CTCN
CLIMATE TECHNOLOGY CENTRE & NETWORK

CTCN Technical Assistance
Request Submission Form

Guidelines:

- This Request Submission Form should be completed by the organisation requesting technical assistance from the Climate Technology Centre & Network (CTCN) in collaboration with the National Designated Entity (NDE) of the country in question
- The Form must be signed by the NDE. Please see updated contact list of NDEs here: http://unfccc.int/ttclear/support/national-designated-entity.html
- The Form can be submitted as a Word file containing a digital signature or as a signed and scanned PDF file in combination with an un-signed Word file
- For requests submitted by multiple countries, all the NDEs of the respective countries shall sign identical Forms before official submission to the CTCN
- NDEs have the opportunity to submit CTCN requests in collaboration with National Designated Authorities (NDAs) for the Green Climate Fund (GCF) if targeting the GCF Readiness Programme.

Requesting country or countries:	Nigeria
Request title:	*Please reflect the objective of the technical assistance in the title (maximum 200 characters).* Developing Institutional Framework for the Energy Efficiency Act and Regulations targeting energy intensive sector (household and industries) in Nigeria
NDE	*Please add name of organisation, name of individual, position, email and address.* Mr. Chukwuemeka Okebugwu, NDE of Nigeria chuksokebugwu@yahoo.com Department of Climate Change, Federal Ministry of Environment, Plot 444, Aguiyi Ironsi Road, Abuja, Nigeria
Request Applicant:	Please add name of organisation, contact person, position, email and address of the organisation requesting assistance from the CTCN. - Federal Ministry of Power - Engr. Faruk Y. Yusuf - Ag.Director, Renewable and Rural Power Access Department - Faruk.yusuf@power.gov.ng

Climate objective:

- ☐ Adaptation to climate change
- ☒ Mitigation of climate change
- ☐ Combination of adaptation and mitigation of climate change

Geographical scope:

- ☐ Community level
- ☐ Sub-national

☒ National

☐ Multi-country

If the request is at a sub-national or multi-country level, please describe specific geographical areas (provinces, states, countries, regions, etc.).

Problem statement related to climate change (up to one page):

This section should answer the question "what is the problem?" Please summarise the problem related to climate change and/or the negative impacts of climate change in the country that the request aims to address.

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.

Past and on-going efforts to address the problem (up to half a page):

This section should answer the question "what has been done or is currently being done to address the problem?" Please describe past and on-going processes, projects or initiatives implemented in the country or region to tackle the climate problem as described above.

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 the 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.

Specific technology[1] barriers (up to one page):

This section should answer the questions "what are the technology barriers that hinder national efforts described above" and "how will the CTCN technical assistance complement these efforts?" Building upon the problem statement and taking into consideration the existing efforts described above, please describe the specific technology barriers encountered by the requesting applicant to identify, assess or deploy climate technology (ies) in an effort to address the problem statement. The described barriers should be within the scope of the requested CTCN technical assistance (described in the section below).

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. Technology barriers are mainly linked to the complexity of introducing energy sector reforms across the key sectors industry, commerce and transport in which current activities are highly fragmented. This TA will aim at developing a harmonized framework of regulations leading to 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 under the proposed framework.

Sectors:

Please indicate the main sectors related to the request:

☐ Coastal zones	☐ Early Warning and Environmental Assessment	☐ Human Health	☐ Infrastructure and Urban planning
☐ Marine and Fisheries	☐ Water	☐ Agriculture	☐ Carbon fixation
☒ Energy Efficiency	☐ Forestry	☒ Industry	☐ Renewable energy

[1] ***"any equipment, techniques, practical knowledge and skills** needed for reducing greenhouse gas emissions and adapting to climate change" (Special Report on Technology Transfer, IPCC, 2000)*

☐ Transport ☐ Waste management

Please add other relevant sectors:

Cross-sectoral enablers and approaches:

Please indicate the main cross-sectoral enablers and approaches

☐ Communication and awareness ☐ Economics and financial decision-making ☒ Governance and planning ☐ Community based

☐ Disaster risk reduction ☐ Ecosystems and biodiversity ☐ Gender

Technical assistance requested (up to one page):

Founded on the problem statement, past/on-going efforts and technology barriers, please describe the requested technical assistance. The technical assistance should clearly contribute to mitigation or adaptation to climate change as described in the problem statement and contribute to overcome the specific technology barriers.

Within a clearly defined scope, the description of technical assistance should be structured into the following:

- *Overall objective*
- *Anticipated groups of activities to be performed by the technical assistance*
- *Anticipated products to be delivered by the technical assistance.*

Please note that the CTCN facilitates technical assistance and is not a project financing mechanism.

