



# Introduction into the UNEP-U4E Integrated Policy Approach & Savings possible through energy-efficient cooling


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National Capacity Building Workshop

- Introduction of UNEP-U4E
- Overview of UNEP-U4E tools and resources
- Savings that can be achieved with energy efficient cooling in The Gambia
- Overview of the project

# United for Efficiency – Leapfrogging to Energy-Efficient Lighting, Appliances and Equipment

- Launched United for Efficiency (U4E) in 2014 at the UN Secretary General’s Climate Summit.
- Initiative contributes to Sustainable Development Goal 7.3

<p><b>7 AFFORDABLE AND CLEAN ENERGY</b></p> 	<p>7. Ensure access to affordable, reliable, sustainable and modern energy for all</p> <p>7.3 By 2030, double the global rate of improvement in energy efficiency</p>
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- The Programme combines the forces of the private and public sectors on high impact opportunities – lighting, appliances and equipment



# U4E Partner Organizations

## Manufacturers & Industry Associations



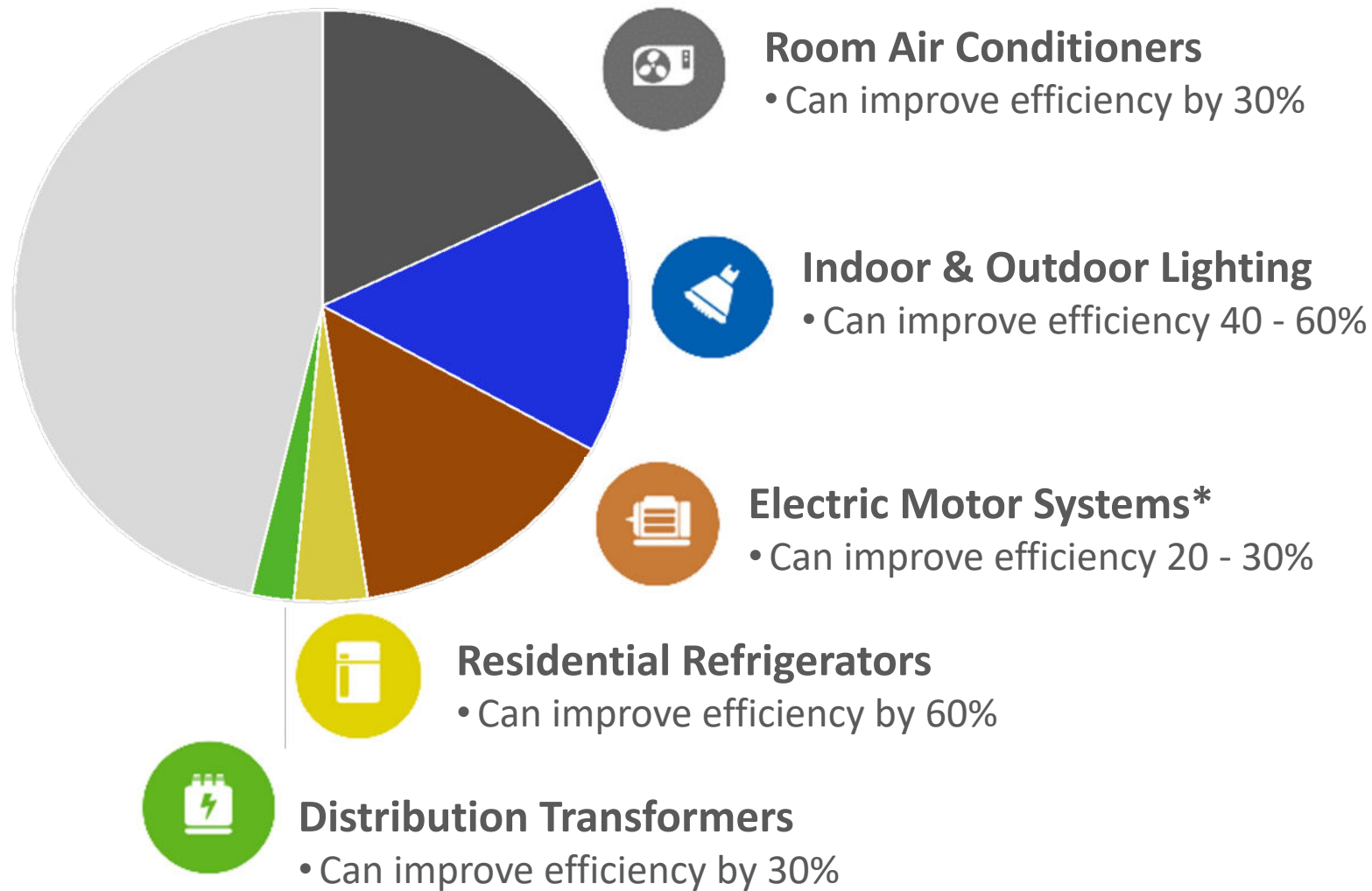
## Technical Organizations & Initiatives



