

Sustainable and reliable electricity is central to ensure that PHCs function optimally.

The current national electricity grid and fossil generators, cannot alone guarantee sustainable and reliable electricity supply to PHCs.

FOOD FOR THOUGHT:

Why do we wait for the worst to do the needful?

Historic data on maternal and child health incident in Nigeria remains poor, especially the number of daily deaths of mothers from pregnancy related issues. Are these avoidable deaths not enough to call for sustainable action among our elected leaders, policy makers and other stakeholders?

One will expect that the 2014 Ebola virus in Nigeria was enough to cause a serious political and policy rethink on Nigeria's health sector, specifically at the primary healthcare level. The passing of the Ebola virus saw little or no improvement in the structure or working conditions of basic health service delivery in Nigeria.



Currently, only 6,000 of the over 30,000 Primary Healthcare Centres (PHCs) in Nigeria (that is **less than 20% of PHCs**) is functional. The over 80% of poorly functional PHCs are located in densely populated communities in peri-urban, and far remote village; away from the daily eyes of the government. This is unacceptable, especially when PHCs cater for the healthcare needs of over 70-80% of the Nigerian people.



One would hope that the COVID-19 outbreak, lockdown and travel bans, would have forced political leaders who occupy the country's list of medical tourism, to lead holistic thought process, and sustainable actions towards improving the working conditions of PHCs in Nigeria.



If the death of 1 in every 13 pregnant women or the over 2,300 daily death of under-five children is not enough to call for sustainable action towards improving the functionality of PHCs in Nigeria, then our prospect for a better healthcare maybe dim.

The COVID-19 pandemic should be enough to galvanise collective actions to improve the functionality of our healthcare system, taking cognisance of key elements needed to guarantee improvement in PHC service delivery: like constant electricity supply.

BACKGROUND: Functional Primary Healthcare Delivery rests on Reliable Clean Electricity

The connection between energy and health is strong and critical for effective delivery of quality healthcare. According to the World Health Organization (WHO), the standard operating procedures for most hospitals require energy use for water supply, temperature control, lighting, ventilation and clinical processes. Whilst modern health facilities in high- and middle-income countries are among the largest commercial consumers of energy, with associated climate and environmental impacts, many small rural and public facilities in resource-constrained settings suffer from unreliable energy networks, impeding health service provision.



WHO: standard operating procedures for most hospitals require energy use for; water supply, temperature control, lighting, ventilation, and clinical processes..

**Over
94million
Nigerians,
representing**

47%

**of the
country's
population
lack access to
grid electricity**



There are 34,173 health facilities across the 36 States plus the Federal Capital Territory (FCT) Abuja.¹ This comprises of 30,098 PHC facilities (88%), 3,992 secondary facilities (12%), and 83 tertiary (1%) facilities. The ability of these facilities to provide certain services to meet the health needs of the people is undermined by poor energy access.

Over 80% of the Nigerian population are either un-served (as they have no access to grid electricity) or under-served (with unreliable electricity supply). Most PHCs across Nigeria are forced to shut down before nightfall, as they lack illumination to operate nightshifts; otherwise, they rely on torchlight or kerosene lantern for critical night-time emergencies.²




More often drugs and vaccines cannot be stored in most PHCs due to the poor or unavailable grid electricity supply. This affects immunization coverage and may compromise the quality of administered drugs and vaccines. With several PHCs lacking access to reliable

¹ As at December 2011, see: National Health Facility List 2011 (FMOH).

² Heinrich Boell Stiftung Nigeria (2018): Improving Access to Clean Reliable Energy for Primary Health Care Centres in Nigeria: Situation Analysis of PHCs in the Federal Capital Territory. (The Potential for Green Development Options to Power Primary Health Care Centres in Nigeria)

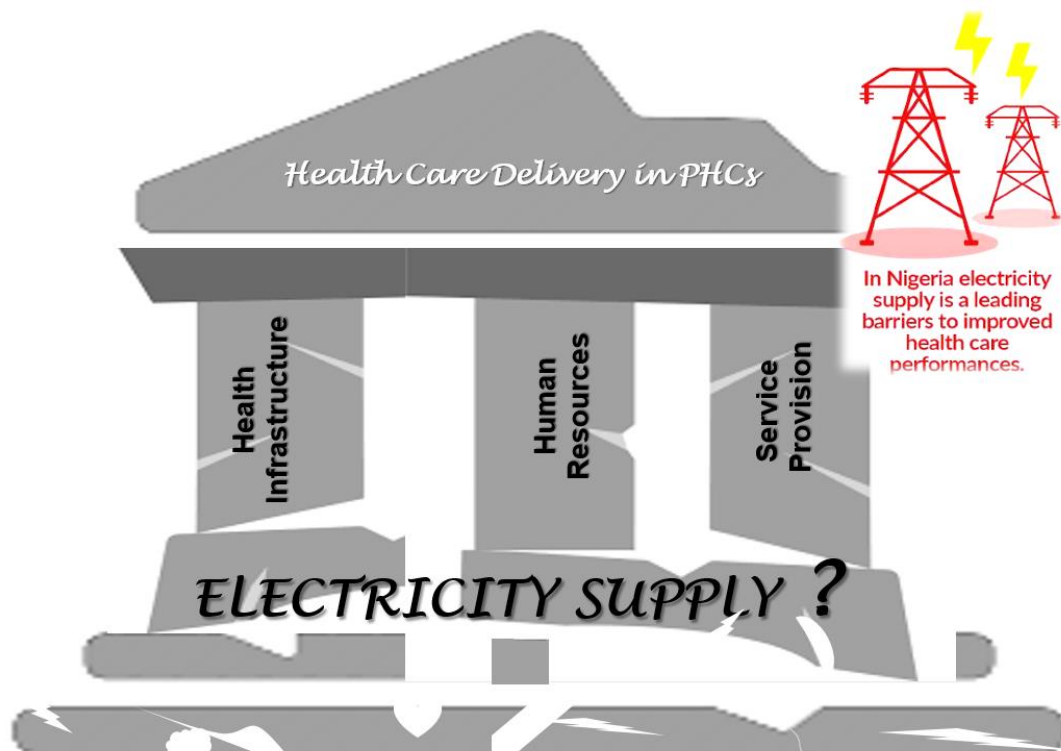
electricity, safe water supply becomes inaccessible, forcing most PHC facilities to obtain water from unreliable and unhygienic sources.

According to the National minimum standard for PHCs in Nigeria, the delivery of quality health services depend on 3 pillars³ as highlighted in the box and chart below:

-  **Health Infrastructure:** including recommended facilities, buildings, furniture, water supply, sanitation, staff accommodation and equipment
-  **Human Resources:** Minimum recommended staff number and cadre for each type of health facility and
-  **Service Provision:** the recommended minimum PHC services for each facility type including the minimum requirement of medical equipment and essential drugs.

These pillars ought to stand on a foundation of sustainable, clean, uninterrupted electricity supply.

Without a sustainable and reliable electricity supply, the three pillars of health services delivery cannot function effectively.



³ National Primary Health Care Development Agency [NPHCDA] (2007). National Minimum Standard for Primary Healthcare in Nigeria.

Women Suffer the Most:

In Nigeria and Africa, women account for 65 to 70% of the health workers⁴. Many of these women professionals under the aegis of the National Association of Nigerian Nurses and Midwives (NANNM) have on several occasions protested against the poor and risky working conditions they face.



Over 43% of PHCs are not connected to grid electricity supply.

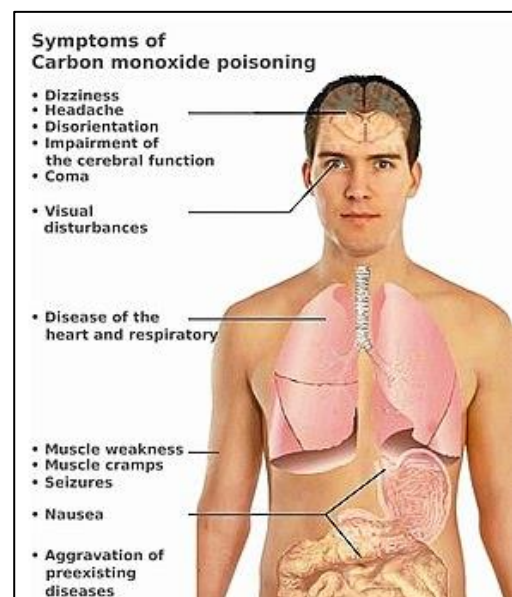
57% of the PHCs connected to the national electricity grid have less than 5 hours of grid electricity supply daily⁵.

This implies that the majority of nurses and midwives in these PHCs, work in very terrible conditions. They do not have access to ready water supply to wash their hands after medical procedures or maintain personal hygiene at work.

They cannot use medical equipment that depends on electricity to make their work safer and easier.

They have no illumination at night, making night work a herculean task, and night emergencies impossible. This also exposes them to security risk at night-time.

These female medical workers are further exposed to adverse work temperature from the worsening heat caused by global warming, to the noise and poisonous carbon monoxide from fossil generator sets used in over 65% of PHC facilities⁴. These fossil generators are harmful to the health of users. Approximately 500 deaths is recorded per year from inhaling generator fumes, which carries large doze



⁴ Nigerian Health Watch (March 5, 2020): Elevate Women's voices: Nigeria's Health Sector must become #Eachforequal-IWD2020. Thought Leadership Series. <https://nigeriahealthwatch.com/elevate-womens-voices-nigerias-health-sector-must-become-eachforequal-iwd2020/>

⁵ Heinrich Boell Stiftung Nigeria (2018): Improving Access to Clean Reliable Energy for Primary Health Care Centres in Nigeria: Situation Analysis of PHCs in the Federal Capital Territory.

of carbon monoxide. More than two-third (>2/3) of generator users report impaired hearing and 70% increased risk of lung cancer⁶.

PHCs spend between N20,000.00 and N29,000.00 monthly to fuel fossil generator (this excludes maintenance and repairs). These costs are largely bore by the nurses and midwives in the PHC facilities; as the budgetary allocation from the State and Local governments to power these generators and cover the grid electricity bill are either too marginal (at an average of N900 to N1,006 a month per PHC) or unavailable. This imposes personal financial burdens on nurses and midwives, and force them to rely on candles, kerosene lanterns, or mobile phone light at night⁷.

Apart from the exposure of health workers to generator fumes and noise pollution, patients in the health facilities are also exposed to these risk. Many of these patients are women and children. Without reliable electricity in the PHC facility, these patients may not have access to quality health services.



Generators are harmful to the health of users

~1,500 deaths

per year from inhaling generator smoke and carbon monoxide

70%

increased risk of lung cancer

>2/3 of users

report impaired hearing

Since the use and funding for fossil generators in health centres in Nigeria are not sustainable (aside their polluting feature), this energy source should not be considered as a first option to achieving sustainable electricity in PHCs. In the mist of many other clean and more sustainable energy alternatives, the use of fossil generators should be a last resort.

