

KENYA

Kenya Bureau of Standards (KEBS)

Energy-efficient air conditioners and refrigerators

Overview

Temperatures are rising worldwide, as is the demand for cooling systems. In 2018, the Kenyan government revised its energy efficiency policies for cooling appliances, namely refrigerators and room air conditioners. The new air conditioner policy, in addition to increasing energy efficiency by 11 %, effectively phased out high ozone-depleting R-22 refrigerants in this import market. On the strength of these results, and under the Kigali Cooling Efficiency Program (K-CEP), the Kenya Bureau of Standards (KEBS) revised and implemented minimum energy performance standards (MEPS) and a labelling programme for room air conditioners (RACs) and refrigerators.

Kenya first introduced RAC MEPS in 2013, but the industry immediately called for revision after some challenges were identified during the implementation phase. The revision addressed the following points:

- The scope was broadened to include combined air conditioners and heat pumps, which had previously been excluded.
- Test conditions were changed from T₃ to T₁.
- Energy efficiency levels were reviewed.
- A market surveillance clause was included in the RAC sector.
- The use of refrigerant with low global warming potential was added.

Implementation of the updated RAC MEPS began in April 2019. The revision increased the required efficiency levels for products by 11 % and eliminated 73 % of models on the market in 2018.

Outcomes and benefits

The MEPS are born out of a joint effort by government agencies, regulators, importers, dealers, manufacturers, research institutions, academia, experts, consumer organizations, and KEBS, acting as the committee's secretariat. By October 2019, just six months after the standards were implemented, the Energy and Petroleum Regulatory Authority (EPRA) had registered 63 models into the Kenyan market that met the new requirements. Although the revised norms significantly

increased the efficiency baseline for air conditioners in Kenya, importers responded and were able to easily source higher-efficiency units. The transition went more smoothly than anticipated because energy-efficient products are readily available in the source countries.

While Kenya's MEPS aimed first and foremost to increase the efficiency of room air conditioners, the standards also reduced the import of RACs containing harmful ozone-depleting refrigerants. In 2018, a RAC market assessment found that 27 % of the air conditioner models on the Kenyan market contained the R-22 refrigerant, a hydrochlorofluorocarbon and potent greenhouse gas with high ozone depletion potential. In the Kenyan context, the RAC's low energy efficiency was linked to R-22 refrigerant usage. Today, none of the EPRA-registered RACs contain R-22. The newly registered products all contain R-410A, a hydrofluorocarbon that has zero ozone-depleting potential.

Kenya is well on track to completely phase out the importation, use and sale of ozone-depleting substances by 2026, four years ahead of the 2030 Montreal Protocol deadline. In the RAC sector, the implementation of revised MEPS was also instrumental in accelerating the removal of hydrofluorocarbon ten years before target.

Partners involved

Requesting organization:

- Energy and Petroleum Regulatory Authority (EPRA)

Supporting organizations:

- CLASP, an organization focusing on appliance & equipment energy performance and quality to mitigate and adapt to climate change
- GIZ Proklima, a programme of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), which provides technical support to developing countries to implement the provisions of the Montreal Protocol and the Kigali Amendment

Timeline

The first edition of 2013 took 18 months to complete. More recently, following a 12-month systematic review, the content was split into two separate standards, published in 2019 for air conditioners and 2020 for refrigerators.