## Funders & Financiers



# Tackle Products That Use >50% of Electricity

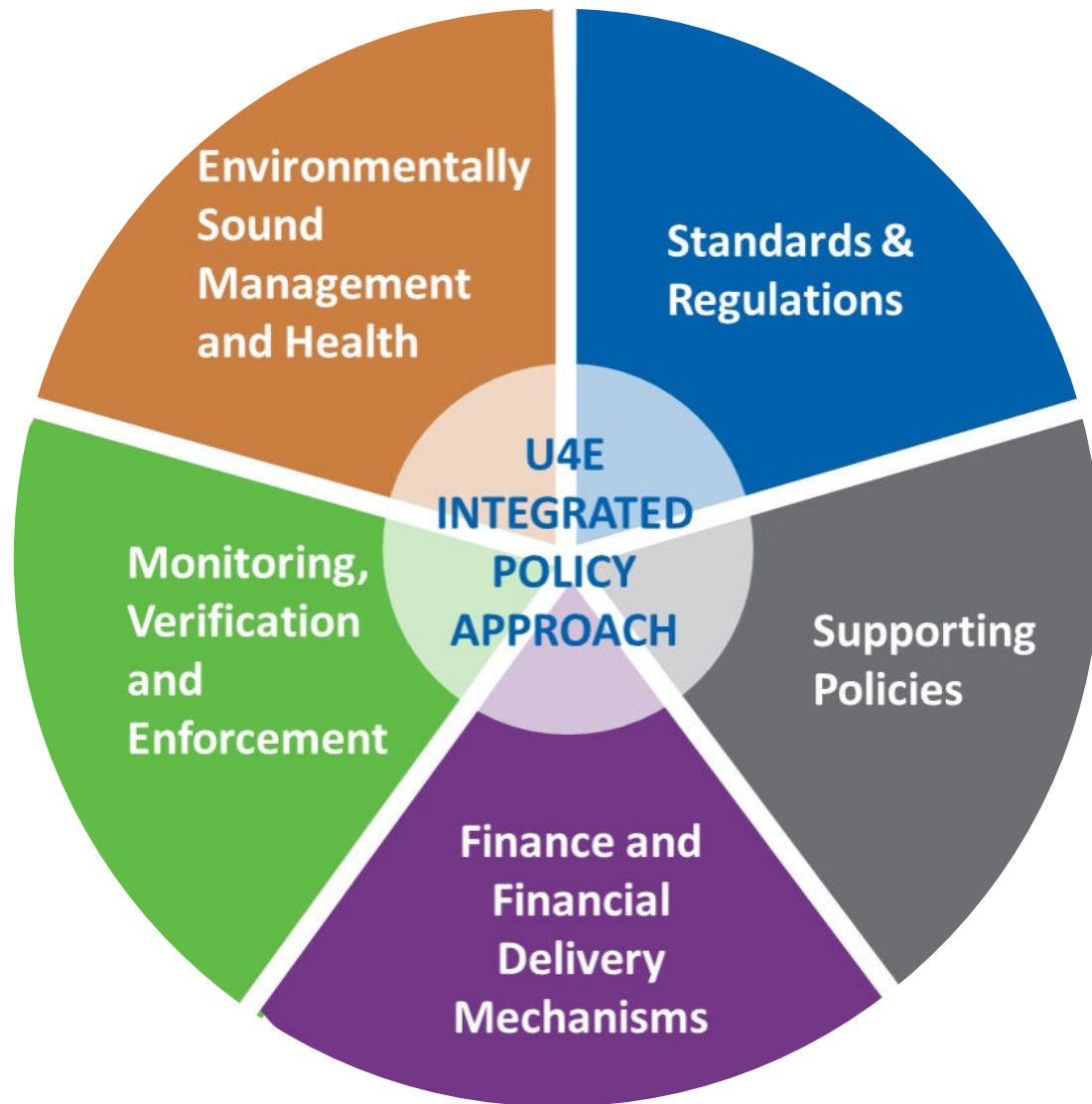


Sources: International Energy Agency; Lawrence Berkeley National Laboratory; UN Environment