Sources: Access to Electricity Institute (A2EI) Dalberg: Putting an End to Nigeria's Generator Crisis: The Path Forward (June 2019)

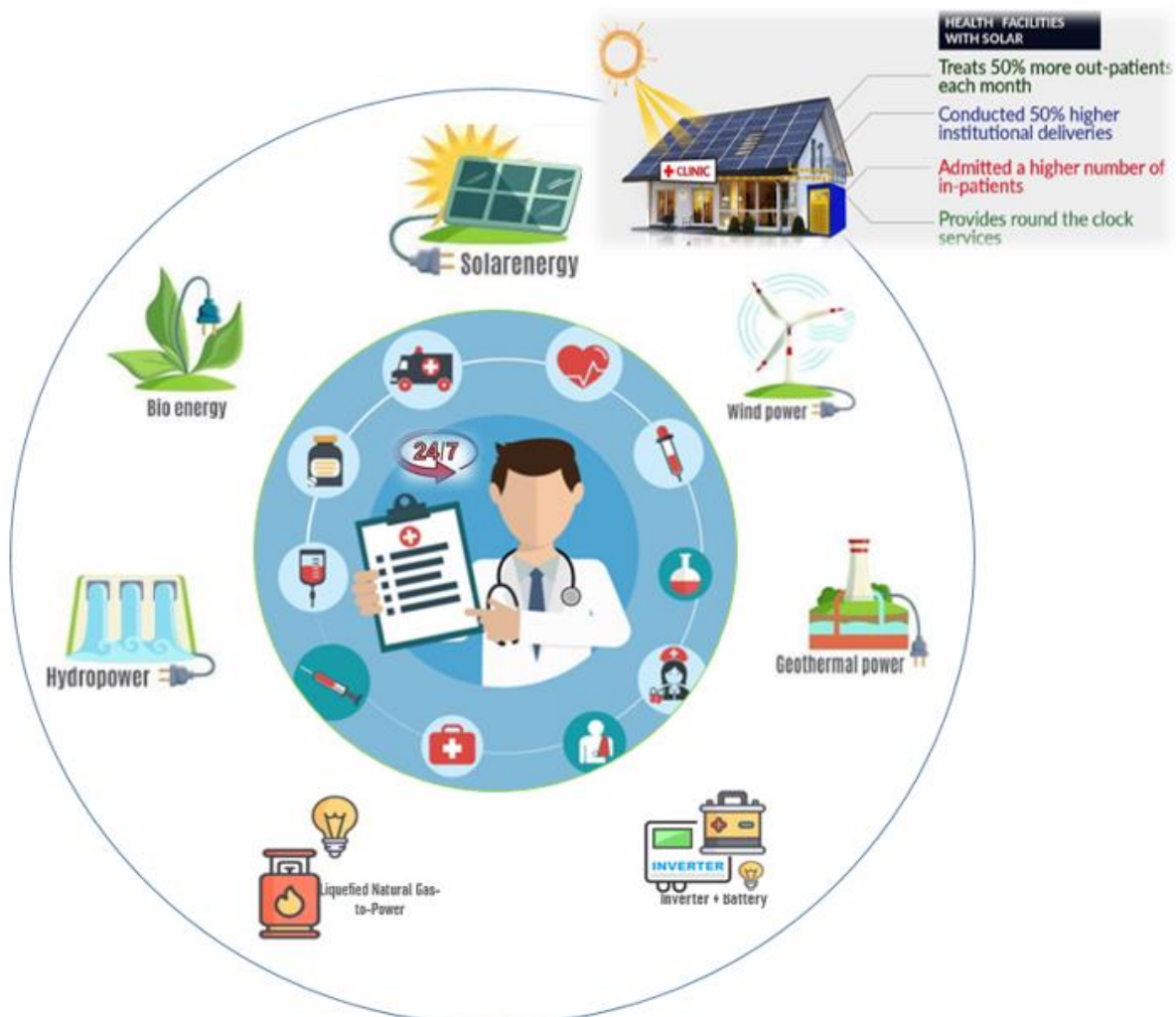
⁶ Access to Electricity Institute (A2EI) Dalberg: Putting an End to Nigeria's Generator Crisis: The Path Forward (June 2019). https://a2ei.org/resources/uploads/2019/06/A2EI_Dalberg_Putting_an_End_to_Nigeria%E2%80%99s_Generator-Crisis_The_Path_Forward.pdf

⁷ Heinrich Boell Stiftung Nigeria (2018): Improving Access to Clean Reliable Energy for Primary Health Care Centres in Nigeria: Situation Analysis of PHCs in the Federal Capital Territory.

Given Nigeria's poor grid electricity supply, both the federal and state government would require a more sustainable, clean and reliable electricity solutions such as solar energy, geothermal, wind, and other energy storage systems i.e inverters and battery storage or a hybrid, to ensure energy for all and improve health service delivery.

A clean sustainable energy source ensures:

1. Good work condition for recommended medical staff in the facility
2. Makes staff accommodation if available, liveable.
3. Allows for 24/7 operation of the facility; night operation becomes possible.
4. Allows all other medical equipment to function effectively in the Centre.
5. Supports motorized water supply within the premises of the health facilities.
6. Provides illumination and security in the health facility at nights
7. Power storage facilities to keep essential drugs & vaccines in the right condition

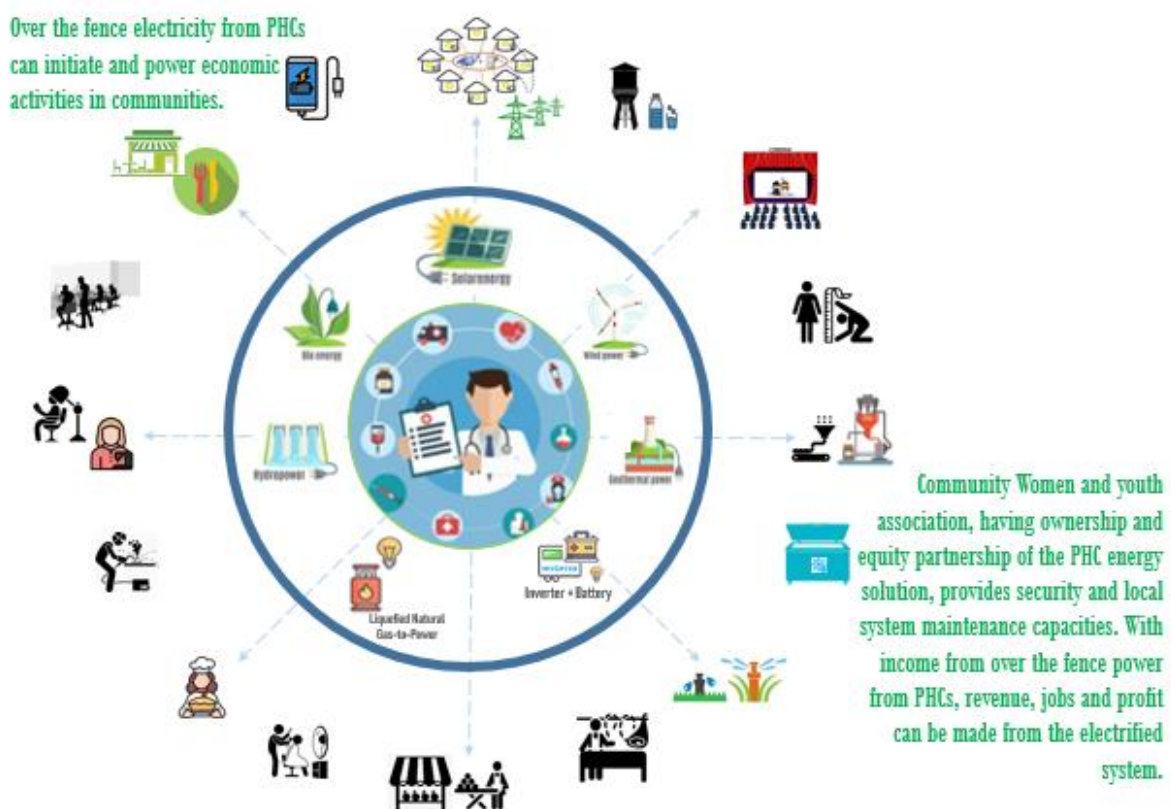


PHCs as Socioeconomic Enablers:

Apart from being an integral part of Nigeria's health system, electrified PHCs can serve as an enabler for socioeconomic growth and development in rural communities.

The mainstreaming of clean sustainable electricity supply in PHCs will not only increase the functionality of PHC facilities, but will position PHCs to serve as a power anchor. An electrified PHC can provide over the fence electricity to power small businesses, provide water for the community, light markets, streets, and park; support farm irrigation, power agro-processing machines, support community training centres and mobile charging points. These can serve as equity returns to community women and youths; who will oversee and ensure the safety of the energy solution in the health facility.

Such sustainability model for PHCs in an electricity deficit country like Nigeria, would not only increase health service functionality, but presents an economic and financial viability advantage to the community through over the fence electricity from the PHC. This makes a good business case and provides a lever for community ownership and management of the energy solution and its receiving economic activities.



Stakeholders; financiers, donor communities, REA and private sector players should consider PHC electrification models that give community women and youths ownership in the form equity partnerships. Such models guarantees local technology

transfer, asset security, and direct revenue generation for the energy provider and the local community people; creating local jobs, and stimulating local businesses. This makes the entire project bankable for the energy provider, financiers and the management of the PHC.

A few subnational governments in Nigeria have been exploring and enjoying clean sustainable energy solutions in their PHCs. For instance, states like Kaduna, Lagos and Edo since 2016, have been championing the electrification of PHCs through public private partnership (PPP). These states are recording tremendous success stories on their health and social outcomes (see annex I).



There is a need to ensure that these successes are replicated across the country, and built on policies and laws to ensure their resilience from economic and socio-political volatilities.

Objective of the Policy Review

The overall purpose of this policy review is to drive the needed policy and legislative change for the mainstreaming of reliable and sustainable energy solutions in the electrification of PHCs in Nigeria.

The specific project activities include:

- 1 Review key health policies and laws in order to identify the gaps in the provision of health infrastructure, specifically as it relates to power supply.
- 2 Build a case for the mainstreaming of sustainable electricity solution in PHCs, and present same to stakeholders for consideration, adoption and implementation.
- 3 Use the policy review to engage the relevant stakeholders like the executive, legislatures, civil society sector, media and the public, to ensure that the issue of electrifying the health sector is given priority.

Methodology

This policy review is a desk research. It relies essentially on secondary data, and uses descriptive content analysis technique to extrapolate relevant information and draw conclusions. It also employs the use of visual aid to simplify context for better understanding.

The report was subjected to three levels of context validation by sector experts, legislatures and think tanks, to ensure comprehensiveness and correctness. The initial draft was presented at a breakfast meeting organized by Good Governance Team on 27 August 2020 to sense feedback and gather input from health experts, civil society organisations, donor organisations and media representatives.

Prior to final publication, the updated draft was reviewed by key stakeholders under auspices of the National Coalition on Sustainable Electrification of PHCs in Nigeria.

Policy and Legislative Gaps and Proposed Solutions

Reliable electricity is a prerequisite for quality healthcare service delivery. According to the World Health Organisation (WHO), renewable energy plays an important role in improving health services, if integrated at the policy and operational levels. However, existing policy and legislative frameworks for PHC electrification in Nigeria glosses over the integration of sustainable electricity solutions despite compelling evidence demonstrating renewable energy as the best energy options for PHCs.

The following law, policies, regulations, guidelines, strategies, and frameworks, were reviewed to identify policy gaps and suggest appropriate shift needed to infuse sustainable energy options in Nigeria's PHC system:

- ✚ National Health Act 2014 (including Guideline for Administration, Disbursement, Monitoring and Fund Management of Basic Health Care Provision Fund [2016/2020])
- ✚ National Human Resources for Health Policy 2015
- ✚ National Health Policy 2016
- ✚ Second National Strategic Health Development Plan 2018 – 2022
- ✚ Ward Minimum Healthcare Package 2007 (Minimum Standards for Primary Health Care in Nigeria 2007 – 2012)
- ✚ National Primary Health Care Development Agency [Cap N69] 2004
- ✚ Protocol for the Assessment of and Accreditation of COVID-19 Isolation Facilities
- ✚ National Action Plan for Health Security 2018 – 2022
- ✚ One Health Strategic Plan 2019 – 2023

1. The Minimum Standard for PHC in Nigeria Guideline



The National Primary Health Care Development Agency (NPHCDA) developed the Minimum Standards for Primary Health Care in Nigeria 2007–2012 based on the Ward Minimum Health Care Package (WMHCP) to guide the operation of primary healthcare services in the country. The document prescribes a set of minimum standards for health infrastructure, personnel, drugs and other medical consumables to reflect the WMHCP.

The minimum standards document describes key components of PHC services to include promotion of proper nutrition, adequate supply of safe water, basic sanitation, maternal and childcare, family planning, immunization, prevention and control of locally endemic diseases, education on prevailing health

problems and methods of preventing and controlling them, as well as appropriate treatment for common diseases and injuries. More importantly, it also classifies three main facility types: Health Post, Primary Clinic and Primary Healthcare Centre with their specification and service coverage areas.

