CTCN
CLIMATE TECHNOLOGY CENTRE & NETWORK

Technical Assistance Response Plan – Terms of Reference

Country	**Nigeria**
Request ID#	**2021000029**
Title	Developing Institutional Framework for the Energy Efficiency Act and Regulations targeting energy intensive sector (household and industries) in Nigeria
NDE	**Mr. Chukwuemeka Okebugwu** NDE of Nigeria Department of Climate Change, Federal Ministry of Environment, Plot 444, Aguiyi Ironsi Road, Abuja, Nigeria Email: chuksokebugwu@yahoo.com
Proponent	**Engr. A. D. Abubakar** FNSE, FNIPE Ag. Director, Renewable and Rural Power Access Department Federal Ministry of Power Email: dapshimaabubakar@gmail.com

Summary of the CTCN technical assistance

The summary should provide a brief description of the problem (barrier to climate technology deployment) and how the technical assistance will address it (brief summary of outputs and activities). Please also briefly indicate national actors involved and the anticipated timeline. Please note this summary will be used for public communication purposes so it is important that it is well written. (maximum 1250 characters including spaces)

Nigeria is the largest economy in sub-Saharan Africa, but limitations in the power sector constrain economic development. Frequent electricity outages have a serious impact on the economy. The average firm in Nigeria claims outage related losses equivalent to more than 4% of sales and no peer country experiences such severe business losses related to the power supply. The residential sector (households and commerce) accounts for most of Nigeria's final energy consumption with a share of about 78%, followed by industrial use with about 9% and the rapidly expanding transport sector with 7.5%. According to the World Bank's projection, electricity demand is to grow by a factor of over 5 until 2035 up to almost 530 TWh. This trend will add to the already existing challenges in the energy sector.

The government of Nigeria has therefore prioritized energy generation, transmission and consumption efficiency as key actions in its National Determined Contributions (NDCs) from 2015. However, to date, Nigeria's transition to energy efficiency and conservation is mainly hindered by the complexity of introducing energy sector reforms across the key sectors industry, commerce and transport in which current activities are highly fragmented. This technical assistance will aim at developing a harmonized energy efficiency and conservation act leading to the adoption and implementation of energy efficient technologies and practices in the industrial, and household sectors. It will also set up a regulatory framework to monitor and report on activities towards compliance of the regulations. A certification and training curriculum as well as a training the trainers programme will contribute to an effective auditing and reporting.

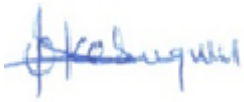
Agreement:

(If possible, please use electronic signatures in Microsoft Word file format)

National Designated Entity to the UNFCCC Technology Mechanism
Name: **OKEBUGWU CHUKWUEMEKA**

Title: **ASSISTANT CHIEF SCIENTIFIC OFFICER**

Date: **8th December,2021.**
Signature:



Proponent (signature of the Proponent is optional)
Name: **Engr. A. D. Abubakar** FNSE, FNIPE

Title: **Ag. Director, Renewable and Rural Power Access Department Federal Ministry of Power**

Date: **8th December,2021**
Signature:

UNFCCC Climate Technology Centre and Network (CTCN)

Name: Rose Mwebaza
Title: CTCN Director
Date: 09/12/2021
Signature:

1. Background and context

Please provide a brief description of the background and context for the CTCN Response Plan. Please include national and sectoral information using recognized and publicly available sources. (maximum 2500 characters including spaces).

Nigeria is the largest economy in sub-Saharan Africa, but limitations in the power sector constrain economic development. The country is endowed with large oil, gas, hydro and solar resources, and it already has the potential to generate more than 12,500 megawatts (MW) of electric power from existing plants daily, but most days is only able to generate around 4,000 MW due to unavailability of gas, breakdowns, water shortage and grid constraints. This results in frequent electricity outages that are a serious problem to the economy. The average firm in Nigeria claims outage related losses equivalent to more than 4% of sales and no peer country experiences such severe business losses related to the power supply. The residential sector (households and commerce) accounts for most of Nigeria's final energy consumption with a share of about 78%, followed by industrial use with about 9% and the rapidly expanding transport sector with 7.5%. According to the World Bank's projection, electricity demand is to grow by a factor of over 5 until 2035 up to almost 530 TWh. This trend will add to the already existing challenges in the energy sector.