Method: Approximate savings in 2030 in emerging & developing economies if today's best available technologies are adopted

\*Electric motors systems use over half of global electricity, some of which is accounted for in ACs and Refrigerators

# U4E Integrated Policy Approach

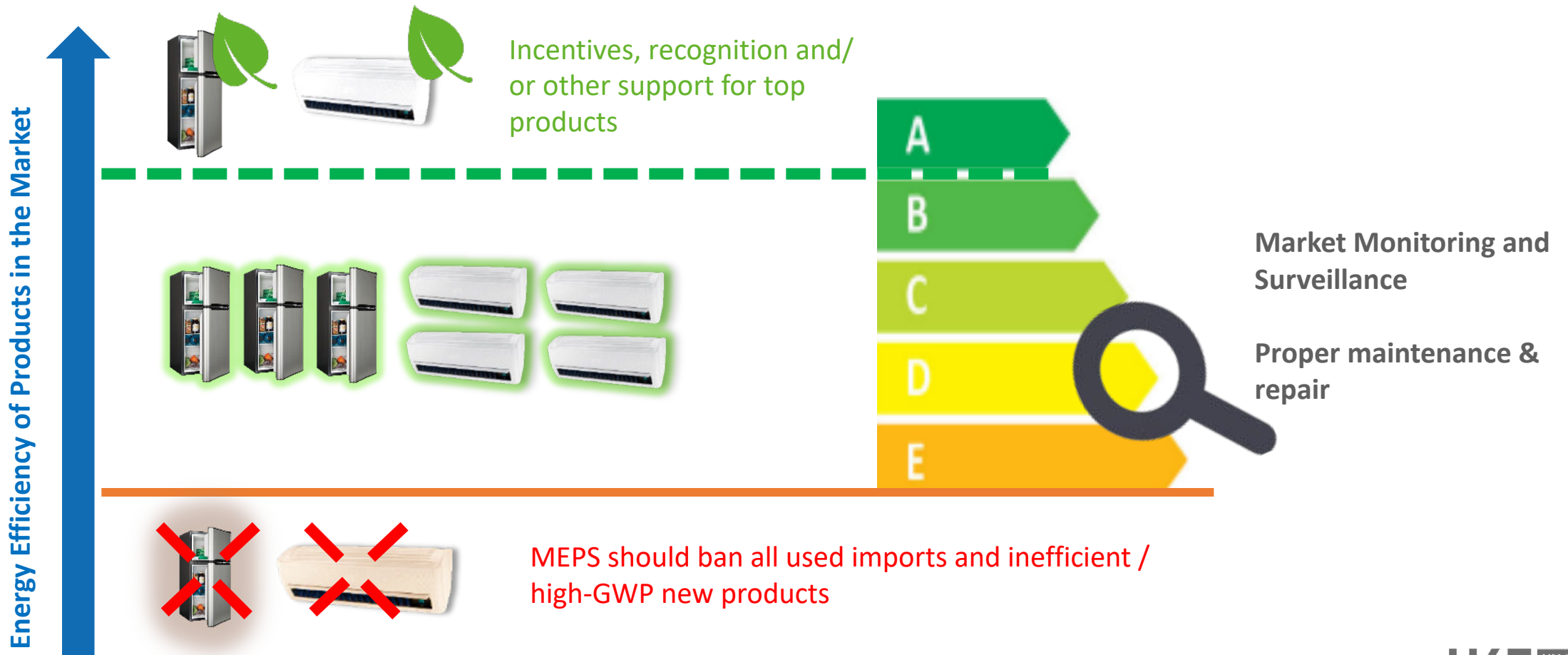


- Gather market data and stakeholder input to set **standards** specifying efficiency and other requirements for products
- Establish energy **labels**, raise **awareness**, and build **capacity**
- Support consumers to **offset the higher purchase price** of efficient products and send demand signal to vendors
- **Oversee** products sold in the market, **verify** compliance, **enforce** the requirements, **report** results
- Reduce adverse **health and environmental impacts** during manufacturing, operation, and end-of-life recycling / disposal