Some of the prescriptions for physical health infrastructure enshrined in the Minimum Standard Guideline for PHC in Nigeria are shown in table 1 below:

Table1: Classification of PHC facility and their specific minimum standards

<p>Health Post</p> <p>Service Delivery Area: Settlement, Neighborhood and/ or village level</p> <p>Estimated Coverage Population: 500</p>	<p>Minimum Infrastructure: Amongst other should have:</p> <ul style="list-style-type: none"> ✓ Minimum Land Area: 1,200 square metres ✓ Functional separate male and female toilet facilities with water supply within the premises ✓ Availability of a clean water source: motorized borehole ✓ Be connected to the national grid and other regular alternative power source ✓ Be fenced with gate and generator houses ✓ Staff accommodation provided within the facility: 2 units of 1-bedroom self-contained apartments (See building plan)
<p>Primary Health Clinic</p> <p>Service Delivery Area: Group of Settlements /Neighborhood, Villages or Communities</p> <p>Estimated Coverage Population: 2,000 to 5,000</p>	<p>Minimum Infrastructure: Amongst other should have:</p> <ul style="list-style-type: none"> ✓ Minimum Land Area: 2,475 square metres ✓ A detached building with at least 5 rooms (see floor plan) ✓ Functional separate male and female toilet facilities with water supply within the premises ✓ Availability of a clean water source: at least motorized borehole ✓ Be connected to the national grid and other regular alternative power source ✓ Be fenced with gate and generator houses ✓ Staff accommodation provided with in the premises: 2bedroom apartments
<p>Primary HealthCare Centre</p> <p>Service Delivery Area: Political Ward</p> <p>Estimated Coverage Population: 10,000 to 20,000</p>	<p>Minimum Infrastructure: Amongst other should have:</p> <ul style="list-style-type: none"> ✓ Minimum Land Area: 4,200 square metres ✓ A detached building of at least 13 rooms (see floor plan) ✓ Functional separate male and female toilet facilities with water supply within the premises ✓ Have a clean water source from a motorized borehole ✓ Be connected to the national grid and other regular alternative power source ✓ Be fenced with generator and gate houses ✓ Staff accommodation provided within the premises: 2 units of 1-bedroom flats

The Gaps & Proposed Solutions:

The existing Minimum Standards for PHC is already outdated. It was designed to cover five years - 2007 to 2012.

1. After 8 years of its expiration, there is a need to review the old standards and draft a new Minimum Standard Guideline for PHC operations in Nigeria. The improved guideline should take cognisance and advantage of new technologies (i.e. energy

storage technology, off-grid energy solution, mobile energy solutions, etc.), Multisectoral and community partnership models, existing governance structures, environmental considerations, and other existing PHC challenges. The new minimum standards should also position PHCs to be more than a health centres, but also a major economic catalyst in host communities.

2. The Minimum Standard Guideline under PHC infrastructure prescribed that the PHC facility - **“Be connected to the national grid and other regular alternative power source”**. Though the guideline considered the limited and unreliable nature of the national electricity grid, it does not consider the sustainability of the fossil generator (either sourcing fuel, its polluting nature, the cost of financing its fuelling and maintenance), which it technically suggested as the first line alternative power source.

3. The prescription of **“...Other regular alternative power source”**, without categorically setting a criteria for what this entails, and then in another section recommends that the health facility **“Be fenced with generator houses”**, automatically suggested that the other regular alternative power is a fossil generator set. Put differently, the outdated guideline somewhat prescribes dirty, noisy, polluting and poorly funded generators as the first option to an alternative power source to energize PHCs.



It can be excused that, as at the time of developing the document in 2007, other clean sustainable energy alternatives were inaccessible because of their high cost and an unproven reliability in Nigeria. Since then, a lot of developed and developing countries, as well as state governments in Nigeria are now adopting more sustainable clean energy alternatives through PPP, with better technical standards, remote innovation and improved community engagement for local ownership.

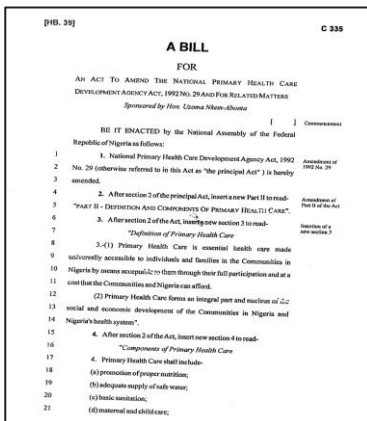
4. The guideline had very poor compliance rate, as most PHCs were constructed without following the set guideline. This largely explains why only 20% of the over 30,000 PHCs in the country are functional, and the majority dilapidated. The new minimum standards guideline must be enforced when developed.

Potential Solutions:

The new minimum standard operation guideline for PHC under - the Building Premises can be improved to read...:

- ✓ *Be connected to the national grid and /or provided with an alternate off-grid power sources, more preferably should be a clean sustainable, and reliable, energy solutions; enough to provide 24/7 power supply to the entire facility (i.e. Solar, Biomass, Wind, small hydro, as locally available, not excluding hybrid-generator or other clean energy installation or storage technology).*
- ✓ *For operational efficiency and maintenance, the off-grid sustainable energy solutions should be managed under a People-Private-Government Partnership (PPGP) arrangement with strong community oversights to ensure sustainable operation in the delivery of 24/7 power supply (with documented guarantee to supply power to the facility),*
- ✓ *and where feasible, the provided energy solutions can provide over-the-fence electricity to business units and utilities like water supply, etc in host communities; making the PHC facility a catalyst for rural economic development.*
- ✓ *Availability of a clean water source: motorized borehole powered by a sustainable reliable power source, etc.*
- ✓ *Be fenced with security gate, generator house, ample roof or land space to accommodate solar panels, or other forms of clean energy generator or energy storage technology.*

2. National Primary Health Care Development Agency (NPHCDA) Act (Amendment Bill)



Established in 1992 through Decree No.29 of 1992 (now Cap.N69, Laws of the Federation of Nigeria, 2004), the National Primary Health Care Development Agency (NPHCDA) serves as the institutional framework to provide a source of technical knowledge and expertise to drive development and delivery of PHC in Nigeria. The Act sets a minimum standard for PHC operations. The amendment to the NPHCDA Act seeks to provide a definition and a legal framework for the components of primary healthcare in Nigeria.

The Gaps & Proposed Solutions:

The NPHCDA Act of 1992 (Cap. N69 LFN 2004) should be a living document that evolves alongside the healthcare needs of the population, increasing global knowledge, and environmental changes. The Act should inject innovation in the service delivery of PHCs to reposition them to be an integral part of the health sector;

and serve as a catalyst to environmental conservation, protection and an anchor to stimulate socio-economic development in rural communities in Nigeria.

As severally reiterated in this report, clean sustainable and reliable electricity is critical for the optimal delivery of primary healthcare services. However, the proposed amendment to the NPHCDA Act is silent on how to ensure sustainable power supply to PHCs to make them functional.

The proposed amendment recommends the insertion of a new section 4 to read – “Components of Primary Health Care” – shall include:

- a. Promotion of proper nutrition;
- b. Adequate supply of safe water;
- c. Basic sanitation;
- d. Maternal and child care
- e. Family planning;
- f. Immunization
- g. Prevention and control of locally endemic diseases;
- h. Education of prevailing health problem and methods of preventing and controlling them; and
- i. Appropriate treatment for control disease and injuries.

The omission of reliable electricity supply from the nine basic components of PHC as listed in the proposed amendment (a-i), is a major lapse. All other component as mentioned, depend on an uninterrupted power supply.

Legislation should set the norm for access to sustainable electricity supply in all PHC facilities. This should obligate the Ministry of Health, the NPHCDA, and State governments to strategize, and provide resources towards improved access to electricity in primary healthcare facilities. This will also support higher standards for better healthcare delivery in Nigeria.

Amending the NPHCDA Act can help accelerate the development and use of renewable energy in the design, construction, and rehabilitation of PHCs across Nigeria. Decentralised renewable energy offers the cleanest, cheapest, most reliable, and smartest solution to electrifying PHCs in both unserved and underserved areas. Improving access to electricity, particularly through renewable energy technologies, will result in multiple benefits, including:

1. A clean energy supply: there will be an improvement in the air quality around PHCs;
2. Increased reliability: more reliable electricity to operate at night,
3. Enhanced medical delivery:
 - i. Longer-lasting storage of vaccines, drugs, IVC-drips, etc.

- ii. Access to clean running water essential for infection prevention
 - iii. Ability to operate and staff operational laboratories around the clock
4. Staff Retention: Health workers in these PHCs will have better and safer work conditions and be more likely to stay for the long-term.
5. Community Dynamics: Electricity access can be increased in the community, potentially using the PHC as an anchor load for solar development. This would solidify the PHC as the centre of the community and open a potential for generating revenue for PHCs. The PHCs with access to clean reliable electricity can also provide electricity, as well as clean running water to neighbouring homes, farms, shops and utilities, thus stimulating local economies and opportunities in remote locations.
6. Savings: With clean reliable electricity in villages, PHCs will not have to spend between N20,000 and N29, 000 monthly (often out of the personal pockets of health workers) to fuel and maintain generators that pollute the environment for an average of 6hours a day.

Potential Solutions:

Under the proposed insertion of a new Section 4, this policy paper endorses the inclusion of a new section 4 and in addition, recommends the inclusion of the following as part of the components:

- ✓ Connection to an uninterrupted electricity source, or
- ✓ Availability of clean sustainable and reliable electricity.

Stipulate a timeframe for the mandatory review of guidelines and designing frameworks for a specified period of 5 year or a maximum of 6 Year Periodic reviews of the Minimum Standards for Primary Health Care in Nigeria.

4 year, or a maximum of 5 Year Periodic Monitoring, Evaluation and Public Reporting on the level of compliance to the National Minimum Standards for Primary Health Care at the State level.

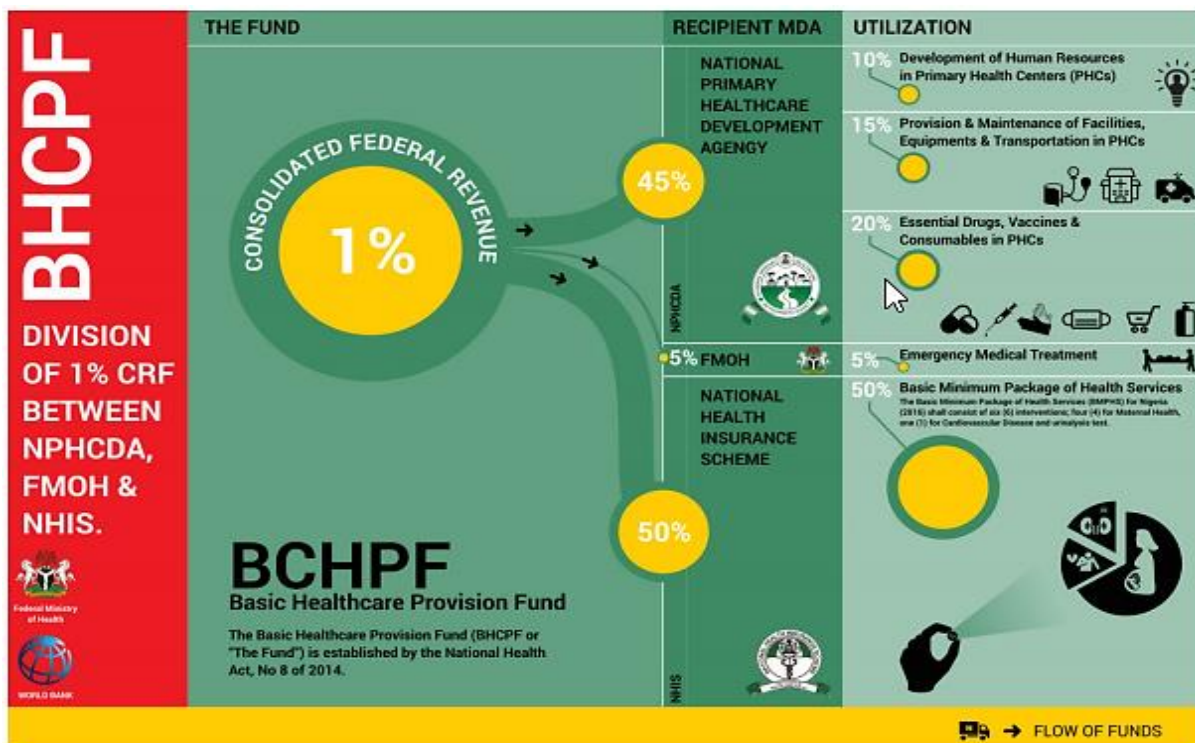
3. The National Health Act 2014 (NHA, 2014) and its Basic Health Care Provision Fund (BHCPF) Guidelines (2016)



The National Health Act was signed into law on 31st October 2014. The Act provides a legal framework for the regulation, development and management of a national health system in Nigeria. It sets out a minimum package of essential health services for all citizens in the country.