The government of Nigeria has therefore prioritized energy generation, transmission and consumption efficiency as key actions in its National Determined Contributions (NDCs) from 2015. Despite the fact that the key focus in the energy sector in Nigeria has been rather on improving power generation over the past years, there is need to formulate and implement energy efficiency programs in the various sectors of the economy. This will contribute not only to reducing the power shortage but will also increase the competitiveness of the industrial sector through the reduction of energy intensity per unit product. Yet, this requires a very careful implementation of energy sector reforms across the industrial, commercial and transport sectors.

2. Problem statement

Founded on the national and sectoral context as detailed in the section above, please include a brief problem statement clarifying the main problems and barriers for climate change mitigation and/or adaptation in terms of climate technologies that the CTCN Response Plan will address and overcome. (maximum 1250 characters including spaces).

Energy efficiency is important in order to address the issue of energy insecurity and to meet present and future energy demand in a way that is both economically and environmentally efficient. Innovative technologies could significantly reduce energy consumption and save industry.

To date, Nigeria's transition to energy efficiency and conservation is mainly hindered by the complexity of introducing energy sector reforms across the key sectors industry, commerce and transport in which current activities are highly fragmented. This technical assistance will aim at developing a harmonized energy efficiency and conservation act leading to the adoption and implementation of energy efficient technologies and practices in the industrial, and household sectors. It will also set up a regulatory framework to monitor and report on activities towards compliance of the regulations. A certification and training curriculum as well as a training the trainers programme

will contribute to an effective auditing and reporting.

3. Logical Framework for the CTCN Technical Assistance:

(Guidance: Please note that multiple activities lead to one Output, and multiple Outputs lead to one Outcome. There can be several Outputs, but only one Outcome description capturing the CTCN technical assistance. Deliverables are the products or services to be delivered to the NDE/Proponent/CTCN based on the Activities and the Outputs.)

	Month																	
***Objective**: The objective of this technical assistance is to develop a comprehensive energy efficiency and conservation act and to deliver a training the trainers programme for energy auditors and managers.*																		
Outcome: *The outcome of this technical assistance is expected to be a considerable increase in energy efficiency within industries and households in Nigeria, overseen by effective mechanisms for auditing, reporting and compliance.*																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Output 1: Development of implementation planning and communication documents																		
Activity 1: i) A detailed work plan of all activities, deliveries, outputs, deadlines and responsible persons/organisations and detailed budget to implement the Response Plan. The detailed work plan and budget must be based directly on this Response Plan; ii) Based on the work plan, a monitoring and evaluation plan with specific, measurable, achievable, relevant, and time-bound indicators used to monitor and evaluate the timeliness and appropriateness of the implementation. The monitoring and evaluation plan should apply selected indicators from the Closure and Data Collection report template and enable the lead implementer to complete the CTCN Closure and Data collection report at the end of the assignment (please refer to item iv below and section 14 in the Response Plan); iii) A two-page CTCN Impact Description formulated in the beginning of the technical assistance and update/revised once the technical assistance is fully delivered (a template will be provided); iv) A Closure and Data Collection report completed at the end of the technical assistance (a template will be provided).																		
Deliverables 1: i) Detailed work plan ii) Monitoring and evaluation plan	X X																	

iii) CTCN Impact Description iv) Closure and Data Collection report	X																		X X
Output 2: Comprehensive market assessment for energy efficiency and conservation in industry and households to establish a baseline																			
Activity 2.1: Market assessment Conduct a detailed market assessment for energy efficiency and conservation in industry and households to establish a baseline. For that purpose, the following activities will be conducted: • Identify industrial and household sectors and sub-sectors that consume energy as well as the types of energy consumed (energy sources, including electricity, coal, oil, gas, etc.) per sector and sub-sector • Review existing energy consumption data in these sectors and its sub-sectors and estimate the performance of industries with regards to specific energy consumption against international benchmarks • Identify existing regulations and policies that are designed to promote growth by regulating energy use in the industrial and household sectors and its sub-sectors During the market assessment, gender aspects should be integrated transversally in order to understand challenges and opportunities that particularly arise for women.																		
Activity 2.2: Classification of sectors under the EEA Develop a methodology to help classify the energy producing and consuming sectors and sub-sectors (designated sectors) that need to come under the purview of the EEA.																			