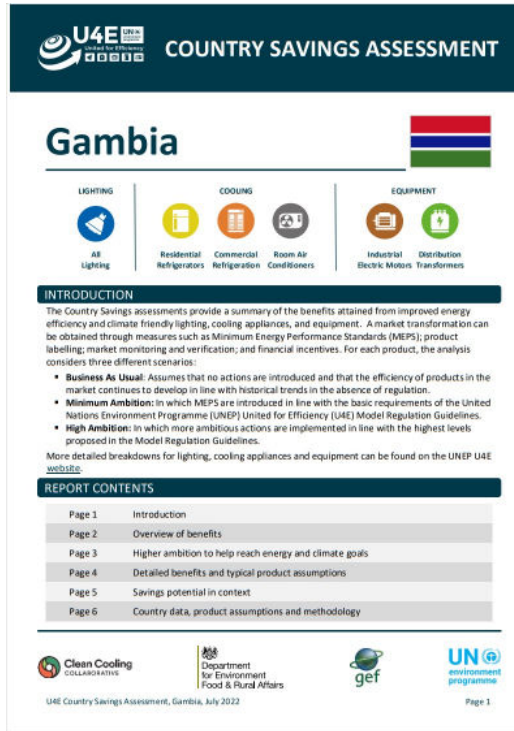
# Role of MEPS & High-Performance Product Labels