A key component of the Act was the establishment of the Basic Health Care Provision Fund (BHCPF), which aims to support the attainment of universal healthcare coverage in Nigeria by substantially increasing the level of financial resources through the PHC structures.

The BHCPF is predominantly financed through an annual grant from the Federal Government; an amount not less than 1% of the Consolidated Revenue Fund with additional sources of funding expected through grants from local and international donors and state governments. To access the BHCPF, eligible states and local governments are expected to contribute 25% as counterpart funds.



- ✚ 50% of the Fund shall be used for the provision of basic minimum package of health services to citizens in eligible primary or secondary healthcare facilities through the National Health Insurance Scheme (NHIS).
- ✚ 20% of the Fund shall be used to provide essential drugs, vaccines and consumables for eligible PHC facilities.
- ✚ 15% of the Fund shall be used for the provision and maintenance of facilities, equipment and transport for eligible PHC facilities.
- ✚ 10% of the Fund shall be used for the development of human resources for primary healthcare.
- ✚ 5% of the Fund shall be used for emergency medical treatment to be administered by a Committee appointed by the National Council on Health.

The Gap & Proposed Solutions:

Under the NPHCDA Gateway in Healthcare Provider Rights and Responsibilities, section 3.9.2 [a, b]:

a) Primary Health care facilities selected based initially on the One Functional PHC per Ward strategy shall be eligible to apply for accreditation and participate in the initiative.

c) In order to ensure a consistent level of quality, each facility shall meet the minimum criteria of quality standards before it is eligible to be empanelled.

REQUIREMENT	SATISFIED (YES/NO)
1. Skilled Health Worker (doctor, nurse, midwife, or CHEW)	
2. Sphygmomanometer	
3. Foetoscope	
4. Stethoscope	
5. Delivery Bed	
6. Battery-powered Torch or other light source	✘
7. Partogram	
8. Patient Records (weight, blood pressure, etc. where each antenatal care visit is documented)	
9. Mobile Phone	
10. Essential Drugs: <ul style="list-style-type: none"> a. Magnesium sulphate b. Oxytocin or Ergometrin or Misoprostol 	
11. Disposable or Reusable Gloves	
12. Sterilisable Scissors	
13. Sterilisable Cord Ties	
14. Functioning Bank Account	
15. Running water and soap or Hand sanitiser	

Table 2: Basic Accreditation Requirements for Rural PHCs from the BHCPF Guideline 2016.

The BHCPF Guideline sets out accreditation standards for eligible PHCs. It specifies 15 basic requirements for rural PHCs as shown in extract labelled table 2.

Take note of number 6 under the basic accreditation requirement for Rural PHCs from the BHCPF Guideline 2016 - “Battery powered Torch or other light source”.

The guideline encourages the use of Battery touch lights and other light source (which can be candles, kerosene lanterns, etc.) to provide illumination at night. This is without considering the fact that over 50% of Nigerian communities are not connected to the national grid electricity, and for those connected to the grid, more that 85% of them are largely underserved with irregular electricity.

A guiding document like the BHCPF that hopes to achieve 1 functional PHC per ward strategy fails to make provision for 24/7 uninterrupted electricity supply in each of the PHC per ward.

Providing 24/7 electricity in one PHC per ward is not a very high standard. The BHCPF guideline did not even ensure that the eligible PHCs criteria for the selection of a PHC in a political ward meets the Minimum Standard for PHC in Nigeria (that considers electricity supply in its list).



The BPHCPF Guideline failed to think through and make provision for the pillars of a functional PHC in Nigeria. The document ignores the foundation upon which these pillars stand – uninterrupted Electricity.

Even though the BHCPF scheme provides basic minimum package of health services; supplies essential drugs, vaccines and consumables for eligible PHC facilities, provides equipment's in the eligible (or selected) PHCs per ward and cover salaries of personnel's in the PHC; without steady reliable electricity in the eligible PHCs these provisions may not provide the desired outcome.

In summary, the eligible and selected PHCs will continue to function sub-optimally as long as uninterrupted electricity is not provided for.

Potential Solutions:

The success of the BHCPF scheme lies in the ability of the selected and eligible PHCs to deliver quality health services as promised. This depends on the sustainability of the pillars of PHCs, and central to their functionality is the availability of clean reliable uninterrupted electricity supply.

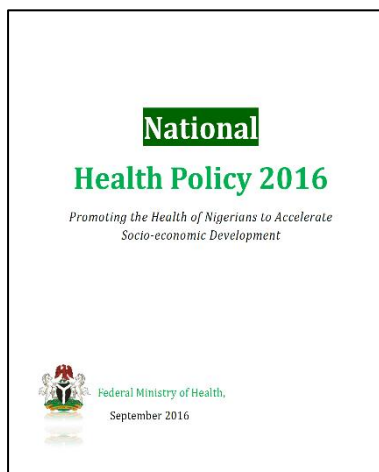
The BCPF guideline needs to be reviewed to encourage PPP with strong community oversight to improve infrastructure provision and management; specifically, for electricity supply.

A fraction of the 15% of the BHCPH fund earmarked for the provision and maintenance of facilities, equipment and transport for eligible PHC facilities, can be channelled towards covering the operation and maintenance agreement with a private energy companies and community people to ensure 24/7 supply of electricity to the selected PHC in each ward. This fraction can be augmented with budgetary allocation from Local and State government, as well as grants from local and international organisations and philanthropist.

For a starter, the BHCPF guideline should review the requirement for eligible PHC, specifically the criteria line number 6 - "Battery powered Torch or other light source". This ridicules the plans to improve the functionality of PHCs in Nigeria and ending the norm of women and nurses giving birth in the dark or PHCs not being able to work at night or attend to night emergencies.

The BHCPF as a special purpose vehicle must set and maintain high standards. It should be a catalyst; a pace setter of what a functional PHC in Nigeria should look like.

4. National Health Policy 2016



The National Health Policy (NHP) was drafted in 2016 to provide policy orientation for the implementation of National Health Act 2014. The overall policy goal is to strengthen Nigeria's health system, particularly the PHC sub-system, to deliver effective, efficient, equitable, accessible, affordable, acceptable and comprehensive healthcare services to all Nigerians.

Prior to the development of the current NHP, Nigeria had previously developed and implemented two national health policies in 1988 and 2004, but the new NHP came at a time when there is global re-commitment to the Sustainable Development Goals (SDGs), and an increasing global support for the attainment of Universal Health Coverage (UHC).

Therefore, the NHP 2016 provides the necessary direction to support the improvement in Nigeria's health system performance. It also lays emphasis on strengthening PHC as the bedrock of Nigeria's national health system.

In addition to the provision of a financial risk cover for all Nigerians, particularly the poor and most vulnerable groups, the NHP stresses the importance of developing strategies that respond adequately to globalization, climate change, and the challenges of insurgency and its impact on the Nigerian health system.

The NHP has 10 policy thrusts derived from the WHO building blocks of health systems. These ten policy thrust include: Governance, Health Service Delivery, Health Financing, Human Resources for Health, Medicines, Vaccines, Commodities and Health Technologies, Health Infrastructure, Health Information System, Health Research and Development, Community Ownership/ Participation, and Partnerships for Health.

In POLICY OBJECTIVES AND ORIENTATIONS (Chapter 4) under Health Infrastructure (section 4.2.6), the NHP sets the goal of having "an adequate and a well distributed network of healthcare infrastructure that meets quality and safety standards". The objectives here include:

- To improve availability and distribution of functional health facilities across the country to ensure equitable access to health services, especially in underserved areas
- To ensure compliance with quality standards and requirements for facilities and biomedical equipment
- To ensure effective maintenance of health equipment and infrastructure at all levels

To be guided by the following Policy Orientations/ Initiatives

- Ensure the efficient utilization of the 15% allocation from the Basic Health Care Provision Fund for the maintenance of health infrastructure, equipment and transport for eligible primary care facilities, in line with the National Health Act 2014
- Promote adherence to all quality requirements and standards for equipment and safety for all the various categories of health facilities
- Strengthen the implementation of the issuance of, and compliance with, the Certificate of Standards in line with the National Health Act 2014
- Ensure the classification of health establishments according to the National Health Act 2014 to guarantee efficiency and equitable access to health services
- Promote multi-sectoral and public-private partnership for infrastructural development and maintenance
- Resuscitate and strengthen schools of biomedical engineering to produce the required personnel and to manage and maintain medical equipment
- Integrate the principles of service contracts and technology transfer/training/maintenance agreements as part of the contracting conditions for the purchase of equipment and complex medical services

The NHP 2016 drafting was reportedly as elaborately participatory consultative process which involves all stakeholders from line Ministries, Departments and Agencies (MDAs), the National Assembly, the State Ministries of Health and the FCT Department of Health Services, Academia, Public Health Experts, Civil Societies and Development Partners. However, the intersection between reliable electricity and healthcare delivery appears uncaptured, with a conspicuous omission of the Ministry of Power (and the Rural Electrification Agency – REA) in the consultative process of the NHP. This is much evident as the NHP 2016 prescribes special roles and responsibilities for various MDAs except the Ministry of Power and Rural development. The MDA assigned with roles included:

<p>The Office of the President, The Office of the Minister of Health, National Council of States, National Economic Council, Federal Executive Council, The National Assembly, The Federal Ministry of Health, Office of the State Governor, The State Houses of Assembly, State Ministries of Health, National Council on Health, State Councils on Health, National Health Insurance Scheme, National Primary Healthcare Development Agency, State Primary Healthcare Development Agencies, Local Government Area Councils, Federal Ministry of Finance, State Ministries of Finance, Federal Ministry of Planning and Budget, State Planning and Budget Offices, Federal Ministry of Agriculture, Federal Ministry of Education, State Ministries of Education, Federal Ministry of Women Affairs, State Ministries of Women Affairs, Federal Ministry of Environment, Federal Ministry of Information, State Ministries of Information,</p>

Ministry of Defence, State Ministries of Environment, National Agency for Food and Drug Administration Control (NAFDAC), The Nigerian Institute of Medical Research (NIMR), National Institute for Pharmaceutical Research and Development (NIPRD), National Arbovirus Research Institute, Ministry of Labour and Productivity, National Emergency Management Agency, Ministry of Water Resources, The Governor's Forum, Committee of Speakers (of Houses of Assembly), Religious Organizations, Traditional Medical Practitioners, CSOs, Private Sector and Community groups.

The Gap & Proposed Solution:

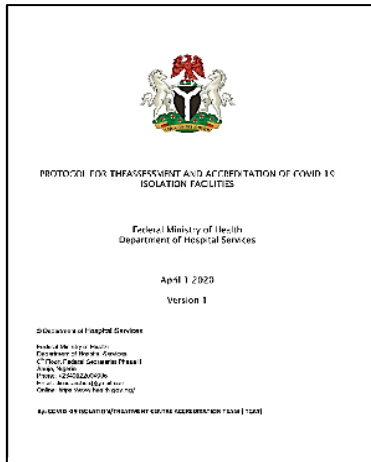
In section 2.5.6. Health Infrastructure, the document did well to note that physical structures, buildings and facilities, such as pipe borne water, good access roads, electricity and transportation are deficient in most PHC locations. In addition, technological equipment meant for hospital use, like surgical equipment, computers, power generating plants, and consumables are inadequate. The policy document noted in section 2.52 (health Services) that – Many health facilities are situated far away from the people, especially in rural and hard-to-reach areas. It stated that the most common barriers to accessing health services by the population are the cost of services, distance to the health facility, and the attitude of health workers.

Having highlighted electricity as a barrier and in deficit, the document still failed to consult and mainstream the Federal Ministry of Power and the Rural Electrification Agency (REA) in its planning.

Potential Solution:

- The implementation of the National Health Policy 2016 should ensure that the Federal Ministry of Power, State Ministry of Power and Electrification and the Rural Electrification Agencies are part of the key stakeholder; with core implementing roles and responsibilities.
- Like other Ministries, the Federal Ministry of Power and NACOP (National Council of Power) should have the responsibility to ensure that clean sustainable and affordable electricity supply (either on-grid or off-grid: mini-grid or as a stand-alone-solution) is provided to all PHC facilities within their electrification plan.
- The Federal Ministry of Health, the NPHCDA, the Federal Ministry of Power, the REA, state and local government, should come together to develop a road-map for the electrification of primary health care centres in Nigeria; such strategies should target the electrification of the eligible PHCs in each of the political ward under the BHCPF.