Deliverables 2: 2.1: Market assessment 2.2: Classification of sectors and sub-sectors			X	X															
Output 3: Introduction of a Policy Working Group																			
Activity 3.1: Identification of stakeholders Conduct an analysis of key stakeholders across different sectors (industries, household) and types of institutions (national and local government entities, research institutions, industry associations, civil society organizations, private sector enterprises and SMEs). A preliminary list of potential stakeholders for the PWG should be prepared based on which the NDE, project proponent and key stakeholders will select the PWG members.																			
Activity 3.2: Formation of the PWG Prepare the ToRs of the PWG stating its activities in overseeing the work of the various activities (e.g. market assessment, policy development, implementation, etc.) and approving all intermediate sub-outcomes. During the formation of the PWG, member organizations should present at least two candidates and be mindful of gender-equality concerns. A list of PWG members disaggregated by gender and institution should also be developed.																			
Activity 3.3: 2-day PWG kick-off meeting Organize a 2-day PWG kick-off meeting to discuss the objectives and activities related to the market assessment, policy development and implementation.																			
Activity 3.4: Quarterly PWG meetings Quarterly PWG meetings will be organized to keep track of the																			

market assessment and policy development and implementation progress.																		
Deliverables 3: 3.1: Stakeholder mapping list 3.2: ToRs of PWG, PWG member list disaggregated by gender and institution 3.3: Kick-off meeting report including list of participants disaggregated by gender and institution 3.4: Quarterly PWG meeting reports including list of participants disaggregated by gender and institution			X	X X		X			X			X			X			X
Output 4: Development of the Energy Efficiency and Conservation Act																		
Activity 4.1: Development of the draft EEA Develop the draft EEA that creates the legal framework to promote energy efficiency and conservation in industry and households in Nigeria. The Energy Efficiency and Conservation Act should: • consolidate laws relating to energy efficiency and conservation; • establish/name new and existing energy entities and define roles and responsibilities; • regulate energy sources (Renewable energy, Downstream coal, electrical energy, etc.) • regulate energy/electricity consuming sectors (industry and households) • set incentives for energy efficiency and conservation • create linkages to energy performance standards and labeling requirements • define auditing, reporting and compliance requirements, including certification schemes for energy professionals																		

Within the EEA, opportunities for gender mainstreaming should be considered where applicable.																		
Activity 4.2: National stakeholder consultation Organize a national stakeholder consultation on the recommended Draft EEA. This consultation will bring together representatives from the industry, importers, consumer groups, manufacturers, and academia. The consultation will last 2 months, including a national stakeholder consultation workshop.																		
Activity 4.3: Development of final EEA Develop a final EEA by incorporating the input from the national stakeholder consultation process. The final version should be ready for adoption.																		
Deliverables 4: 4.1: Draft EEA 4.2: Consultation and workshop report including participant list disaggregated by gender and institution 4.3: Final EEA								X		X			X					
Output 5: Operationalization of the Energy Efficiency and Conservation Act																		
Activity 5.1: Guidance on the implementation of the EEA Provide guidance during the implementation of the EEA, including the preparation of an implementation plan to notify designated consumers, and appoint of energy managers.																		
Activity 5.2: Development of standard templates for energy auditing																		

