POLICY BRIEF

Cool Coalition




OPPORTUNITIES TO ADDRESS USED COOLING PRODUCT IMPORTS INTO AFRICA

COOLING EQUIPMENT IN CONTEXT

Access to safe, reliable and affordable refrigeration and indoor comfort is critical for human health and wellbeing. There is *burgeoning demand* for refrigerators and air conditioners throughout much of Africa, which traditionally has had relatively low levels of adoption. With rapidly expanding access to electricity, population growth, urbanization, rising temperatures and increased purchasing power, cooling products are getting within reach for many more families and businesses. The way these cooling needs are met has profound implications for future energy security, economic development, and the environment. **It is critical that policymakers enable widespread adoption of *sustainable cooling solutions* rather than permitting used products and unregulated new products to keep dominating sales.**

While typically less expensive to purchase than a new model with current technology, used products may be unsafe, have limited further useful life, suffer from poor performance which wastes electricity, and/or contain obsolete refrigerants which are harmful for the planet. **Countries lacking robust policies and enforcement become dumping grounds for outdated products which are not desirable or eligible for resale in well-regulated markets.**

Consumers lack information on high operating costs they may experience with a used unit relative to an efficient new appliance, as well as safety concerns or reliability drawbacks on such ungoverned products.

Outdated appliances often waste twice as much electricity as new products that comply with performance standards common in developed markets. According to recent *report findings*, out of a sampling of 650,000 new air conditioners sold in Africa in 2018, 170,000 were imports that would not meet the minimum energy efficiency standards in the countries of origin. The remainder were assembled using low-efficiency components and refrigerants that are potent greenhouse gasses. For example, a single older refrigerator can contain phased-out chlorofluorocarbon refrigerants with a global warming potential equivalent to *2.8 tons of carbon dioxide* in the insulation foams and cooling circuit. These refrigerants often leak into the atmosphere during equipment repair, servicing, and at the end of the product's useful life.

Appropriate recycling infrastructure and incentives for end-of-life collection and processing of cooling products are rare in many African nations. This leads to major health and environmental impacts through the open burning of insulation foams and other informal approaches which strip out valuable components but leave significant waste materials. **The aforementioned market dynamics are well entrenched, and an *integrated set of interventions* are needed to help transition toward sustainable cooling solutions.**

KEY CHALLENGES

High quality and energy efficient new products are at a competitive disadvantage: Most consumers base their purchasing decision on the initial price from the vendor and they lack insight into the full cost of ownership (e.g. considering the life expectancy of the product, utility bills to operate it, maintenance/repairs, etc.). *Energy labels* may be misleading, outdated, or missing entirely from used products so there is no way to properly compare them against new products aside from the price, readily apparent features, and the opinion of the seller. Moreover, some consumers perceive used imports as of higher quality than new products tailored for the local market.

Poor data availability: Data is difficult to gather as import classifications do not distinguish between used and new cooling products. Waste appliances are often mixed with used products and declared incorrectly for customs (e.g. as personal effects) to evade enforcement. A study on the port of Lagos estimated 60,000 tons of used electronics imports were made in 2016 (mostly inside vehicles), of which 19% were not functioning. More stringent rules on what can be transported in vehicles and by shipping carriers may have impacted this trade in *recent years*.

Complex monitoring, verification and enforcement: Few African countries ban imports of used appliances amidst low awareness of the issue, lack of experience with setting relevant policies, and due to limited resources. Enforcement is challenging given the volumes and many points of entry via well-entrenched and often informal trade networks. There is a vast array of appliance brands and models and their performance when new and as tested for the original market cannot be relied upon after years of use in different operating conditions. Though there is precedent to set and enforce standards *for used vehicles to be imported*, it is likely to be impractical (due to cost and complexity) to do so for used cooling appliances.

EXISTING POLICY FRAMEWORKS

TRANSBOUNDARY WASTE SHIPMENTS

- The *Basel Convention* (and OECD Decision of 2001) prohibits export of waste electrical and electronic equipment from OECD countries to non-OECD countries. However, used appliances are not considered waste and thus are outside the scope. Within Africa, the *Bamako Convention* prohibits import of hazardous wastes, aiming for stronger obligations than the Basel Convention.
- Basel Convention obligations in the EU are covered by the *Waste Shipment Regulation*, which with the Waste Electrical and Electronic Equipment Directive requires functionality testing before export. Once proven to be functional per EU waste shipment *correspondence guidelines*, used products are not classified as waste and they fall outside the remit of waste enforcement authorities.
- Definitions of whether used goods can be considered waste are based upon the interpretation of importing countries in their national laws. Under the *Montreal Protocol*, the *EU Ozone Regulation* prohibits the export of goods containing CFCs.
- Some African nations classify certain categories of used electronics as waste that cannot be imported, such as Egypt for computers older than 5 years and Ghana blocking used refrigerator imports (see case study). The Basel Convention has provisions for Parties to make their own definitions of what they consider as hazardous waste and to notify the Basel Convention Secretariat of this determination.

MINIMUM ENERGY PERFORMANCE STANDARDS (MEPS)

- MEPS which set a set a floor for the minimum energy performance of new appliances are increasingly being pursued by *countries* throughout Africa. They are also being undertaken as part of regional harmonization efforts in the *East African Community, the Southern African Development Community*, and beyond. *ECOWAS has also set minimum standards* to ban imports of vehicles older than 10 years.