5. Protocol for the Assessment and Accreditation of Covid-19 Isolation Facilities



First detected in Wuhan China in December 2019, novel coronavirus disease (COVID-19) is an emerging respiratory disease caused by a novel coronavirus SARS-COV-2. COVID-19 is transmitted through inhalation of large respiratory droplets and direct contact with contaminated surfaces. Its clinical features include fever, dry cough, fatigue, myalgia and dyspnoea.

The objectives of the Protocol for Assessment and Accreditation of COVID-19 Isolation document is to provide guidance for the:

- Establishment of new COVID-19 isolation and treatment centres across the country.
- Strengthening of existing treatment centres to meet basic requirements for safety and comfort of patients and staff.
- Assessment and accreditation of isolation and treatment centres across the country.
- Recommendation for material, human and infrastructural requirements for surge capacity, patient care and prevention of nosocomial infections.

The protocol supports a holistic COVID-19 public health preparedness and effective response strategy at national and state level health facilities and other adaptable non-medical facilities.

According to the Protocol, elements to be assessed in COVID-19 isolation centres, have been divided into the following areas:

- | | |
|--|---|
| ✓ Location, | ✓ Housekeeping Kitchen and Laundry, |
| ✓ Access control and security, | ✓ Patient area including rooms, |
| ✓ Workflow, | ✓ Staff work area including offices and rest rooms, |
| ✓ Clinical and laboratory systems, | ✓ Utilities including electricity and water supply, |
| ✓ Manpower, | ✓ Staff residence and welfare, |
| ✓ Ventilation, | ✓ Supplies and access to infection preventions. |
| ✓ Human, material and facility capacity, | |
| ✓ Waste management | |

The Protocol under 1.5 Assessment tools (1.5.1 Thematic areas), requires amongst others that for:

a. Location:

- The facility should be in a serene environment or away from busy streets or crowded and populated areas
- There should be adequate parking space for staff vehicles and Ambulances

f. Ventilation

- The facility should be generally well-ventilated

g. Patient rooms

- Rooms should be adequately ventilated and maintained at negative pressure relative to the outside or corridors using mechanical or natural ventilations if possible.
- Lighting should be adequate in all rooms
- Potable water should be available
- Provision of intercom in each room for communication

l. Power

- The facility should have a back-up power source.

p. Water supply

- Water should be reticulated to all parts of the facility and flow constantly.

The protocol also highlights the following list for non-health care facilities and healthcare facilities.

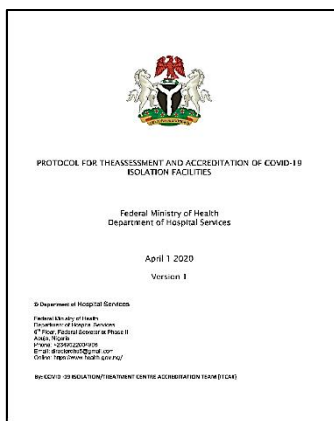
CHECKLIST ONE: FOR NON-HEALTH CARE FACILITIES

ELECTRICITY	
What is the primary source of power for the facility?	
Is there regular supply of electricity in the facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are there readily available and functional back-up power sources?	
If yes, what type(s) of back up electricity supply do you have?	
If generator, who is responsible for fuelling the generator?	
Is fuel supply regular?	<input type="checkbox"/> Yes <input type="checkbox"/> No

CHECKLIST TWO: FOR HEALTH FACILITIES

What is the primary source of power for the facility?		<input type="checkbox"/> Yes <input type="checkbox"/> No
10.2	Is there regular supply of electricity in the facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No
10.3	Are there readily available and functional back-up power sources?	<input type="checkbox"/> Yes <input type="checkbox"/> No
10.4	If yes, what type(s) of back up electricity supply do you have?	
10.5	If generator, who is responsible for fuelling the generator?	
10.6	Is fuel supply regular?	<input type="checkbox"/> Yes <input type="checkbox"/> No

The Gap & Proposed Solutions:



The Protocol for the establishment and assessment of COVID-19 Isolation centre is a commendable document that meets the challenge of the time. The Protocol somewhat ticks the box for accuracy, and comprehensiveness. It did well to stress the importance of ventilation, distance in the location of the centre from densely populated areas, and makes reasonable consideration for power supply needed to power the facility and equipment like ventilator to aid respiration of patient.

The Protocol took cognisance of the erratic power supply in the country and tries to make cover for the provision of a back-up electricity supply system. However, the Protocol seems to limit this back-up to fuel generators, this is evidence in the checklist one and two design for non-health and health facilities as shown in the table above. COVID-19 is a respiratory disease and infected persons should not be exposed to pollutants and poor air quality that may worsen their conditions. Fossil fuel generators are harmful to the health of users and compromises air quality around vicinities. 1,500 deaths per year come from the inhaling of generator smoke and carbon monoxide. Exposure to generator fumes exposes people to 70% increase risk of lungs cancer. This is aside 2/3 of users reporting hearing impairment⁸.

At the advent of the COVID-19 outbreak and set-up of isolation centres in Nigeria, the Rural Electrification Agency (REA) took the initiative to power the first set of COVID-19 Isolation facilities with solar-hybrid mini-grids;

53.1kWp solar-hybrid mini-grid at the University of Abuja Teaching Hospital Isolation centres;

20kWp solar-hybrid mini-grid at 128-bed Ikenne Isolation Centre;

25kWp solar mini-grid at the Nigerian Centre for Disease Control (NCDC) Public Health Laboratory in Lagos and

10kWp solar-hybrid mini-grid at 100-bed Iberekodo Isolation Centre in Ogun State⁹.

These initiatives are highly commendable and should be the set minimum operational standard for all health facilities and COVID-19 isolation centres nationwide.

⁸ Environmental Impact of Portable Power Generator on Indoor Air Quality, 2012; Generators: A Major Hazard to Health and the Environment in Nigeria, 2011; Good Governance Initiative, 2014; The Environmental and Cost Implication of Fossil Fuel Generators – Nigeria; 2015.

⁹ REA Press Release - REA Electrifies Four COVID-19 Health Facilities with Solar Hybrid Mini-Grids by Md/CEO REA – Ahmad Salihijo Ahmad on 15 April 2020. <https://rea.gov.ng/press-release-rea-electrifies-four-covid-19-health-facilities-solar-hybrid-mini-grids/>

Such systems are economically, financial and environmentally sustainable. Such technology ensures improved functionality in the health centres and guarantees safer air quality, as they are noiseless and healthy for both human and environmental health.

Potential Solutions:

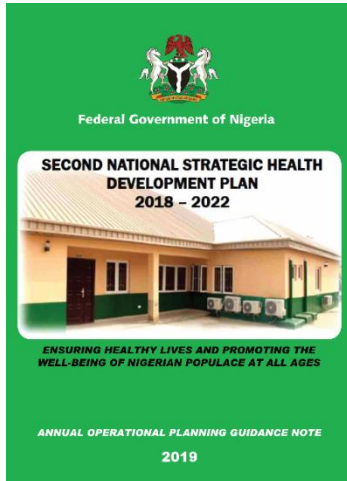
The Federal Ministry of Health (FMOH) and other supporting ministries should tap into technological innovations that give the best outcome i.e. in terms of energy supply and health sector functionality. It is wrong, and very limiting to set sub-optimal standards for any sector. It should be the responsibility of government officials, experts and agencies to set visions, and take actions that elevate Nigeria from its present comatose situation, not setting low standards that compromises the real Nigerian potential, under the excuse of being realistic. We should be ambitious. With accountability, transparency and an honest commitment to policies, these solutions are affordable and sustainable.

It is important to broaden stakeholders' participation to include those outside the concerned sector whenever key crosscutting policy document are being developed. This is why sectoral meetings and planning must be holistic enough to bring in all other sectors players, to give new angles and solution to specific, sectorial and national issues.

It is sad that when many developing and developed countries are exploring clean sustainable energy sources to guarantee the delivery of 24/7 electricity supply in their health facilities, decision makers in the Nigerian health sector are not taking advantages of these developments and opportunities, even when international partners and investors bring these solutions to our doorstep.

Considering the upward trend of the spread of COVID-19 in Nigeria, and the paucity of requisite healthcare facilities, there is need to set up more isolation centres and to standardize existing ones to safely cater for infected individuals. Such isolation centres need to conform to international best practices with adaptation to the peculiarities of Nigeria. These centres should provide basic facilities for patient care in an atmosphere that minimizes health worker infection and facilitates physical and psychosocial recovery.

6. The Second National Strategic Health Development Plan (2018–2022): Annual Operation Planning Guide Note 2019.



The Second National Strategic Health Development Plan (NSHDP II) 2018 – 2022 was finalized in 2018 within the framework of Vision 2020, the National Health Act 2014, the National Health Policy (NHP) 2016, and the Federal Government Economic Recovery and Growth Plan (ERGP) 2017. It was developed to serve as a successor to the first NSHDP 2010- 2015. The plan outlines Nigeria’s strategies for achieving the SDGs and UHC through the PHC revitalization. A bottom-up and decentralized approach was adopted in the development of the NSHDP II, as well as the Subnational State strategic Health Development Plans (SSHDP II).

Though concerted efforts were made to effectively implement the first plan across all levels, there was no uniform guideline to assist stakeholders especially the states to operationalise their state specific plans. In order to avoid a repeat of the past, a common operational planning tool that can be used by all stakeholders was developed to assist all the 36 states, and FCT; as a guide that will aid the application of the Annual Operation Plan (AOP) tool.

Above all objectives, the NSHDP II AOP guide set out series of steps and processes that the health sector should take in developing its sector-wide operational plan. The steps provided in the guide are not exhaustive, but at the minimum to assist stakeholders undertake development of their operational plans.

The Gap & Proposed Solutions:

The Second National Strategic Health Development Plan (NSHDP II) 2018 – 2022 AOP tool and guide is a highly technical document that provides explanations on fiscal frameworks and planning around the health sector. However, the document is rather fluid and lacks any specific target. It is more of a loose coordination checklist tool for health sector analysis at all governance level.

The document is supposed to give a map of how key health sector indicators, projects and plans are framed alongside other sectorial contributions. The framework does not provide a comprehensive detail of how such multi-sectorial collaboration across MDAs at Federal, State and LGAs can function. The document is more of a Monitoring & Evaluation log-frame to capture the projects and activities of the health sector MDAs at Federal, States and Local government level.

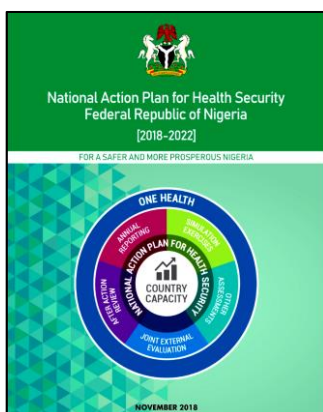
It does not provide guiding paths on how line MDAs like Ministry of Water Resource, Ministry of Works and Housing, Ministry of Power, Ministry of Environment, etc. can work collaboratively with their sub-regional counterparts. This is largely missing in the NSHDP II guide and may explain the lack of collaboration; the disconnect and somewhat the isolation of the health sector from the activities of the other Ministries.

Potential Solutions:

There is a need to be more specific and deliberate in the development and setting of guidelines and log-frameworks. In the future, such multi-sectorial tool should use more nomenclature and naming of ministries that relates to the Health Sector. The document should dedicate sections to show the interconnections between Ministries and how such interconnection can be leveraged upon to achieve mutual goals for all ministries. For instance, a closer working of the Ministries of Power and Health can lead to increase healthcare delivery in rural communities, as well as increasing the number of Nigerian households with access to electricity. This can even be extended into rural development and access to water for rural communities. However, such is yet to be harnessed and mainstreamed in high sectorial documents such as the NSHDP II.

Because of the fluid nature of the NSHDP II, it has the advantage of still mainstreaming and leveraging on various sectorial activities to improve health sector performance at all level. This should be one of the major leverage to improve the functionalities of PHCs in Nigeria. However, there is need for coordination, trust, information sharing and harmonious working across MDAs, CSOs and private sector.

7. The National Action Plan for Health Security Federal Republic of Nigeria (2018-2022)



In 2018, Nigeria developed a National Action Plan for Health Security (NAPHS). The NAPHS seeks to strengthen core capacities by adopting strategies, establishing priorities, and implementing activities intended to close the identified gaps in the prevention, detection, and response to public health threats in Nigeria.