Develop standardized templates for reporting data, energy audit reports and compliance reports. These should be in line with the defined auditing, reporting and compliance requirements of the EEA in terms of manner and interval of conducting audits.																		
Activity 5.3: Development of a certification procedures and training curricula for energy auditors and managers Develop certification procedures for energy auditors and managers through the conduct of assessments, examination, syllabus, registration, etc. Detailed training curricula for energy auditors and managers will be developed including training modules, model question banks and a specific training the trainer programme.																		
Activity 5.4: Delivery of a training of trainers to energy auditors and managers Deliver a 5-days training the trainers programme for energy auditors and managers to a selected amount of participants (maximum 20). A fair representation across geographic zones, institutions and gender should be guaranteed.																		
Deliverables 5: 5.1: Implementation plan 5.2: Standard templates for energy auditing, data reporting and compliance 5.3: Certification procedures, and training curricula and outline 5.4: Training report														X	X	X	X	

4. Resources required and itemized budget:

Please provide an indicative overview of the resources required and itemized budget required to implement the CTCN technical assistance, including for M&E-related activities, using the table below. Important to note that minimum 1% of the budget should explicitly target gender specific activities related to the technical assistance (please see section 10 for further information on gender). Once the Response Plan is completed, a Response Implementation partner(s) will be selected by the Climate Technology Centre (CTC). A detailed activity-based budget for the CTCN assistance will be finalized by the CTCN and selected Implementer.

Activities and Outputs	**Input: Human Resources** *(Title, role, estimated number of days)*	**Input: Travel** *(Purpose, national vs. international, number of days)*	**Inputs: Meetings/events** *(Meeting title, number of participants, number of days)*	**Input: Equipment/Material** *(Item, purpose, buy/rent, quantity)*	**Estimated cost** *Please accumulate the costing at Activity and Output level and provide an estimated costing range for each activity and the total Response Plan*	
					Minimum	**Maximum**
Output 1: Development of implementation planning and communication documents	*IC1: 5 days* *NC1: 5 days*				***USD 3,500***	***USD 3,850***
Output 2: Comprehensive market assessment for energy efficiency and conservation in industry and households to establish a baseline					***USD 42,400***	***USD 46,640***
Activity 2.1: Market assessment	*IC1: 20* *IC2: 15* *IC3: 3* *NC1: 20*	*Local travel for NC1 and NC2*			*USD 36,800*	*USD 40,480*

	NC2: 15 *NC3: 5*					
Activity 2.2: Classification of sectors under the EEA	*IC1: 4* *IC2: 4* *NC1: 4* *NC2: 4*				*USD 5,600*	*USD 6,160*
Output 3: Introduction of a Policy Working Group					***USD 25,400***	***USD 27,970***
Activity 3.1: Identification of stakeholders	*IC1: 3* *IC2: 3* *NC1: 3* *NC2: 3* *NC3: 1*				*USD 4,400*	*USD 4,840*
Activity 3.2: Formation of the PWG	*IC1: 10* *NC1: 10*				*USD 7,000*	*USD 7,700*
Activity 3.3: 2-day PWG kick-off meeting	*IC1: 3* *IC2: 3* *IC3: 3* *NC1: 3* *NC2: 3* *NC3: 3*				*USD 6,300*	*USD 6,930*
Activity 3.4: Quarterly PWG meetings	*IC1: 5* *IC2: 5* *IC3: 1* *NC1: 5* *NC2: 5* *NC3: 1*				*USD 7,700*	*USD 8,470*
Output 4:					***USD***	***USD***

Development of the Energy Efficiency and Conservation Act					***83,100***	***91,410***
Activity 4.1: Development of draft EEA	*IC1: 20* *IC2: 20* *IC3: 3* *NC1: 20* *NC2: 20* *NC3: 5*				*USD 30,500*	*USD 33,550*
Activity 4.2: National stakeholder consultation	*IC1: 10* *IC2: 10* *IC3: 1* *NC1: 10* *NC2: 10* *NC3: 1*	*Local Travel, DSA to participants, Meeting Room*	*National stakeholder consultation workshop, hybrid mode*		*USD 30,700*	*USD 33,770*
Activity 4.3: Development of final EEA	*IC1: 15* *IC2: 15* *IC3: 1* *NC1: 15* *NC2: 15* *NC3: 2*				*USD 21,900*	*USD 24,090*
Output 5: Operationalization of the Energy Efficiency and Conservation Act					***USD 77,600***	***USD 85,360***
Activity 5.1: Guidance on the implementation of the EEA	*IC1: 10* *IC2: 5* *NC1: 10*				*USD 10,500*	*USD 11,550*

