MEETING REPORT NIGERIA

CLEAN CAPTIVE INSTALLATIONS FOR INDUSTRIAL CLIENTS IN SUB-SAHARA AFRICA

Official Project Launch and First Stakeholders Consultative Meeting
18 November 2019 –Nigeria, Abuja

CICSA
CLEAN CAPTIVE INSTALLATIONS FOR INDUSTRIAL CLIENTS IN SUB-SAHARA AFRICA

ENERGY COMMISSION OF NIGERIA

Frankfurt School
FS-UNEP Collaborating Centre
for Climate & Sustainable Energy Finance

UN environment programme

CLEAN CAPTIVE INSTALLATIONS FOR INDUSTRIAL CLIENTS IN SUB-SAHARA AFRICA"

OFFICIAL PROJECT LAUNCH

AND

FIRST STAKEHOLDER CONSULTATIVE MEETING IN NIGERIA

Date and time: Monday 18th November 2019 from 10:00 a.m. to 1:00 p.m.

Venue: Energy Commission of Nigeria, Abuja

OFFICIAL LAUNCH AND FIRST STAKEHOLDERS CONSULTATIVE MEETING IN NIGERIA

The official launch and first stakeholder consultative meeting in Nigeria of the project "Clean Captive Installations for Industrial Clients in sub-Sahara Africa" was organized jointly by the Energy Commission of Nigeria, the United Nations Environment Programme and the Frankfurt School of Finance and Management (Frankfurt School). This meeting took place at the Energy Commission of Nigeria, Abuja on Monday, 18th November 2019 from 10 a.m. to 1.00 p.m.

The UN Environment Programme initiated the project in partnership with its collaborating centre at Frankfurt School of Finance and Management who are the implementing partners of the project. The project's four target countries are namely: Ghana, Nigeria, Kenya and South Africa. This project is funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) through the International Climate Initiative (IKI).

One of the main catalytic sectors of the economy in sub-Sahara Africa are the commercial and industrial (C&I) sector. However, the expansion and growth of the national C&I sector is being hindered by (i) shortage of reliable power and (ii) high alternative-energy costs. As a result, diesel-powered generators are widely used to back-up the grid or mitigate its fluctuations or as substitutes where there is no grid access. This in turn increases the total cost spent on electricity, thereby reducing profit margins, and generates GHG Emissions that accelerate climate change and causes pollution and health problems.

Therefore, the project's main objective is to demonstrate the economic and financial viability of clean captive energy installations for industries in the identified countries, thereby helping the C&I sector to reduce their over-dependence on the national grid and limit their usage of diesel generators. The project will focus on second generation of renewable energy business models, which do not rely on national governments' financial incentives (Feed-in-Tariffs or other scarce public money) to enhance the deployment of clean energy technologies.

Currently, a series of scoping missions in the four target countries are being conducted to collect relevant data and information that would be the basis to develop appropriate tools and guidelines to develop various business and financial models. The first day of each scoping mission is dedicated to the official launch of the project and the first stakeholder consultative meeting is being held in each of the four target countries. The three scoping missions of the project's team were each held in Kenya on 16-20 September 2019, in Ghana on 23-27 September 2019, and in South Africa 4-8 November 2019. In each of these countries, the project was launched and the public stakeholder meetings were held at the same time.

The launch of the project and first stakeholder consultative meeting in Nigeria was held with the objective of creating country's ownership and buy-in for effective and efficient implementation of the project in Nigeria. In this meeting, various national public authorities and private sector actors were engaged, with a focus on discussing key barriers

including policy and financial barriers that hinder the greening of private clean energy generation installations including factors that limit economic activity and country development.

1. HIGHLIGHTS OF THE MEETING

1.1 Opening Session

The meeting started with the arrival of Prof. Eli. J. Bala, Director General and CEO of Energy Commission of Nigeria (ECN). Mr. Okon Ekpenyong, Director, Linkages and Consultancy of ECN, moderated the meeting, and introduced the Director General. Self-introductions of participants followed.

Twenty-five participants drawn from Federal Ministries, Departments and Public Agencies, as well as a representative from the German Embassy in Nigeria attended the meeting, alongside 6 representatives from the UN Environment Programme and Frankfurt School.

Prof. Eli. J. Bala gave the opening remarks where he welcomed participants, including members of the project team. He also informed the meeting that the Energy Commission of Nigeria was established by law in 1979 and is charged with the responsibility for the strategic planning and coordination of the nation's policies in the field of energy in all its ramifications. In doing so, the Commission, inter alia, also makes recommendations for the utilization of new energy sources to Government. The Commission commenced operations in 1989 and thereafter embarked on an exercise for the creation of an umbrella National Energy Policy (NEP), an instrument for long-term sustainable energy development in the country for national energy security and socio-economic development, often sought after by investors, scholars and development partners.