It was developed by linking existing national health security plans, including the NHSDP II, NCDC Strategy and Implementation Plan 2017–2021, Nigeria National Action Plan on Antimicrobial Resistance (AMR), Infection, Prevention, and Control (IPC) Action Plan, and National

Strategy on Immunization and Primary Health Care Systems Strengthening (NSIPSS).

The NAPHS as a 5-year strategic plan is a multi-sectoral approach hinged on the principles of 'One Health' with significant participation in the process from various government MDAs and security authorities. These MDAs include: Federal Ministry of Agriculture and Rural Development, Federal Ministry of the Environment, Federal Ministry of Finance, Budget and National Planning, Federal Ministry of Health, Federal Ministry of Mines and Steel Development, Ministry of Defence, Federal Ministry of Transport, Federal Ministry of Science and Technology, Federal Ministry of Justice, Federal Ministry of Information, Ministry of Interior, Office of the National Security Adviser and the National Emergency Management Agency.

The NAPHS covers all the 19 technical areas required to effectively prevent, detect, and respond to public health threats. Detailed plans for each technical area were developed by multi-sectoral working groups, to cover the period 2018–2022.

The Gap & Proposed Solutions:

The NAPHS is unique in its comprehensive scope and multi-sectoral nature. However, like the National Health Policy of 2016, the NAPHS failed to consult and mainstream the Federal Ministry of Power and the Rural Electrification Agency (REA) in its planning. This again reflects the after-thought position given to the importance of sustainable electricity supply in the delivery of quality health service.

All through the document, nowhere was the Ministry of Power mentioned.

Even though the makers of the document correctly established the link between the Health sector and the aforementioned ministries, and went further to show how such relationship can be leveraged upon, it failed to show the relationship between sustainable electricity and the delivery of health service; and how the Ministry of Power and the Ministry of Health can leverage on their relationship.

Potential Solutions:

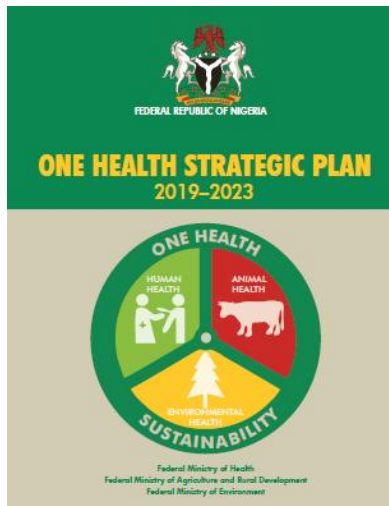
There is a need to link public health and the power sector electrification plan.

There is a need to set-up a joint technical working groups (composed of the Ministries of Health, the National Primary Health Care Development Agency, the Ministry of Power, the Rural Electrification Agency and their state counterparts). This working committee should develop a road-map between 2021 and 2025 with clear target, activities and indicators for the electrification of PHCs in Nigeria with a reliable and sustainable electricity supply.

Specific linkages at policy and operational levels should be highlighted in the NAPHS. This should synchronize with the power sector electrification plans. For instance, the

Rural Electrification Strategy and Implementation Plans (RESIP), the Nigerian Rural Electrification Plan (NESP), the Power Road Map, and the Mid Term Expenditure Framework (MTEF) should align with the NAPHS and the national budgeting, planning and implementation cycle. These activities are critical to ensuring that domestic financing is made available for health and electrification security.

8. One Health Strategic Plan (2019-2023)



One Health is an approach to designing and implementing programs, policies, legislations and research in which multiple sectors plan, communicate and work together to achieve better public health outcomes for the human, animal, and environment sectors.

For the timely prevention and control of zoonoses and other emergencies, the Federal Government recognises the need to join forces across sectors vis-a-vis sharing of epidemiological data including laboratory information or public health events. It is against this backdrop that the NCDC, in collaboration with other MDAs developed a 5-year strategic plan and a 1-year implementation plan

for One Health in Nigeria (2019-2023).

This plan was jointly developed with Department of Veterinary and Pest Control Services in the Federal Ministry of Agriculture and Rural Development, Federal Ministry of Health, Federal Ministry of Environment, Academia, development partners, the private sector as well as non-governmental organisations.

The plan addresses some of the gaps identified in the Joint External Evaluation of the IHR core capacities. The plan reflects the shared commitment to enhance multi-sectoral collaborations in addressing human-animal ecosystem public health challenges. If successfully implemented, the plan will institutionalise One Health, address zoonotic diseases, enhance food safety and security, improve livelihoods of many Nigerians and keep Nigeria healthier and safer.

The Gap & Proposed Solutions:

Like the NAPHS, the One Health Strategic Plan 2019-2023 is unique in its comprehensive scope and multi-sectoral nature. However, it failed to consult and mainstream the role of the Federal Ministry of Power and REA in its planning. This again reflects the after-thought position given to the importance of sustainable electricity supply in the delivery of quality health service. It failed to show the relationship between sustainable electricity and the delivery of public health safety.

Our Request

The National Assembly:

A review of various health sector strategies, plans and guidelines shows a large omission of the importance of electricity supply. Thus, legislation is needed to create the norm for clean sustainable energy at PHC facilities to obligate the State to provide the resources necessary to guarantee and maintain clean sustainable energy to set improved standards for healthcare in Nigeria.

The NPHCDA amendment bill currently before the National Assembly provides an opportunity to introduce sustainable electricity supply as a component of primary health care framework for Nigeria.

The Bill for an Act to Amend the National Primary Health Care Development Agency, having passed the public hearing stage, should be enacted and accented into law with the infusion of sustainable reliable electricity connect to ensure PHCs work effectively with 24/7 electricity supply.

Undoubtedly, the NPHCDA requires strong legislative framework to enhance its ability to fulfil its mandate more effectively. As such, there is urgent need for concerted legislative efforts to strengthen the efficiency of the NPHCDA through an amendment to the Agency establishment Act.

Federal Ministry of Health and the NPHCDA:

- i. The NPHCDA should lead the process to review the outdated Minimum Standard for Primary Health Care in Nigeria.
- ii. Ensure that sustainable clean reliable electricity is well captured and described with provided 24/7 supply guaranteed in a new Minimum Standard for PHCs in Nigeria.
- iii. Lead a multi-stakeholder dialogue on improving sustainable energy access for PHCs;
- iv. Collaborate and work closely with the off-grid stakeholders especially the Rural Electrification Agency and the Governors Forum to develop work plans to electrify PHCs across Nigeria.
- v. Collaborate with REA and other stakeholders to carrying out a comprehensive energy audit of the PHCs providing PHCs database with sampling reflecting all types of PHCs facilities.

Federal Ministry of Power and the Rural Electrification Agency (REA):

- i. Mainstream the inclusion of social sector most especially public PHCs in the off-grid, mini-grid and stand-alone solutions through local and international

funded electrification schemes either via REF calls or actual donor funding i.e. GIZ, World Bank project

- ii. Initiate actions for increasing access to electricity in rural communities and simultaneously stimulate rural economies and rural services via electrification of PHCs especially in cluster locations.
- iii. Collaborate with NPHCDA and other stakeholders to carry out a comprehensive energy audit of the PHCs providing PHCs database with sampling reflecting all types of PHCs facilities.

Other stakeholders

- i. Promote access to sustainable energy for electrification of Primary Health Care Centres in Nigeria
- ii. Support call for possible policy and regulatory shift to accommodate roll-out of renewable energy for PHCs
- iii. Call on the Federal, State and Local governments, as well as other financial institutions and donor communities to investment in the electrification of PHCs.
- iv. Call on CSOs and other NGOs to demand and monitor resources channelled into the sustainable electrification of PHCs i.e. Renewable Energy/Solar for PHCs to ensure transparency, accountability, and value for money.
- v. Consider electrification models that give community women and youths ownership or equity partnerships of the electrification technology, so they provide security, and make revenue from the solution, as they can provide over the fence electricity from the PHC to power other community productive activities. Such models guarantees the safety of the solution, create local jobs, stimulates businesses and make the entire project bankability for the energy provider.

Action Points

1. NPHCDA and the REA should drive the call for the electrification of PHC facilities across Nigeria. The call should focus, and call for collaborations from the Nigerian Governors Forum (NGF), Association of Local Government Chairmen, World Bank, ECOWAS, AFDB, Nigerian Health Insurance Scheme, National and State Legislative Committee in the Senate and House of Representatives, etc.
2. The Federal Ministry of Health and the Ministry of Power, together with CSOs should facilitate meeting and agreement between the NPHCDA and the REA (Rural Electrification Agency) to roll-out action plan of sustainable electrification of 10,000 PHCs (1 PHC per ward) across Nigeria. This should lead to MOU

signing between the Ministry of Power (REA), and the Ministry of Health (NPHCDA); and other legislative and funding entities i.e. State government, Financial Institution, International Organisations, etc.

3. Renewable energy solution providers, RE technical partners and donor communities should develop a sustainable business plan for the electrification of PHCs with RE. There is need to have a well-established business case with all sustainability funding options well laid-out. Examples of such can be documented cost and plans from the successful States like Kaduna, Lagos and Edo that have executed (in part) similar electrification program.
4. The Coalition for the Sustainable Electrification of PHCs in Nigeria, should host a national multi-sectorial dialogue event to call all major stakeholders from REA, State Primary Health Care Boards and State Commissioners of Health, the state governors, the financial institutions, donor organisations (in power, health, environment, development, etc.), legislatures, donor organisations, crowd funding platforms, Nigerian Sovereign Investment Authority, seed investors, Nigerian stock exchange, etc. to discuss the upscaling of sustainable PHC electrification in Nigeria.
5. Work with the ready states: readiness of the state will be measure by their commitment and actual actions like; policy shift to accommodate funding commitments to the solar for PHCs, support the evaluation of PHC using criteria template on the PHCs in the state.

Conclusion

A review of various health sector strategies, plans and guidelines shows a large omission of the importance of electricity and power supply in plans and strategies. Ironically, even when so called multi-sectoral strategies that required the full participation of major MDAs, it is quickly observed that the Federal Ministry of Power and/or its implementing agency –the Rural Electrification Agency (REA) is grossly missing in all of the plans, policies, guidelines and strategies.

While there is need to commend ongoing effort of the MDAs within the health space to connect to other MDAs, it's necessary to emphasise the lacuna created in the absence of a bridge that links improving public health and provision of electricity to make health facilities functional. This is almost like building a castle in thin air; especially for a country like Nigeria where electricity supply remains poor. Hence, the quality of energy access in health facilities has crosscutting impacts on other aspects of health services.

The National Electric Power Policy (NEPP) of 2001 and Nigeria's Power Sector Recovery Programme (PSRP) recognized the fact that grid electricity cannot get to everywhere soon even if desirable, the more reasons for the promotion of off-grid energy option, such as solar mini-grids, interconnect mini-grids, micro-grid and Stand-Alone-Solar, through policies like the 2015 Nigerian Renewable Energy and Energy Efficiency Policy (NREEEP), National Renewable Energy Action Plan (2015-2030) and the Rural Electrification Strategy and Implementation Plan (RESIP) of 2016.

The problem is that these electrification plans do not make specific provision for the electrification of social public sectors like public health facilities, and public primary schools, which are not profit-making businesses units that can afford the relative higher tariffs of these clean renewable off-grid solutions.

Considering the upward trend of the spread of COVID-19 in Nigeria, and the paucity of requisite healthcare facilities, there is need to set up more isolation centres and to standardize existing ones to safely cater for infected individuals. Such isolation centres need to conform to international best practices with adaptation to the peculiarities of Nigeria. These centres should provide basic facilities for patient care in an atmosphere that minimizes health worker infection and facilitates physical and psychosocial recovery.

Hence, sustainable funding mechanism backed by government legitimacy; policies and fiscal guarantees is needed for the deployed solutions that are founded on grants of international donor contributions. With electricity continually viewed with the bankability-for-profit lens, public social facilities like PHCs that are not designed for profit making, must be informed and reshaped in manners that make their access to clean reliable on-grid or off-grid sustainable regardless of socio-economic and political changes. Such framework is and should be explored. Limited local sustainability framework backed by strong sectoral policies or compelling legislative governance that ensured government support regardless of political changes and direction is much needed.