	NC2: 5					
Activity 5.2: Development of standard templates for energy auditing	*IC1: 5* *IC2: 5* *NC1: 5* *NC2: 5*				*USD 7,000*	*USD 7,700*
Activity 5.3: Development of a certification procedures and training curricula for energy auditors and managers	*IC1: 5* *IC2: 5* *IC3: 20* *NC1: 5* *NC2: 5* *NC3: 2*				*USD 17,400*	*USD 19,140*
Activity 5.4: Delivery of a training of trainers to energy auditors and managers	*IC3: 10* *NC1: 5* *NC2: 5*	*International travel for IC3* *Local travel for 20 participants plus local experts, DSA and meeting room*	*Training the trainers workshop over 5 days*	*Training material*	*USD 42,700*	*USD 46,970*
Estimated range of costing for the entire Response Plan					***USD 232000***	***USD 255,200***

5. Profile and experience of experts

Based on the required Human Resources identified in section 4 (Resources required and itemized budget) please provide a description of the required profile of all involved experts for the implementation of the CTCN Response Plan.

Experts required	Brief description of required profile

International Consultant (IC1) - Policy expert & team leader	• Master's degree or higher in political science, economics or science in the area of energy • More than 8 years of responsible experience at a regional or national level of coordinating, implementing and evaluating energy efficiency related projects. Policy implementation projects are desired. • Experience with energy efficiency across industries, appliances and equipment • Experience in engaging stakeholders from Government, academics and the private sector in a developing country context • Fluency in English required
International Consultant (IC2) – Technical expert	• Master's degree or higher in energy efficiency, energy, engineering, energy policy, environmental studies, environmental policy, environmental economics, finance, economics or a similar related field • More than 8 years of experience in energy efficient appliances and equipment projects, preferably in relation to government work. • At least 3 years of progressively responsible experience of collecting, compiling and reporting energy related industry data • Experience in projects which include the implementation of policies on energy efficiency, assessing and communicating the impacts of market assessments • Knowledge and experience in working with government and private sector in a developing country context • Fluency in English required
International Consultant (IC3) – Capacity building expert	• Master's degree or higher in political science, engineering social science or educational science • More than 8 years of experience in designing and delivering technical trainings in the area of energy efficiency, energy auditing and reporting • Knowledge and experience in working with government and private sector in a developing country context • Fluency in English required
National Consultant (NC1) – Local policy expert	• Bachelor's degree or higher in political science, economics or science in the area of energy • More than 5 years of experience with energy efficiency related projects. • Knowledge and experience with the national energy efficiency regulations and initiatives • Experience in engaging stakeholders from Government, academics and the private sector in

	Nigeria • Fluency in English required
National Consultant (NC2) – Technical expert	• Bachelor's degree or higher in energy efficiency, energy, engineering, energy policy, environmental studies, environmental policy, environmental economics, finance, economics or a similar related field • More than 5 years of experience in energy efficient appliances and equipment projects, preferably in relation to government work. • Expertise in collecting, compiling and reporting energy related industry data • Experience in projects which include the implementation of policies on energy efficiency, assessing and communicating the impacts of market assessments • Knowledge and experience with the national energy efficiency regulations and initiatives • Fluency in English required
National Consultant (NC3) – Gender expert	• Bachelor's degree or higher in social science, political science or economics with a focus on gender • More than 5 years of experience integrating gender perspectives in energy policies and initiatives • Knowledge and experience of working in Nigeria or similar geography • Fluency in English required

