

MEETING REPORT

SOUTH AFRICA

CLEAN CAPTIVE INSTALLATIONS FOR INDUSTRIAL CLIENTS IN SUB- SAHARA AFRICA

Official Project Launch and First Stakeholders Consultative Meeting
4 November 2019 - Pretoria, South Africa



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



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

OFFICIAL PROJECT LAUNCH

AND

FIRST STAKEHOLDERS CONSULTATIVE MEETING IN SOUTH AFRICA

Date and time: Monday 4 November 2019 from 9.30 a.m. to 1.00 p.m.

Venue: CSIR, Building 10a - First Floor, Meiring Naude Road, Brummeria Pretoria

OFFICIAL LAUNCH AND FIRST STAKEHOLDERS CONSULTATIVE MEETING IN SOUTH AFRICA

Introduction

The United Nations Environment Programme, the Frankfurt School of Finance and Management, and the Department of Trade and Industry as well as the National Cleaner Production Centre in South Africa together organized the launch in South Africa of the project “Clean Captive Installations for Industrial Clients in sub-Saharan Africa”. This meeting took place at the CSIR, Building 10a - First Floor, Meiring Naude Road, Brummeria Pretoria on Monday, 4th November 2019 from 9.30 a.m. to 1.00 P.m.

The UN Environment Programme is initiating this 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-Saharan 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.

The first two scoping missions of the project’s team were held in Kenya on 16-20 September 2019 and in Ghana on 23-27 September 2019. In these two countries, the project was launched and the first stakeholders consultative meeting took place on the first days of the scoping missions. The scoping mission in Nigeria will take place later in November 2019.

This launch of the project and first stakeholders consultative meeting in South Africa was held with the objective of creating country’s ownership and buy-in for effective and efficient implementation of the project in South Africa. In this meeting various national public authorities were engaged, with a focus on discussing key barriers, policy, technology and financial barriers, and other factors hindering the greening of private clean energy generation installations and limiting economic activity and country development.

1. HIGHLIGHTS OF THE MEETING

1.1 Opening Session

The launch of the project and the inaugural stakeholders consultative meeting in South Africa hosted over 15 participants. These participants included representatives from the Department of Trade and Industry (DTI), South African National Energy Development Institute, South African German Energy Programme, National Cleaner Production Centre (NCPC), CSIR, ESCO Association, Banking Association of South Africa, and of the South African Photovoltaic industry Association (SAREC).

The UN Environment Programme and project implementing partner, the Frankfurt School UNEP Collaborating Centre (Frankfurt School), used this platform to introduce the project objectives, activities and expected outcomes to the stakeholders and to receive feedback from those public stakeholders to optimise implementation of the project. The information received added much value to the series of meetings with other private and public stakeholders that were held immediately after this meeting in Pretoria, Johannesburg and Cape Town between 5 and 8 November 2019.

The opening remarks were delivered by the Department of Trade and Industry in South Africa, the UN Environment Programme and the Frankfurt School. Ms. Baron, one of the directors in the Department of Trade and industry of South Africa, gave opening remarks on behalf of Mr. Gherard Fourie, Chief Director, Green industries at the DTI. In her opening remarks, Ms Elian indicated that the project's objective is aligned to the National Planning frameworks, National Development Plan and Industrial Action Plan. She also described that the project will contribute to achieving the country's Nationally Determined Contribution with the framework of greening initiatives. In this regard, she mentioned that DTI in collaboration with NCPC will continue supporting the implementation of this project and is looking forward to the results of this project study.

In a similar vein, Ms. Françoise d'Estais, representing the UN Environment Programme, thanked the Department of Trade Industry (DTI) and National Clean Production Centre (NCPC) for hosting this first stakeholders consultative meeting and launching the project in South Africa. She also indicated the readiness and commitment of the UN Environment Programme to respond to the needs and expectations of South Africa towards the country's own objectives of developing low carbon, climate resilient and resource efficient energy systems.

Subsequent to this introductory session, the project team delivered two presentations that focused on the project highlights and preliminary results of the desk study on South Africa energy market.

1.2 Project Highlights

Ms. Meseret Zemedkun, representing the UN Environment Programme presented the highlights of the project including the rationale, objectives, activities and expected output of the project.

She stated that one of the main catalytic sectors of the economy in sub-Saharan 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 presented the key findings from a desk study conducted on the current energy supply and demand situation in South Africa with a particular focus on the industrial sector. She described the stages of the project's implementation and the need to bridge the existing information gaps. She called on participants to provide the project team with relevant and/or missing information that would help the team finalize the project design.

The key preliminary findings from the desk-study were:

- South Africa suffers from an acute undersupply of electricity and its national power utility faces financial crisis
- Growth in local renewable energy markets is crucial to achieving its NDC targets for 2030
- Municipal support for Small Scale Embedded Generation (SSEG) fosters commercial and industrial sectors (<1MW)
- Renewable energy financing is well-established for some market segments.