ANNEX I

Progressive & Visionary States are Taking
the Lead: Kaduna, Lagos & Edo

Powering COVID-19 Isolation Centres by the
Rural Electrification Agency (REA)

Energy Audit of a Typical Primary Health
Care Centres

Leading States in Powering PHCs:

Kaduna Solar for Health

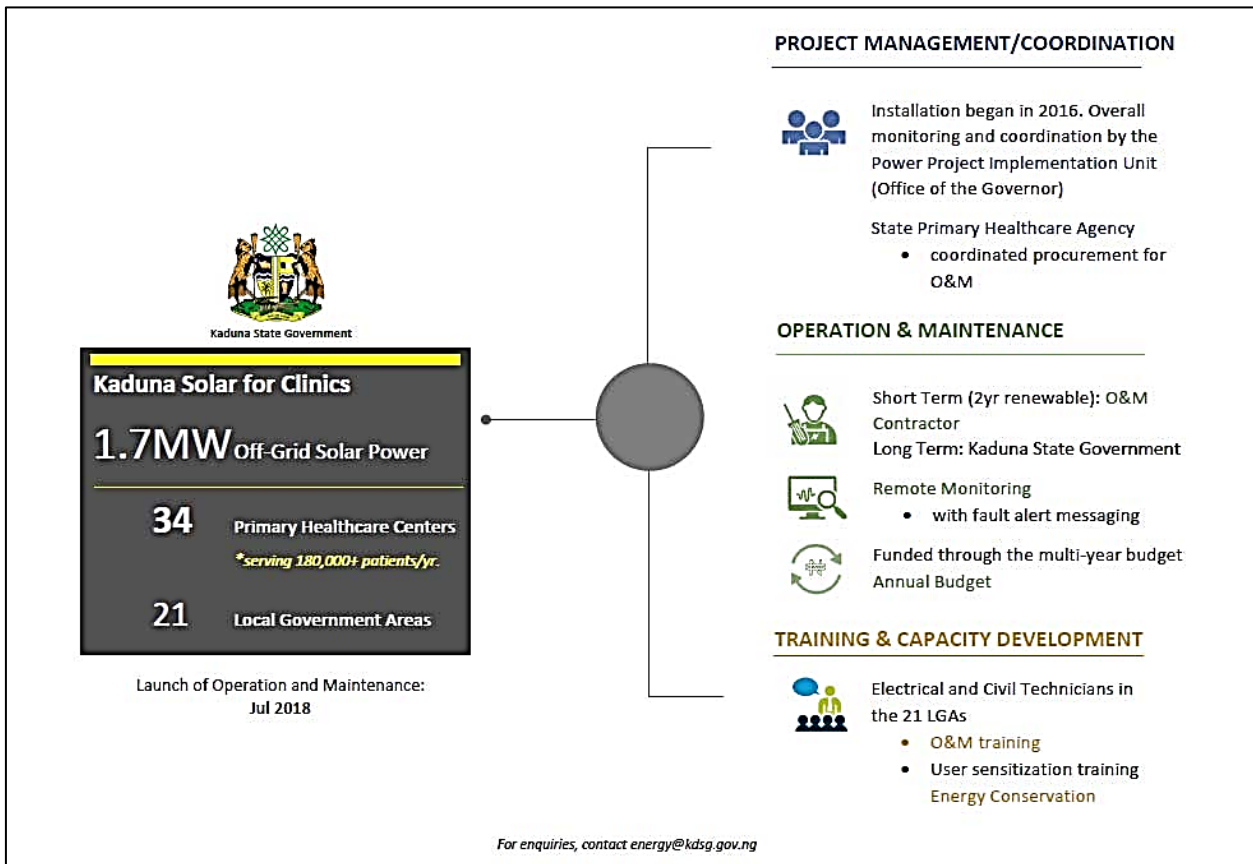


In 2016, the Kaduna State Government, as part of its strategic health development agenda, began installation of a total of 1.7MW of Solar Systems in Primary Healthcare Centres (PHCs) across Kaduna. In partnership with the UK Department for International Development (DFID), a total of 34 primary healthcare centres in 21 Local Government Areas have now received these solar systems. As part of the agreement, UK DFID committed funding for the installation while KDSC committed to establishing and funding the Operation and Maintenance of the systems¹⁰.

Kaduna Solar for Health Phase 1 has been completed with operational systems for two years and an MOU signed for Operation and Maintenance (O&M). The systems for Phase 2 have also been installed and are currently undergoing testing and commissioning while the O&M is currently undergoing procurement. The solar systems for Phase 3 are in the design stage.

¹⁰ Kaduna State Solar for Primary Healthcare Centre: <https://energy.kdsg.gov.ng/>

A total of 2.4MW of Solar Power has been installed and is operating at 34 PHCs and 13 General Hospitals. Kaduna State is currently designing standardized systems for 221 PHCs and hope to have them all installed in 14 months. Once installed, the State would have achieved their goal of ensuring that the 255 wards in Kaduna State can each boast of a healthcare centre that has electricity 24 hours of the day¹¹.



Financing the Project:

As part of the agreement, DFID committed funding for the installation of the systems, while the Kaduna state government committed to establishing and funding the operation

¹¹ Electricity Hub. February 18.2020:KAPSCO Will Make Kaduna Energy Self-Sufficient — MD. <https://www.nigeriaelectricityhub.com/2020/02/18/kapsco-will-make-kaduna-energy-self-sufficient-md/>

and maintenance. In fulfilment of that commitment, the people of Kaduna and 21 LGAs witnessed the contract signing for the operation and maintenance of the 34 solar systems.

According to the Senior Special Assistant on Energy to Governor El-Rufai, Ms. Dolapo Popoola, the State Government has secured an additional grant of 10 million Euros from the European Union Delegation to Nigeria and ECOWAS for the scale-up of the Kaduna Solar intervention¹².

The Testimonial

“this project is the first of its kind in northern Nigeria; ensuring that the selected healthcare centres, serving over 180,000 patients annually can be supplied all the power they need to provide quality healthcare round the clock in an environmentally friendly manner. On average, almost 6,000 babies are delivered yearly across 34 primary healthcare centres 44percent at night, and due to the lack of grid electricity access at remote PHCs, staff are often forced to deliver babies that come at night under candle light. Solar systems have eradicated the need for noisy generators thereby reducing carbon emissions and creating a more serene environment for patients. 34 PHCs in 21 local government areas have received this systems... It is for these reasons that the significance of starting these solar systems for their entire lifespan of 20years cannot be overstated...”

- The executive secretary of the Kaduna State Primary Healthcare Development Agency, Hajiya Hadiza S. Balarabe¹,

¹² NorthernEnergy (28 July 2018): Kaduna gets additional €10m EU/ECOWAS grant for solar energy. <https://punchng.com/kaduna-gets-additional-e10m-euecowas-grant-for-solar-energy/>

Lagos Solar Power Project

- ✓ 5MW of solar power to education and health facilities
- ✓ 172 schools and 11 public health centres given access to clean, renewable power
- ✓ £15m of solar equipment procured, tested and delivered

In 2014, the UK Department for International Development (DFID) and the state government of Lagos joined forces to bring forth an ambitious project- “Lagos Solar”; to power public institutions by means of solar PV systems. Under the DFID tender and Lagos Solar, hundreds of schools along with almost a dozen Primary HealthCare Centres (PHC) throughout rural Lagos will be electrified by solar.

Lagos Solar is an energy initiative by the Lagos State Government, focused on implementing embedded solar power solutions for public facilities. The project aims to deliver 5MW of sustainable solar power to all rural, riverine and public boarding Secondary Schools (172 Schools) and 11 PHCs located within the rural areas. To demonstrate on a large scale that solar is entirely reliable for power generation, Lagos State Government through the Lagos State Electricity Board, has collaborated with the UK Department for International Development (DFID) to co-fund this ground-breaking project. The Lagos State Electricity Board has tested and proven that the failures were due to poor design and badly managed systems, contracts and programs rather than the solar technology itself.



One of three Primary HealthCare Centers (PHC) in Ibeju Lekki with 25kW of solar installed

Constructing Africa’s largest off-grid solar power project in Lagos State. The Lagos State government worked with Crowd-Agent together with DFID to provide end-to-end supply chain services, including inspection and logistics, to support the largest and most complex off-grid solar power project in Africa. This meant managing each stage of the supply chain, from procurement to delivery, to ensure a high quality solar power system was installed in Nigeria’s most populous state. Through this equipment, schools and healthcare centres that previously had little or no access to electricity supply from the national grid, now have clean and sustainable power solutions that draw on one of Nigeria’s most abundant sources – sunshine.

The Testimonial

It is estimated that by 2020 the solar powered schools and hospitals are expected to benefit 190,000 school pupils and 4.7 million clinic patients, and create more than 3000 jobs. These numbers represent the remarkable impact that solar will bring to the future of Nigeria. This project has proved to be a blessing to every community that has received a solar PV system. Since the completion of this project, immediate changes have already been witnessed by local community members. Residents of Epe, a suburban town and Local Government Area (LGA), can now pump water for days and health centres can accept baby deliveries in full force because power is now available at night. Doctors and staff no longer have to refer expecting mothers to more expensive hospitals, and costs of buying fuel for dilapidated generators have been eliminated¹.

- Clinics no longer rely on limited diesel fuel resources to run dilapidated generators.
- Care is accessible 24 hours a day. Reliable electricity powers lights for night-time surgery; pumps supply fresh water to improve hygiene; and refrigeration preserves much-needed medicines and vaccines.
- By 2020, an estimated 190,000 pupils will benefit from improved access to educational tools and 4.7 million patients will receive better healthcare.
- Hundreds of people are receiving training and certification in solar power generation employment opportunities.
- Local solar industry manufacturers and service providers are gaining opportunities in mini off-grid renewable energy solutions.
- The regular power source will be a catalyst for overall improvements in the health and education services in the state.
- Finally, millions of Naira will be saved annually on the state's fossil fuel bills, funds which the government can reinvest in providing services to citizens

Edo Healthcare Improvement Programme (Edo-HIP).

- ✓ The initiative will see the transition to clean, reliable energy in these first 20 PHCs.
- ✓ The first phase of the programme will see the deployment of 164 KVA total solar energy to power each PHC with critical electrical supply for operations and water supply.
- ✓ The second phase of the programme will see the deployment of solar power under a sustainable pay-as-you-go model for 200 PHCs in the state.
- ✓ 500 functional primary healthcare centres at the end of our administration that will be fitted with e-patient software, reliable sources of power and water, drugs, computers and furniture amongst other facilities



Source: Edo State Health Improvement Program (<https://secure.edohip.com/>)

Edo Health Improvement Program (EDOHIP) is a series of government-led interventions aimed at increasing access to efficient, effective and sustainable quality health care services with the central focus of improving the health status and well-being of citizens of Edo State. To achieve this the Edo Healthcare Improvement Programme have led Complete renovation of clinics, Retraining and continuous education of staffs, Provision of 24hrs power supply and water in the first phase of PHCs, Provision of essential medical staff, equipment & drugs, electronic Clinic solution to aid treatment and complete data capture.

The Edo State government has collaborated with ICE Commercial Power to deliver clean and reliable energy solution to 20 Primary Healthcare Centres (PHCs) under the Edo Healthcare Improvement Programme (Edo-HIP). The intervention programme is expected to set up about 200 Primary Healthcare Centres (PHC); this means that there will be one PHC for every 10 units across the 192 wards in the state, with adequate security, utilities and 24-hour solar-powered electricity. One of the administration's overarching goals is to make sure no fewer than one million persons in the state benefit from the Edo Health Insurance Scheme (EDO-HIS) by the end of the year 2021.

To ensure the programme is fully implemented, the state government set aside 2 percent of its federal allocation for both state and local government councils.