6. Intended contribution to impact over time

Please provide a brief description of the intended contribution to impact over time of the outcome and outputs provided by this technical assistance on resilience to climate change and/or carbon abatement. To the extent possible, please quantify the intended impact contribution, for example by indicated estimated number of people potentially impacted over time, GDP contribution of the focus sector, carbon emissions by the focus sector, etc. This intended contribution to impact is what will happen if the objective (as articulated in section 3) is met. Please ensure relevant complementarity with text in sections 7 to 12. (maximum 1250 characters including spaces)

The introduction of an energy efficiency and conservation act will be a major contribution to achieving Nigeria's NDCs of reducing up to 179 million tonnes of GHG per year in 2030, as the country has set energy efficiency targets at 40% for the period from 2015 to 2030. Through the act, energy efficiency and conservation will be promoted across major industrial sectors and sub-sectors as well as households incentivizing the transition to energy efficient appliances and equipment, and conservation measures beyond this. Furthermore, effective auditing and the training of auditors will ensure effective reporting and compliance.

7. Relevance to NDCs and other national priorities

Please identify relevance and contribution from the technical assistance to the Nationally Intended Contributions (NDC) and other relevant national prioritized efforts (TNAs, TAPs, NAPs, NAMAs, etc.). (maximum 2500 characters including spaces)

NDCs 2015: Within Nigeria's Nationally Determined Contributions (NDCs) from 2015, economy-wide energy efficiency has been considered as the leading mitigation measure with a potential GHG reduction of 179 million tonnes per year in 2030.
Link:
https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nigeria%20First/Approved%20Nigeria%27s%20INDC_271115.pdf

NREAP and NEEAP: Nigeria's Renewable Energy and Energy Efficiency Action Plans from 2016 looked at a 40% energy efficiency target for the country between 2015 and 2030, equivalent to around 2.5% improvement per year.
Links: https://www.all-on.com/media/publications/simplified-guides-to-nigerias-energy-access-policies-and-regulations/_jcr_content/par/textimage.stream/1595008834471/1d6e2ceac514728a800b76da2ebfe60631fba3d4/national-energy-efficiency-action-plan-neeap.pdf

https://www.all-on.com/media/publications/simplified-guides-to-nigerias-energy-access-policies-and-regulations/_jcr_content/par/textimage.stream/1595008834471/1d6e2ceac514728a800b76da2ebfe60631fba3d4/national-energy-efficiency-action-plan-neeap.pdf

Nigeria Vision 20:2020: "introduction of demand side management principles targeted at ensuring efficiency in energy consumption in the electricity industry"
Link: https://nairametrics.com/wp-content/uploads/2013/06/nigeria-vision-20_2020_draftetb.pdf

8. Linkages to relevant parallel on-going activities:

Please identify relevant previous and ongoing public and private sector initiatives, projects or programmes that the CTCN assistance will specifically build on and contribute to. To the extent possible, please add practical and operational details on the linkages between existing activities and the CTCN assistance. (maximum 2500 characters including spaces)

Energy efficiency measures in the sense of nationally planned or coordinated programmes are not yet in place, although several initiatives and policies exist through the Energy Commission of Nigeria (ECN), the National Centre for Energy Efficiency and Conservation (NCEEC) and the Federal Ministry of Environment (FMENV) in partnerships with NGOs, the private sector and UN agencies.

The NCEEC linked to the University of Lagos has been conducting research into energy conservation and efficiency including studies into the promotion of energy efficient appliances and light bulbs. The ECN with support from ECOWAS and in partnership with the Cuban government has been distributing 1 million Compact Fluorescent Lamps in Nigeria free to residents in organised estates nationwide. Under the National Clean Cooking Scheme run by the FMENV, the Rural Women Energy Security has started production and distribution nationwide of a purpose designed bio-fuel stove in partnership with pot-makers Tower and energy firm Envirofit. The project "Promote Energy Efficiency in Nigeria's Residential and Public Sectors" from 2011 to 2015 aimed to introduce energy efficiency policies and measures, including standards and labels for refrigerators and lights in Nigeria. The International Centre for Energy, Environment and Development (ICEED) has also established the Nigerian Clean Cookstoves Design and Testing Centre for an improved cookstove performance comparison.

