

# AFRICAN DEVELOPMENT BANK MULTI COUNTRY WEST AFRICA



GREEN  
CLIMATE  
FUND

GLOBAL  
PROGRAMMING  
CONFERENCE

## Project title

Efficient and Low Emission Cooling in Africa

### Result areas

Buildings Cities and Industry and appliances

### Sector

Both Public and Private

### Total financing, USD

20 M USD per country

### GCF financing, USD

10 M Loan, 5 M Grant

### Financial instrument

Grant/Loan /Guarantee/Equity

### Description of specific climate change problem and how the project will address it

With a galloping urbanization projected to lead to 50 % of Africa's population living in urban areas in 2035, cooling of buildings are emerging as a basic necessities as global warming, higher ambient humidity, denser urban settlements. Rising affluence increase the demand for cooling and refrigeration for food preservation while changing lifestyles and preferences for ready to eat processed food are exacerbating the latter.

Due to weak institutional frameworks for standards labelling and minimum energy performance standards, in most Sub-Saharan Africa countries, space cooling and refrigeration equipment and appliances are mostly low-efficiency and 2<sup>nd</sup> hand appliances. The social electricity tariff policies in many African countries, designed to provide affordable access to the lower income groups often paying subsidized electricity tariffs. tend to lock these vulnerable categories into unsustainable consumption patterns.

### Alignment with key country priorities and stakeholders engaged

The project is aligned to the climate objectives and to SDG 7 for affordable access to electricity through sustainable consumption. Three groups of stakeholders must be engaged (1) utilities, agencies or private sector operators for setting up the revolving fund to finance efficient cooling appliances, (2) a central body for managing standards and labelling programs aiming at market transformation, and (3) fiscal authorities and enterprise support organisations (ESO's) to nurture the emergence of Eco-Entrepreneurs for recycling displaced refrigeration and air-conditioning equipment.

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## Activities

- Setting up of a financing mechanism for providing upfront financing for efficient and low emission fridges
- Setting up of a bulk procurement mechanism along with coordination with standards and labelling agencies
- Capacity building of eco-entrepreneurs for the recycling of fridges and air conditioners and handling of refrigerants.

## Expected outcomes

- For a fridge replacement program of 50,000 units and assuming a conservative baseline, there is a reduction in power of about 30 % which leads to a net reduction in baseload of about 1 MW and a reduction in energy consumption of about 45 % or 12 MWh. (The reduction in GHG depends on the grid emission factor and the type of refrigerants currently used.)

## Paradigm shift potential

- The massive injection of highly efficient appliances targeting low income and vulnerable households, along with standards, labelling and minimum energy performance standard will send a strong signal to the market to align supply to a new benchmark performance standards.
- The revolving fund, bulk procurement and recycling mechanisms are instruments which once validated are available for scaling up to service the whole population.