Ms. Francoise d'Estais, the UN Environment Programme project manager for the Clean Captive Installations' project, expressed her gratitude for the great hospitality shown towards the team. She added that the meeting was to engage with national public authorities and private sector actors for effective project execution. She also indicated that the project will focus on the financial barrier which hinders the greening of private clean energy generation installations. Since industries turned to self-generation of electricity using fossil fuels like diesel to address the lack of reliable and/or affordable electricity supply, this project is to assist industrial actors' transition towards using more captive renewable energy sources for their energy supply.

The UN Environment Programme and Frankfurt School used this platform to introduce the project objectives, activities and expected outcomes to the stakeholders and received feedback from these stakeholders to optimise implementation of the project. The information received added much value to the scoping missions that were held immediately after this meeting from 19-22 November 2019.

Subsequent to this session, the project team members delivered two presentations that focused on the project highlights and preliminary results of the desk studies on the Nigeria energy market.

1.2 Project Highlights

Ms. Meseret Zemedkun, representing the UN Environment Programme, gave an overview of the project including its rationale, objectives, activities and expected output.

She stated that one of the main catalytic sectors of the economy in sub-Sahara Africa is the C&I sector, and that the expansion and growth of national industrial sector is being hindered by (i) shortage of power due to inefficient transmission and distribution infrastructure (amongst others) and (ii) high-energy costs.

She added that industrial clients predominantly use diesel-powered generators to back-up the grid, mitigate its fluctuations, or use it as substitutes where there is no grid access. This in turn has a two-fold effect: (i) it increases the total cost spent on electricity thereby reducing profit margins and (ii) it generates GHG emissions that accelerate climate change and cause pollution and health problems.

She indicated that the project's main objective is to demonstrate the economic and financial viability of captive clean energy installations for industries in the target countries, thereby helping the C&I sector to reduce their over-dependence on the national grid and limit their usage of diesel generators. The project will focus on second generation of renewable energy business models, which do not rely on national governments' financial incentives (Feed-in-Tariffs or other scarce public money) to enhance the deployment of clean energy technologies.

The overall expected outcome is a sustainable business model which creates value for the user and reduces the burden on the grid operator and this will be proven through economic and financial analysis and the establishment of a track record for captive RE industrial installations.

1.3 Preliminary results of desk review

Ms. Madhumitha Madhavan, the project manager from Frankfurt School, gave a brief presentation that covered the tasks undertaken by the project so far. She presented the key findings from their desk study conducted on the current energy supply and demand situation in Nigeria with focus on the industrial sector. She outlined the stages of the project's implementation and the project's interest in bridging the existing information gaps. She called on participants to provide the project team with relevant missing data or information that would help the team finalise the project design.

The presentation of the key preliminary findings from the desk study concluded that the energy situation in Nigeria is critical and is a key constraint for economic development. Those included:

- Nigeria has insufficient national and regional grid-supplied electricity
- Nigeria suffers from weak infrastructure in terms of transmission and distribution systems
- Nigeria has the one of the lowest electricity consumption per capita in the world
- Captive generation being used in many industries exceeds the available grid-connected capacities
- Nigeria has made reforms in its electricity system and has privatised the generation, transmission and distribution of the centralised grid power
- Nigerian government aims to achieve 30GW of electricity capacity by 2030 with

30% share of RE in the mix

From the initial analysis, Ms. Madhumitha Madhavan indicated that the net power generation for supply is only 31 % of the total installed capacity. About 55% of the population has no access to electricity, and out of the total energy consumption, traditional biomass (firewood and charcoal) accounts for 86%. Population growth and economic development contribute to a pressing and increased need for electricity. The gap between production capacity and demand in combination with poorly maintained generation installations and a poor national and regional electricity grid results in unstable and unreliable electricity supply for both households and companies.

As a consequence, many companies and households rely on diesel generators for their electricity supply. Of the total energy consumed by Nigerian industries only 4% is from grid-connected electricity. 96% is self-produced, using either natural gas or oil products (usually diesel).

Further, the analysis indicated that:

- Nigerian off-grid market has attracted significant support over the last three years in the form of technical assistance, grants, low interest loans and equity investments from a wide variety of organizations
- Commercial banks are largely absent from the C&I solar market, offering debt that developers consider too costly (e.g. over 25%) and only for tenors up to two years
- All local financing in Nigeria requires the developer to provide a physical asset as collateral, as solar equipment would not be sufficient collateral

She then suggested a two-fold solution that includes: (i) supplementing existing diesel gensets with captive solar PV for backing-up the grid and (ii) increasing the share of PV electricity usage to reduce over-dependency on grid-supplied electricity.