Several initiatives in the area of energy efficiency are ongoing in Nigeria. The Nigerian Clean Energy Access Programme (NCEAP) is distributing 150 million energy efficient bulbs under the Clean Development Mechanism (CDM). The Abuja Green City has been an ongoing initiative of the FMENV promoting low carbon development by using a combination of local electricity generation, improved insulation and energy efficient devices for apartments.

9. Anticipated follow up activities after this technical assistance is completed:

Please describe the expected future use of the outputs and deliveries produced by this technical assistance, after the CTCN implementation is completed, towards contributing to the anticipated impacts over time articulated in section 6. For example, what organizations or stakeholders will use the outputs of the technical assistance after it is completed, for what purpose, at what scale and scope the outputs and deliveries will be applied, when and what will be the next steps undertaken, etc. (maximum 2500 characters including spaces)

This technical assistance will establish the basis for a set of activities resulting in energy efficient industries and households. The continuity and success of this initiative will be underpinned by the following actions:

(a) Adoption of the Energy Efficiency and Conservation Act;
(b) Implementation of incentives for energy efficiency and conservation in industries and households;
(c) Training of energy auditors and managers by the trained trainers;
(d) Continuous auditing, reporting and enforcement of the EEA;
(e) Introduction/updating of energy performance standards.

10. Gender and co-benefits:

Imbedded in design of the activities:	*A gender mainstreaming analysis is mandatory to include for all technical assistances. A gender expert will be assigned to carry out an assessment and evaluation regarding gender mainstreaming during the implementation of the TA.* *In addition, please describe all support to gender aspects, women's equality and other co-benefits embedded into the Response Plan (please include a reference to the actual activities and outputs as described in section 3).* The gender gap in information, consultation and decision-making limits the capacity of women business owners to adopt energy-efficient practices. Generally, energy use may also be reduced by about 20 per cent through changes in behaviour. Women and men respond differently to policies encouraging behavioural changes. To develop the act for energy efficiency and conservation, the process will need to take into consideration the role of all gender in decision making and ensure equitable consultation and representation in the process. This framework will be designed based on a gender-differentiated understanding of opportunities and constraints to optimize their social and climate impact.
Gender and co-benefits intended as result of the activities:	*Please describe all gender aspects, women's equality and other co-benefits expected as a result of the CTCN technical assistance.* As a result of the activities, women should have equal opportunities to access energy efficiency and conservation options and specific constraints should be balanced out. Women will have an equal access to trainings for energy auditors and managers.

11. Main in-country stakeholders in implementation of the technical assistance activities:

Using the table below, please list and describe the role of in-country stakeholders, participants and beneficiaries who will be involved in or directly consulted during implementation of the assistance.

In country stakeholder	**Role in implementation of the technical assistance**
National Designated Entity	The NDE will support in getting the commitment and participation of relevant stakeholders within the process.
Request Applicant: Federal Ministry of Power	Engage in the implementation of project and ensure synergy and reporting to the UNFCCC Focal Point.
Federal Ministry of Environment	Focal point of Nigeria on climate change issue
Energy Commission of Nigeria	Provide information on activities in various aspects of renewable energy utilization
Standard Organization of Nigeria	Provides standards and quality assurance services for all products, services and processes in Nigeria in line with international best practices and to ensure continual improvement.