The overall objective is to develop a harmonized framework of regulations leading to continual adoption and reporting thereof on implementation of energy efficient technologies and practices in industrial, commercial and transport sectors of the economy in Nigeria. The technical assistance should also suggest an institutional set up under the regulatory framework to monitor and report on the activities towards the compliance of the regulations under the proposed framework.

Anticipated activities to be performed:

Activity 1: Analysis of the status quo and Development of EEA
Review existing energy consumption data in the industrial and household sectors and its sub-sectors in Nigeria. Identify existing regulations and policies that are designed to promote industrial growth by regulating energy use in the industrial and household sectors and its sub-sectors. And develop a framework of Energy efficiency Act and Regulations.

Activity 2: Identification and classification of sectors under the EEA
Develop a methodology to help identify and classify the industrial and household sectors and sub-sectors that need to come under the purview of the framework of the EEA. (designated sectors)

Activity 3: Development of the EEA framework

Develop the framework of EEA which broadly would encompass the following:

- Appointment of Energy Manager in the designated sectors
- Manner and interval of time for conduct of energy audits in designated sectors, including templates for reporting data, energy audit reports and compliance reports
- Minimum qualification for energy auditors and managers including necessary experience in the field
- Certification procedures for energy auditors and managers through conduct of assessments examination, syllabus, registration, etc.
- Development of training modules, model question banks and training of the trainer programme
- Qualifications, criteria and conditions subject to which a person may be accredited as an energy auditor and the procedure for such accreditation and maintenance of their list
- Form, manner and time for furnishing information regarding energy consumed and action taken on recommendations of accredited energy auditors

Activity 4: Proposition of an institutional structure for monitoring and reporting

Propose an institutional structure and its role and responsibilities to coordinate and implement the activities under the EEA framework.

Anticipated products to be delivered:

i. A framework for the energy efficiency act
ii. Training curriculum and training modules for energy auditors and managers
iii. Training of trainers in selected institutions across designated sectors
iv. Standard templates for energy auditing

Expected timeframe:

Please indicate the expected duration period for the requested technical assistance. Please note CTCN technical assistance is limited to a maximum duration of 12 months.

18 Months

Anticipated gender and other co-benefits from the technical assistance:

Please describe the activities with gender linkages as well as the anticipated gender and other co-benefits (e.g. biodiversity, economic, social, cultural, etc.) that are likely to be generated as a result of the technical assistance.

For more information you can find guidelines on the CTCN's website here:
https://www.ctc-n.org/technologies/ctcn-gender-mainstreaming-tool-response-plan-development

Further reading on gender can be found on the CTCN website here:
https://www.ctc-n.org/technology-sectors/gender

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 framework for energy efficiency 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.

Key stakeholders:

Please list the stakeholders who will be involved in the implementation of the requested CTCN technical assistance and describe their role during the implementation (for example, government agencies and ministries, academic institutions and universities, private sector, community organizations, civil society, etc.).

Stakeholders	Role to support the 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

Alignment with national priorities (up to 2000 characters including spaces):

Please describe how the technical assistance is consistent with national climate priorities such as: Nationally Determined Contribution, national development plans, poverty reduction plans, technology needs assessments, Low Emission Development Strategies, Nationally Appropriate Mitigation Actions,

Technology Action Plans, National Adaptation Plans, sectorial strategies and plans, etc.

Nigeria's National Determined Contribution, submitted in 2015, targets an unconditional GHG emissions reduction of 20% and a conditional reduction of 45%, prioritizing an economy-wide energy efficiency as a key mitigation measure with a potential GHG reduction of 179 million tonnes per year in 2030. In that context Nigeria specifically looks at energy efficiency to reduce overall demand of energy, increased efficiency of existing vehicles and the transport system and efficiency benchmarks and standards in manufacturing.

In its Vision 20:2020, Nigeria also foresaw the introduction of demand side management principles targeted at ensuring efficiency in energy consumption in the electricity industry.