2. DISCUSSION

The discussions and interactive sessions was chaired by the Director General of the Energy Commission of Nigeria, who restated and emphasized on the importance of the "Clean Captive Installations for Industrial Clients" project. He called on the project team to take advantage of the experienced participants drawn from the nation's energy and power sector in order to bridge any existing gaps by engaging with them one-on-one for more detailed interactions.

The interactions among various stakeholders and their comments and inputs on the project to optimise implementation and achieving the projects' objectives was noteworthy.

Mr Abba Aliyu, representative from Nigerian Bulk Electricity Trading plc (NBET) reiterated Nigeria's commitment to Nationally Determined Contributions (NDCs), and highlighted some of the models being put in place to achieve NDCs targets in Nigeria. He noted limitations of the nation's transmission networks, where electricity generated could not be wheeled to the distribution level. Representatives from Rural Electrification Agency (REA) spoke in detail on the Energising Economy Programme and Energising Education Projects that share similar end goals with the planned Clean Captive Installations project in Nigeria. REA also sought for clarification on the ownership of the pilot project, realistic targets for

the pilot project, whilst being cognisant of other available and cheaper sources of energy generation. REA stressed on the need to resolve all legal issues with the distribution companies, and highlighted the objectives of the interconnected mini-grid projects.

Responding to issues relating to the ownership of the pilot project, Francoise d'Estais explained that the project will support sustainable innovative financing structuring with an organisation/industry that is willing to invest into clean captive power to replace fossil-fuel based generating sets. She explained that the project is not limited to solar technologies, but that solar is being emphasised in Nigeria due to its cost competitiveness compared to other technologies as well as the level of support the country has already given to it.

The representative of National Environmental Standards and Regulations Enforcement Agency (NESREA), Mr Vincent Emenyonu, suggested that Nigeria's sovereign green bond could be utilised to upscale the project in the future.

The representative of Federal Ministry of Environment - Global Environment Facility, Mr Kusimo D. Olutope, expressed concern over the last inception and inaugural meeting of a similar project undertaken by UNIDO under GEF 6 cycle that was not followed through to execution and suggested that the UN Environment Programme should synergize with UNIDO in Nigeria to have a harmonized project in the future that can attract GEF funding.

The representative of National Power Training Institute of Nigeria (NAPTIN) requested the team to know the role of NAPTIN during the project implementation where, Francoise d'Estais of the UN Environment Programme commented that the design of the project document may consider the capacity building needs.

3. WRAP UP/CLOSING

Participants expressed their willingness to provide needed support to the Clean Captive Installations project, considering the unreliable power supply situation in the country.

The team then had one-on-one follow-up meetings with a few participants at the office of ECN after the closing of the kick-off meeting. Several other one-on-one meetings were planned with other public and private stakeholders in Abuja and Lagos for the remainder of the week.

4. SUMMARY AND RECOMMENDATIONS

In general, the meeting met its objectives by creating project ownership of all relevant stakeholders. The project also fulfilled the following objectives:

- Launching the project "Clean Captive Installations for Industrial Clients in sub-Sahara Africa"
- Creating project ownership of all relevant stakeholders that attended the meeting
- Appointing Mr. Okon Ekpenyong, Director, Linkages and Consultancy of Energy Commission in Nigeria to be a member of the project's steering committee, representing the Government of Nigeria

The Energy Commission of Nigeria appreciates the direction the UN Environment Programme and Frankfurt School have taken towards supporting the clean captive installations for industrial clients in sub-Sahara Africa and in particular for selecting Nigeria as one of the beneficiaries.

All stakeholders expressed their willingness and commitment to work closely with the UN Environment Programme and Frankfurt School to make this project a success in Nigeria.

5. NEXT STEPS

All the stakeholders agreed that a coordinated, integrated and harmonised approach of the various institutions is crucial and well encouraged.

The project is expected to run from 2019 until 2023 and the below phases outlined will help bring the project to its completion.

- Baseline studies and awareness raising are to be conducted through country desk studies and scoping missions and data validation

- In the next phase following stakeholder consultations, streamlining the process will commence through development of necessary tools, identifying relevant & key partners, selection of replicable designs (best model); designing selection criteria for national showcase project

- Tools for assessment of financial and economic viability and definition of suitable financing structures of clean captive installations will be elaborated and disseminated with industrial and commercial actors; national and international financiers, and national public institutions

- Four viable and replicable pilot projects with industries, one in each participating country, will be selected, developed, structured, realized and monitored

Through a knowledge management strategy to be designed jointly with stakeholders, case studies on supported projects will be prepared and published, project results and knowledge disseminated through national and regional and other events and other relevant means to allow replication at both national and regional levels

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Visit the project website

www.captiverenewables-africa.org

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