OPPORTUNITIES FOR JOINT ACTION

COORDINATED EFFORTS ARE CRITICAL TO ADDRESS THIS MULTIFACETED SITUATION. THESE INCLUDE:

SET RIGOROUS ENERGY EFFICIENCY AND REFRIGERANT GAS REQUIREMENTS FOR NEW ROOM AIR CONDITIONERS AND REFRIGERATING APPLIANCES:

Leverage UNEP *Model Regulation Guidelines* (based on global best practices and market trends) and local market considerations to address energy efficiency and refrigerants simultaneously, which reduces compliance costs and complexity. *Country Saving Assessments* indicate that adopting such MEPS could enable African countries to achieve 66 TWh of electricity savings annually starting in 2040, mitigating 42 million tons of GHG emissions and unlocking USD 6 billion in electricity bill savings. Such vast savings reduce strain on electricity grids and enable existing capacity to reach far more consumers and businesses. A study in Ghana found that prior to MEPS, an average used refrigerator bought by consumers used 3x the energy of a typical new model sold in the EU.

OFFER FINANCIAL MECHANISMS AND OTHER INCENTIVES:

Help make efficient new products cost competitive with inefficient competitors from the outset rather than having to wait to recoup the higher cost over time via electricity bill savings (See example of *Senegal ECOFRIDGES*). *Sustainable Public Procurement* can also spur the introduction of the latest technologies.

BAN THE EXPORT AND IMPORT OF USED COOLING PRODUCTS:

If there is no legal market for the products in the destinations due to a ban, and this ban has been officially announced and enforced, it is much easier for regulators in supply-side countries to have clear guidelines and take action against this formal channel. Ghana offers a great case study (see next page) on the ban approach which can inform a much larger, coordinated effort across interested African countries in collaboration with exporters and through relevant Conventions.

IMPROVE WASTE MANAGEMENT OF COOLING APPLIANCES:

Improved waste management of cooling appliances and refrigerants is necessary to avoid major environmental impacts at end of life from the products already in use in African nations. Consider *extended producer responsibility requirements* to help finance waste management.

UTILIZE INTERNATIONAL INSTRUMENTS:

Parties of *Basel*, *Bamako*, and *Rotterdam* Conventions are encouraged to consider proposing amendments to the scope of the Conventions to include CFCs in used appliances and to extend restrictions on imports beyond the EU Export ban in the Ozone Regulation of hazardous waste and restricted chemicals. Among exporters, the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) could be engaged to identify options and scenarios to tighten definitions and/or procedures in the EU Correspondents guidelines for export.

RAISE AWARENESS:

Use this policy brief to highlight why and how to take action with senior officials and industry executives, leveraging major meetings to build interest and then consensus. Illustrative examples include gatherings convened by the African Union, regional trade blocs, G20, B20, C20, T20, Montreal Protocol, the Climate Conference, and so forth. A recent G7 *Ministers' Communiqué* includes a goal to double the efficiency of four key energy-using products sold globally by 2030, which includes cooling products. Leverage the *press* and social media to engage the public and civil society on these matters.

CASE STUDY

GHANA'S PROACTIVE EFFORTS TO ADDRESS USED APPLIANCES

The issue: Imported units often waste ~ 2 – 3 times as much electricity as new products that are compliant with robust minimum energy performance standards. From 2004 – 2014, more than 3.7 million refrigerators were imported into Ghana. About 75% of them were second-hand, according to a *study* by Ghana's University of Energy and Natural Resources.

The action: In 2013, the Ghana Energy Commission began working with border control to implement *the ban* on the Manufacture, Sale or Importation of Incandescent Filament Lamps, Used Refrigerators, Used Refrigerator-Freezers, Used Freezers, and Used Air conditioners. Banning the import of used refrigerators into Ghana gave clear legal definition of how used exports were to be treated in the EU. In the UK waste export authorities were able to stop exports of these products. This led to several "recyclers" in Scotland going out of business, as they were no longer able to send their unwanted refrigerators to Ghana.

The impact: Since the ban came into effect, the government of Ghana has seized 38,933 secondhand refrigerators and 9,767 secondhand ACs. The Ghana Energy Commission estimates that banning secondhand ACs and refrigerators has resulted in energy savings of 3,624 GWh.

Additional steps: While the import of second-hand fridges and ACs has been banned since 2013, many still enter the market. To further promote the purchase of highly efficient new products and removal of outdated products from the market, *Ghana is implementing the ECOFRIDGES project*. It includes a market-based financial mechanism to spread out the cost of purchasing new appliances which meet strict performance and refrigerant gas criteria through a 0% interest loan available through local banks. ECOFRIDGES also includes the option to receive a voucher for an old cooling appliance that has been turned in for recycling.

ABOUT THE USED COOLING IMPORTS IN AFRICA WORKING GROUP AND THE COOL COALITION

The aim of this Working Group is to bring together interested officials and representatives from industry and civil society to take stock of the current situation of used cooling equipment importation into Africa, raise awareness on the environmental impacts along the lifecycle of both new and used cooling products in the African context, identify relevant resources that are applied or could readily be applied to address these issues, and select transformative actions that should be undertaken by interested actors.

The *Cool Coalition* is a global network that connects over 120 governments, cities, private sector and civil society to facilitate knowledge exchange, advocacy and joint action towards a rapid global transition to sustainable cooling. In September 2019, it became one of the official outcomes and "Transformation Initiatives" put forward by the Secretary-General's Executive Office for the UN Climate Action Summit.

FOR MORE INFORMATION, PLEASE CONTACT:

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