From the initial analysis, Ms. Madhavan presented three major components to South Africa's power market situation in terms of actors, supply and demand.

- **Stakeholders:** the current SA's electricity market is dependent on state-owned utility "Eskom" which is financially struggling. As announced by the government, the unbundling of the utility into separate generation, transmission and distribution companies is expected to be operational by 2021.
- **Supply:** More than 85% of electricity in South Africa is generated by coal power plants. South Africa's just published Integrated Resource Plan (IRP) includes a shift away from coal, increased adoption of renewables and gas, and an end to the expansion of nuclear power. This will lead to further growth within the distributed generation market for renewable and clean energy as well as for larger utility-scale projects. South Africa proposes a significant increase in renewables-based generation from wind and solar as well as gas-based generation capacity by 2030 (additional 8.1 GW for wind, 5.7 GW for

solar and 8.1 GW for gas by 2030) and beyond, with no further new nuclear capacity being procured

- **Demand:** Over time, demand has been decreasing steadily that can be attributed to a number of factors including: (i) Low economic growth; (ii) Supply constraints and rolling outages by Eskom between 2011-2015; (iii) Improved Energy Efficiency – as a response to increasing electricity tariffs and load shedding; and (iv) Growth in embedded generation such as roof-top solar PV.

Further, the preliminary desk study highlighted that:

- Commercial and Industrial sectors have the highest installed capacity for distributed solar PV in South Africa to date (60% of total 280 MW installed)
- Some factors such as high interest rates and currency exchange risks exist that hinder local banks from providing longer-term loans.

Finally, Ms Madhumitha Madhavan ended by suggesting three areas for the follow-up discussion:

- How could the project contribute to an increased uptake of renewable energy and the achievement of the NDC? Suggested areas for support could be: hybridization of energy supply in coals mines, combining solar PV and wheeling, combining solar PV and storage.
- What support could the municipalities bring to the SSEG? Could they buy directly from industrial customers?
- Determine the kind of actions that the local banks could take to develop products in the renewable energy area? How could the project work with those that have shown the most development in offering products to their clients in this area?

2. DISCUSSION

The main topics of discussion and interactions among meeting participants to optimise project implementation were the following:

- **Challenges in power sector in South Africa:** Industries that drive the country's economy such as mining suffer from high cost of electricity that led some of the companies to close down
- **Policy and Regulations:** main barrier in the market is the regulatory & licensing uncertainty. The - unbundled structure of Eskom into generation, transmission and distribution is the main challenge. The regulatory uncertainty around licensing requirement for projects over 1 MW is still a barrier.
- **Similar projects in South Africa:** SANEDI indicated that it is currently implementing a similar IKI funded global project (Solar Payback in Mexico, Brazil, South Africa and India) that started in 2016. The project will continue till 2022. SANEDI is currently supporting Energy Sector companies (ESCOs) through this project and advised the project team to work with ESCOs.

- **Relevant sectors for the pilot project:** stakeholders including DTI proposed various relevant sectors for the planned pilot project such as: Agricultural sector, Eco-industrial parks, Storage/batteries project, SME targeted project, Microgrid projects etc. However, they indicated that seasonality of farming revenues could be a challenge as well as land claims on farms
- **Technology:** Stakeholders suggested to see technologies other than solar PV such as biogas. It was mentioned that UNIDO is doing some biogas work in Agriculture, but that the biogas program was facing challenges. The waste-to-energy sector was not encouraged.

The stakeholders were also keen to learn more about the process and criteria of selection of the pilot project. Some of the stakeholders such as the NCP also showed interest to take part in the implementation of the pilot project.

One on One Discussion: As per the request of NCPC, a one- on-one discussion was also held between the project team and the director of NCPC, Mr Ndivhuho Raphulu, immediately after completion of the kick off meeting.

The director indicated that NCPC in South Africa is a national support programme that drives the transition of South African industry towards a green economy through appropriate resource efficient and cleaner production interventions. In this context, he expressed the interest of NCPC to support implementation of the Clean Captive Installations project in South Africa.

In line with this, the project team indicated that NCPC could support the project in the areas of knowledge management and dissemination through national events and other relevant means to allow replication at both national and regional levels.

3. 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. Gherard Fourie, Chief Director, Green Business, at the Department of Trade and Industry to be member of the project's steering committee representing the Government of South Africa.

DTI and NCPC appreciated the direction the UN Environment Programme and its implementing partner Frankfurt School have taken towards supporting the clean captive installations for industrial clients in sub-Sahara Africa and in particular for considering South Africa as one of the four direct beneficiary countries.

Those stakeholders attended the meeting expressed their willingness to work closely with the UN Environment Programme and Frankfurt School to make this project a success in South Africa.

4. 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



Visit the project website

www.captiverenewables-africa.org

Supported by:



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

based on a decision of the German Bundestag