The Testimonial

- *“In the past, we used to take delivery with torch lights because the centre was not connected to public electricity. Even during emergencies, we didn’t have access to light. But with the installation of the solar power, we now have access to 24-hours electricity supply...If a patient is to deliver in the centre today, there is 24 hours electricity supply available. In taking seizing cases, we now see light to use... the healthcare facility has continued to record increase in number of persons who seek medical care... The health centres now boast of steady supply of drugs, solar-powered electricity, modern data gathering technology and portable water supply”. - Mr. Felix Isegbe, health workers attached to Ugbekpe-Ekperi Comprehensive Health Center, in Etsako Central Local Government Area.*
- *“The provision of water facility has alleviated the plights of women who give birth in the centre. Before now, when women come here for delivery, they asked us to provide water from our homes. We now have water running 24-hours1.” – Mrs Gloria Akhilomhe, A patient in the PHC.*
- *“We are working with ICE Commercial Power on the solar power at the PHCs because it is a sustainable option if we intend to realise the vision of repositioning the PHCs for optimal service delivery. Ours is a plan that ensures that the infrastructure needed to support affordable healthcare is guaranteed even as we prepare for the take-off of the Health Insurance Scheme.” - Paul Okungbowa kungbowa, Senior special assistant to Governor Obaseki on Human Resource.*

Powering COVID-19 Isolation Centres by the Rural Electrification Agency (REA)

REA Electrifies Four COVID-19 Health Facilities with Solar-Hybrid Mini-Grids

53.1kWp
53.1kWp solar-hybrid mini-grid at the University of Abuja Teaching Hospital Isolation Center.
UNIVERSITY OF ABUJA TEACHING HOSPITAL, ABUJA

20kWp
20kWp solar-hybrid mini-grid at 128-bed Ikenna Isolation Center.
IKENNA ISOLATION CENTER, OGUN

25kWp
25kWp solar mini-grid at the Nigeria Center for Disease Control (NCDC) Public Health Laboratory in Lagos.
NCDC PUBLIC HEALTH LABORATORY, LAGOS.

10kWp
10kWp solar-hybrid mini-grid at 100-bed Iberekodo Isolation Center in Ogun State.
IBEREKODO ISOLATION CENTER, OGUN.

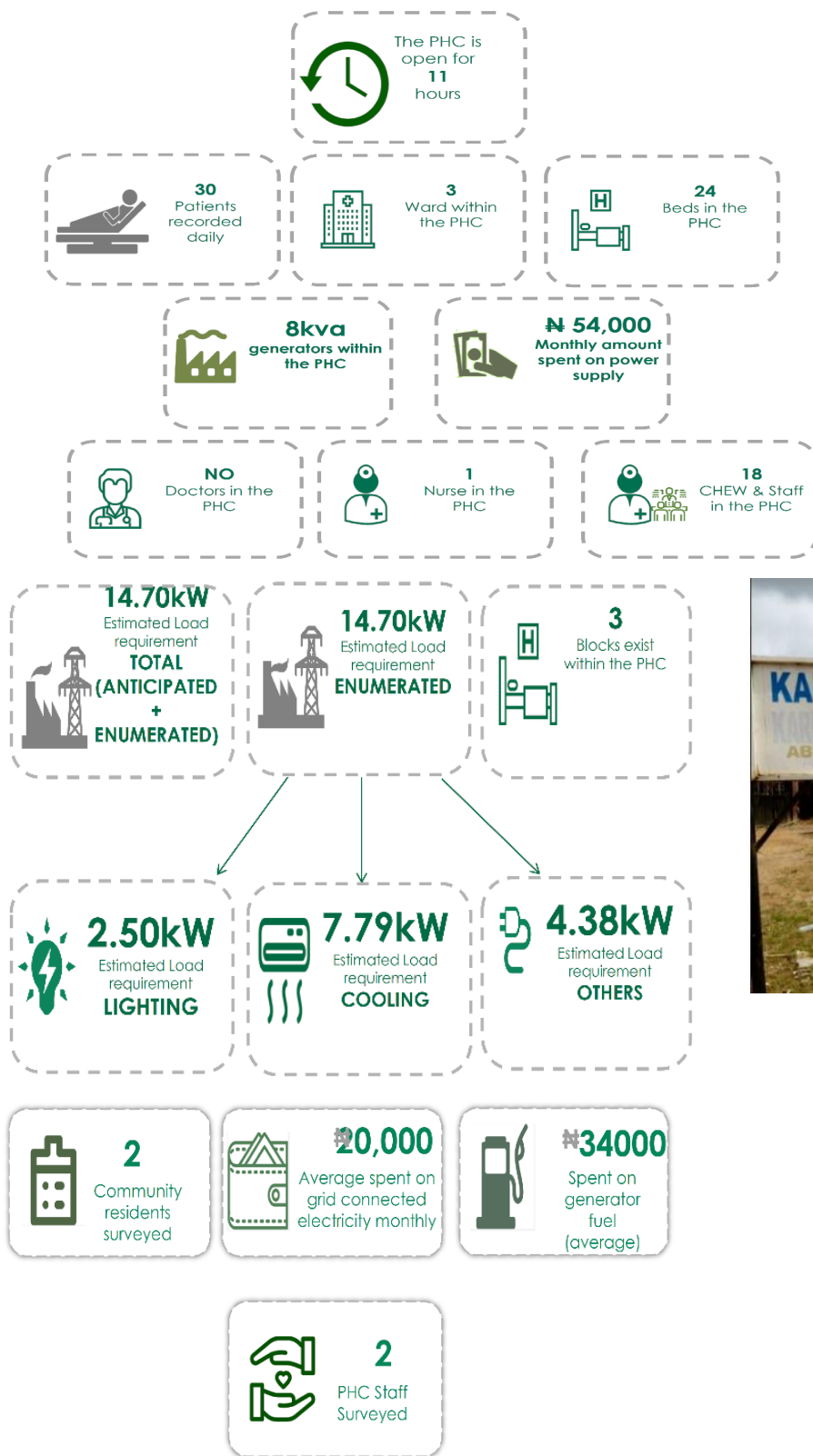
These solar-hybrid mini-grids will power critical loads like ventilators, lighting, cooling equipment and ICU 24/7 in these COVID-19 isolation centres.

www.rea.gov.ng

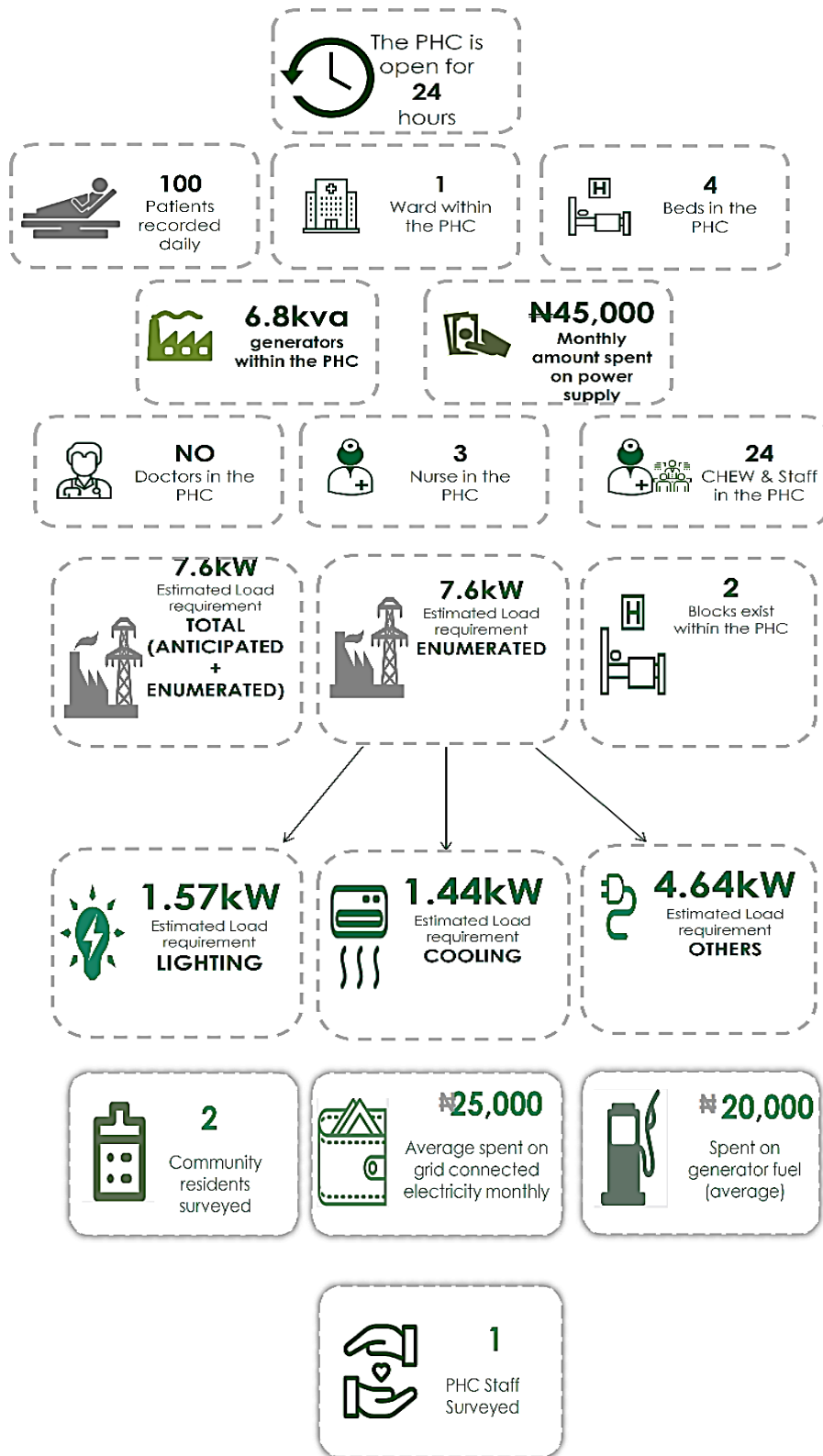


Energy Audit for 2 Model Primary Health Care Centres in FCT

Overview of Karu PHC



Overview of Lugbe PHC



About GGT Nigeria and #RE4PHCs Project:

Convened in 2008, Good Governance Team (GGT) is a civic platform with over a decade experience on governance, health financing, and public finance management (PFM) reforms in Nigeria. It has built capacity around budget research whilst actively involved in civic engagements promoting sound fiscal governance as part of civil society contributions toward accentuating pro-poor development concerns in Nigeria. It has also facilitated plethora of successive policy research and made invaluable contributions to many catalytic civic engagements on policy and legislative interventions, anticorruption campaigns and sustainable development.

Recognizing the need for energy efficiency transition of public social sector, GGT conceptualized a policy research project (#solar4PHCs) to promote the mainstreaming of renewable clean energy solutions in the electrification of basic health facilities in Nigeria. Funded by Heinrich-Boell Stiftung (HBS) Foundation Nigeria, the overall objective of the project was to drive the needed policy and legislative change to fill existing gaps in electrification of PHCs facilities.

Improving the Functionality of Primary Healthcare Centres in Nigeria (Prioritizing Policy & Legislative Actions for Optimal Basic Healthcare Services beyond COVID19) is a key result output which dissemination would further help to benchmark the extent of ongoing intervention(s) to energize the healthcare through off-grid RE. Through this HBS enabled #Solar4PHCs project, the attention of relevant stakeholders' are re-aroused on RE for primary healthcare electrification in Nigeria. As many stakeholders begin to recognize the need for energy efficiency transition in the electrification of public social sector, more public health facilities would be provided with sustainable, clean, reliable and constant energy solutions for Nigeria to achieve improvement in the quality of her healthcare delivery.

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IMPROVING THE FUNCTIONALITY OF PRIMARY HEALTHCARE CENTRES IN NIGERIA:

(Prioritizing Policy & Legislative Actions for Optimal Basic Healthcare Services beyond COVID19)



3 PILLARS OF A FUNCTIONAL PRIMARY HEALTH CARE

1. Health Infrastructure: including recommended Infrastructure dimensions, furniture, water supply, sanitation, staff accommodation and equipment including healthcare technology	2. Human Resources: Minimum recommended staff number and cadre for each type of health facility	3. Service Provision: Recommended minimum PHC services for each facility type including the minimum requirement of medical equipment and essential drugs.
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RELIABLE ELECTRICITY:

1. Ensures good work conditions for recommended medical staff in the facility
2. Makes staff accommodation, if available, liveable
3. Allows for 24/7 operation of the facility; night operation becomes possible
4. Enables laboratory equipment to function in the health centers
5. Allows all other medical equipment to function effectively in the center
6. Supports motorized water supply within the premises of the health facilities
7. Provides illumination and security in the health facility at night
8. Powers storage facilities to keep essential drugs & vaccines in the right condition.

CLEAN, SUSTAINABLE AND RELIABLE ELECTRICITY IS THE FOUNDATION TO ENSURE THE 3 PILLARS CAN FUNCTION.

The 3 pillars for a functional primary healthcare system must be built on a **FOUNDATION** of sustainable steady, reliable (uninterrupted) electricity supply without which these pillars will not stand.

 HEINRICH BÖLL STIFTUNG
ABUJA

With Support from