Reference document (please include date of document)	**Extract** (please include chapter, page number, etc.).
Nationally Determined Contribution (NDC)	*Direct alignment and contribution to NDC implementation is required for all CTCN technical assistances. Please include a direct reference to the INDC/NDC document (chapter, page number, etc.).* Economy-wide energy efficiency as a key mitigation measure with a potential GHG reduction of 179 million tonnes per year in 2030 (p.3) "Thirdly, energy efficiency is greatly improved so as to reduce overall demand for energy and in doing so serve more people, faster." (p.14) "Measures to increase the efficiency of existing vehicles and the transport system are also possible" (p.15) "In the absence of an efficiency mind-set and lack of efficiency benchmarks or standards this might lead to exponential emissions growth in the sector. The use of best available technology at the time of construction of a new industrial facility will reduce future fuel demands and emissions. In addition, in most cases the use of best practice technology will lead to lower lifetime costs for the businesses involved" (p. 16-17)
Technology Needs Assessment	-
National Adaptation Plans	-
Nationally Appropriate Mitigation Actions	
Add others here as relevant	**Nigeria Vision 20:2020:** "introduction of demand side management principles targeted at ensuring efficiency in energy consumption in the electricity industry", p.145, link: https://nairametrics.com/wp-content/uploads/2013/06/nigeria-vision-20_2020_draftetb.pdf

Development of the request (up to 2000 characters including spaces):

Please describe how the request was developed at the national level and the process used by the NDE to approve the request before submitting it (who initiated the process, who were the stakeholders involved and what their roles were?) and describe any consultations or other meetings that took place to develop and select this request, etc.

The process was initiated jointly by the Department of Climate Change, Federal Ministry of Environment and the Federal Ministry of Power. The stakeholders were the members of the Inter-ministerial Committee on Climate Change, which involves relevant Ministries, Departments and Agencies.

The Federal Ministry of Power conveyed their expression of interest for the development of Institutional Framework for the Energy Efficiency Act and Regulations targeting energy intensive sector (households and industries) in Nigeria using the CTCN Technical Assistance provision. This was followed by several stakeholders' consultations and meetings and after the development of the project, it was approved by the Director, Department of Climate Change, Federal Ministry of Environment Nigeria.

Background documents and other information relevant for the request:

- Please list all relevant documents that will help the CTCN analyse the context of the request and national priorities. Please note that all documents listed/provided should be mentioned in this request in the relevant section(s), and that their linkages with the request should be clearly indicated. For each document, please provide web-links (if available) or attach to the submission form. Please add any other relevant information as required.
- Please indicate if this request has been developed with the support of the CTCN Request Incubator.

Nigeria's National Determined Contribution (2015): https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nigeria%20First/Approved%20Nigeria%27s%20INDC_271115.pdf

Nigeria Vision 20:2020 (2009): https://nairametrics.com/wp-content/uploads/2013/06/nigeria-vision-20_2020_draftetb.pdf

GIZ - The Nigerian Energy Sector (2015): https://www.giz.de/en/downloads/giz2015-en-nigerian-energy-sector.pdf

OPTIONAL: Linkages to Green Climate Fund Readiness and Preparatory Support

The CTCN is collaborating with the GCF in order to facilitate access to environmentally sound technologies that address climate change and its effects, including through the provision of readiness and preparatory support delivered directly to countries through their GCF NDA. These actions are in line with the guidance of the GCF Board (Decision B.14/02) and the UNFCCC, particularly paragraphs 4 and 7 of 14/CP.22 that addresses Linkages between the Technology and the Financial Mechanisms[2].

[2] Please see:
https://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/auv_cop22_i8b_tm_fm.pdf

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The CTCN is therefore implementing some of its technical assistance using GCF readiness funds accessed via the country's NDA. Any application for GCF support, including the amount of support provided, is subject to the terms and conditions of the GCF and should be developed in conjunction with the NDA.

Please indicate whether this request has been identified as preliminarily eligible by the NDA to be considered for readiness support from the GCF.

☐ Initial engagement: The GCF NDA of the requesting country has been engaged in the design of this request and the NDA will be involved in the further process leading to an official agreement for accessing GCF readiness support.

☐ Advanced engagement (preferred): The GCF NDA of the requesting country has been directly involved in the design of this request and is a co-signer of this request, the signature indicating provisional agreement to use readiness national funds to support the implementation of the technical assistance.

NDA name:

Date:

Signature:

Monitoring and impact of the assistance:

By signing this request, I affirm that processes are in place in the country to monitor and evaluate the technical assistance provided by the CTCN. I understand that these processes will be explicitly identified in the CTCN Response Plan and that they will be used in the country to monitor the implementation of the technical assistance following standard CTCN procedures.
I understand that, after the completion of the requested assistance, I shall support CTCN efforts to measure the success and effects of the support provided, including its short, medium and long-term impacts in the country.

Signature:

NDE name:	**OKEBUGWU CHUKWUEMEKA**
Date:	09 November,2020.
Signature:	

THE COMPLETED FORM SHALL BE SENT TO THE CTCN@UNEP.ORG

The CTCN is available to answer all questions and provide guidance on the application process.