Federal Ministry of Works & Housing	Monitor and appropriate implementation processes
Federal Ministry of Industries Trade & Investment	Monitor and appropriate implementation processes
National Centre for Energy Efficiency and Conservation	Support in implementing Energy Efficiency and conservation
Federal Ministry of Science & Technology	Provision of appropriate technological inputs
Nigerian Electricity Regulatory Commission	Monitor and appropriate implementation processes
National Bureau of Statistics	Provide information into needed areas of the procedure
National Planning Commission	Monitor and appropriate implementation processes
Manufacturers Association of Nigeria (MAN)	Drumming advocacy and provision of communication and consultation platform.
Nigeria Association of Chambers of Commerce, Industry, Mines and Agriculture (NACCIMA)	Drumming advocacy and provision of communication and consultation platform mainly in the area of private sector engagement
Private sector entities within energy consuming industries	Provide information into needed areas of the procedure
Households	Provide information into needed areas of the procedure

12. SDG Contributions:

*Instructions: Please complete the grey section below for **a maximum of three SDGs** that will be advanced through this TA. A complete list of SDGs and their targets is available here: https://sustainabledevelopment.un.org/partnership/register/.*

Goal	Sustainable Development Goal	Direct contribution from CTCN TA (1 sentence for top 1-3 SDGs)
1	End poverty in all its forms everywhere	
2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	
3	Ensure healthy lives and promote well-being for all at all ages	
4	Ensure inclusive and equitable quality education and promote life-long learning opportunities for all	Part of the technical assistance is a training the trainers programme that will build the basis for training energy auditors and managers. Efforts will be made to ensure gender equality.
5	Achieve gender equality and empower all women and girls	
6	Ensure availability and sustainable management of water and sanitation for all	
7	Ensure access to affordable, reliable, sustainable, and modern energy for all (consider adding targets for 7)	
	7.1 - By 2030, ensure universal access to affordable, reliable and modern energy services	
	7.2 - By 2030, increase substantially the share of renewable energy in the global energy mix	
	7.3 - By 2030, double the global rate of improvement in energy efficiency	Through the introduction of an energy efficiency and conservation act, this technical assistance contributes to the improvement of energy efficiency.
	7.a - By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	
	7.b - By 2030, expand infrastructure and upgrade technology for	

	supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support	
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
10	Reduce inequality within and among countries	
11	Make cities and human settlements inclusive, safe, resilient and sustainable	
12	Ensure sustainable consumption and production patterns	
13	Take urgent action to combat climate change and its impacts	*All TAs should indicate relevance to Goal 13 and at least one target below (13.1 to 13.b).*
	13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	
	13.2 - Integrate climate change measures into national policies, strategies and planning	
	13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	Through this technical assistance, Nigeria will have effective auditing, reporting and compliance mechanisms in place to monitor energy efficiency across industry and households. Qualified energy managers and auditors will be trained.
	13.a - Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible	
	13.b - Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities	
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	

13. Classification of technical assistance:

Please indicate primary type of technical assistance. Optional: If desired, indicate secondary type of technical assistance.

Please tick off the relevant boxes below	*Primary*	*Secondary*
☐ 1. Decision-making tools and/or information provision	☐	☐
☐ 2. Sectoral roadmaps and strategies	☐	☐
☐ 3. Recommendations for law, policy and regulations	x	☐
☐ 4. Financing facilitation	☐	☐
☐ 5. Private sector engagement and market creation	☐	x
☐ 6. Research and development of technologies	☐	☐
☐ 7. Feasibility of technology options	☐	☐
☐ 8. Piloting and deployment of technologies in local conditions	☐	☐
☐ 9. Technology identification and prioritisation	☐	☐

Please note that all CTCN technical assistance contributes to strengthening the capacity of in country actors.

14. Monitoring and Evaluation process

Upon contracting of the implementing partners to implement this Response Plan, the lead implementer will produce a monitoring and evaluation plan for the technical assistance. The monitoring and evaluation plan must include specific, measurable, achievable, relevant, and time-bound indicators that will be used to monitor and evaluate the timeliness and appropriateness of the implementation. The CTCN Technology Manager responsible for the technical assistance will monitor the timeliness and appropriateness of the Response Plan implementation. Upon completion of all activities and outputs, evaluation forms will be completed by the (i) NDE about overall satisfaction level with the technical assistance service provided; (ii) the Lead Implementer about the knowledge and learning gained through delivery of technical assistance; and (iii) the CTCN Director about timeliness and appropriateness of the delivery of the activities and outputs.

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Annex 1. Guidance Note for the Response Plan template