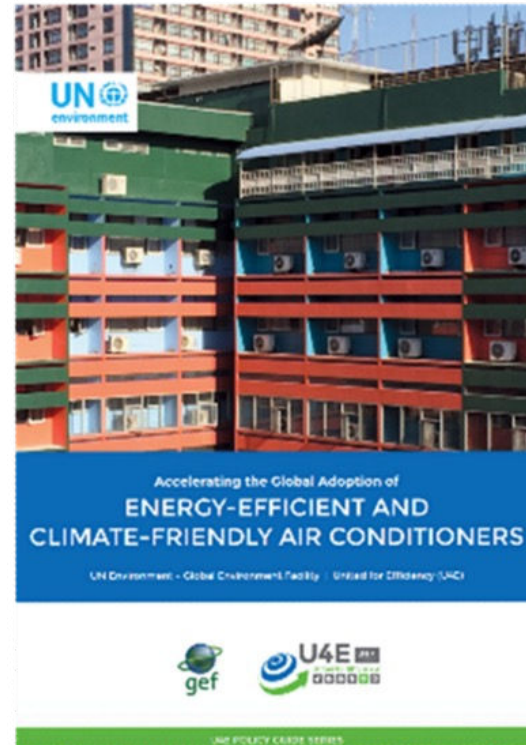
## Overview



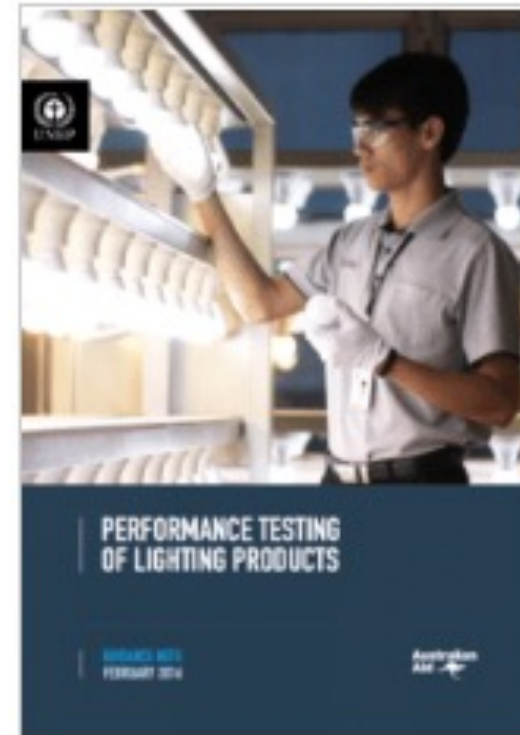
# Overview of U4E Tools and Guidance



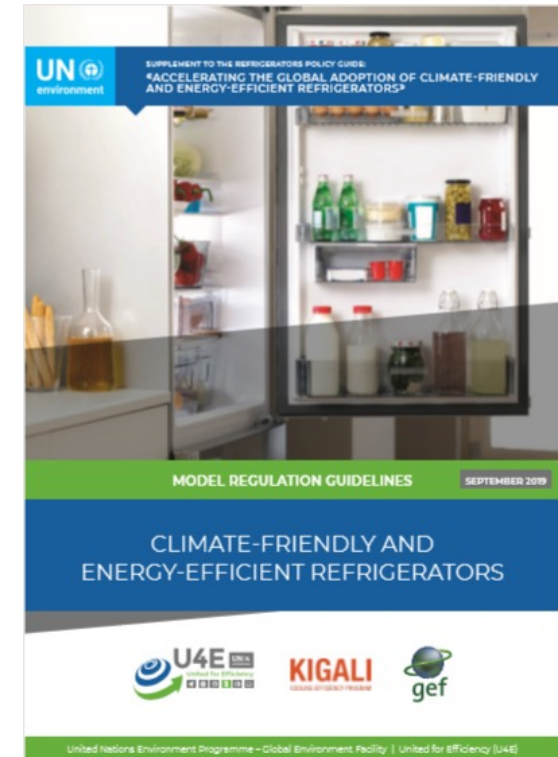
Country Savings Assessments



Policy Guides



Technical Guidance



Model Regulations

**Why** is EE important?  
Which products should we prioritise?

**Which** integrated policies and interventions should be considered? How have others done it?

**How** to analyze data, test products, enforce regulations?

**Which** scope, performance, safety, testing, etc. are a good starting point for MEPS & labels?



Which products are claimed to meet the Model Regulation Guidelines and where are they available?

How to monitor the market, enhance enforcement, and share information?

How to address higher first costs, risk, access to capital, & other barriers?

### Sustainable Cooling Products Database

**Sustainable Cooling Products Database v1.0**

Update: 6/15/2020

Pre qualified models in the whole database

Show # of models for each >> Market Split by Capacity

Country	CC<4> 3.5kW	4.5kW<CC> 3.5kW	CC<4> 3.5kW	Total
Australia, New Zealand	38	71	9	118
Hong Kong	24	70	0	94
India	8	225	2	235
Japan	1,341	656	0	1,997
Singapore	37	223	74	334
Thailand	120	550	398	1,068

**Full database detail:**

UNDER DEVELOPMENT: FUNCTIONALITY TO INTERROGATE SUBSETS OF THE DATA

**Notes on data:**

- The aim of the Database is primarily to inform governments that are pursuing MEPS and labels of products that may meet the energy efficiency and refrigerant gas requirements in the U4E Model Regulation Guidelines. The Database does not obviate the need for proper verification of the information provided, such as through testing at a certified laboratory according to the appropriate test standard. It is illustrative and evolving over time and is not able to capture all products.
- The data included in the Database was collected during April-May 2020.
- Identical combinations of brand and the main product characteristic fields exist within the data so there may be some models that are listed more than once.
- The full Database with raw inputs and contact information of the submitter is maintained by U4E and LBNL and not publicly available. An extract of key data fields will be publicly posted on the U4E website.
- The input is valid for 12 months, in which case it is no longer publicly displayed unless the entry is re-confirmed by the manufacturer or the source (e.g. publicly available national product registry).
- See the supplemental documents for more details of data sources and analysis.

### Product Registration System

Welcome to the U4E Product Registration System

The easiest way to register your product and get it listed for energy efficiency.

UN U4E environment

Get a login ID and password

Register your product

I registered

### Financial mechanisms

Report by BASE – Basal Agency for Sustainable Energy for UN Environment

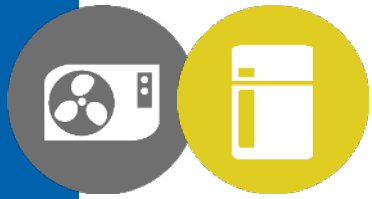
**MANUAL OF FINANCING MECHANISMS AND BUSINESS MODELS FOR ENERGY EFFICIENCY**

March 2019

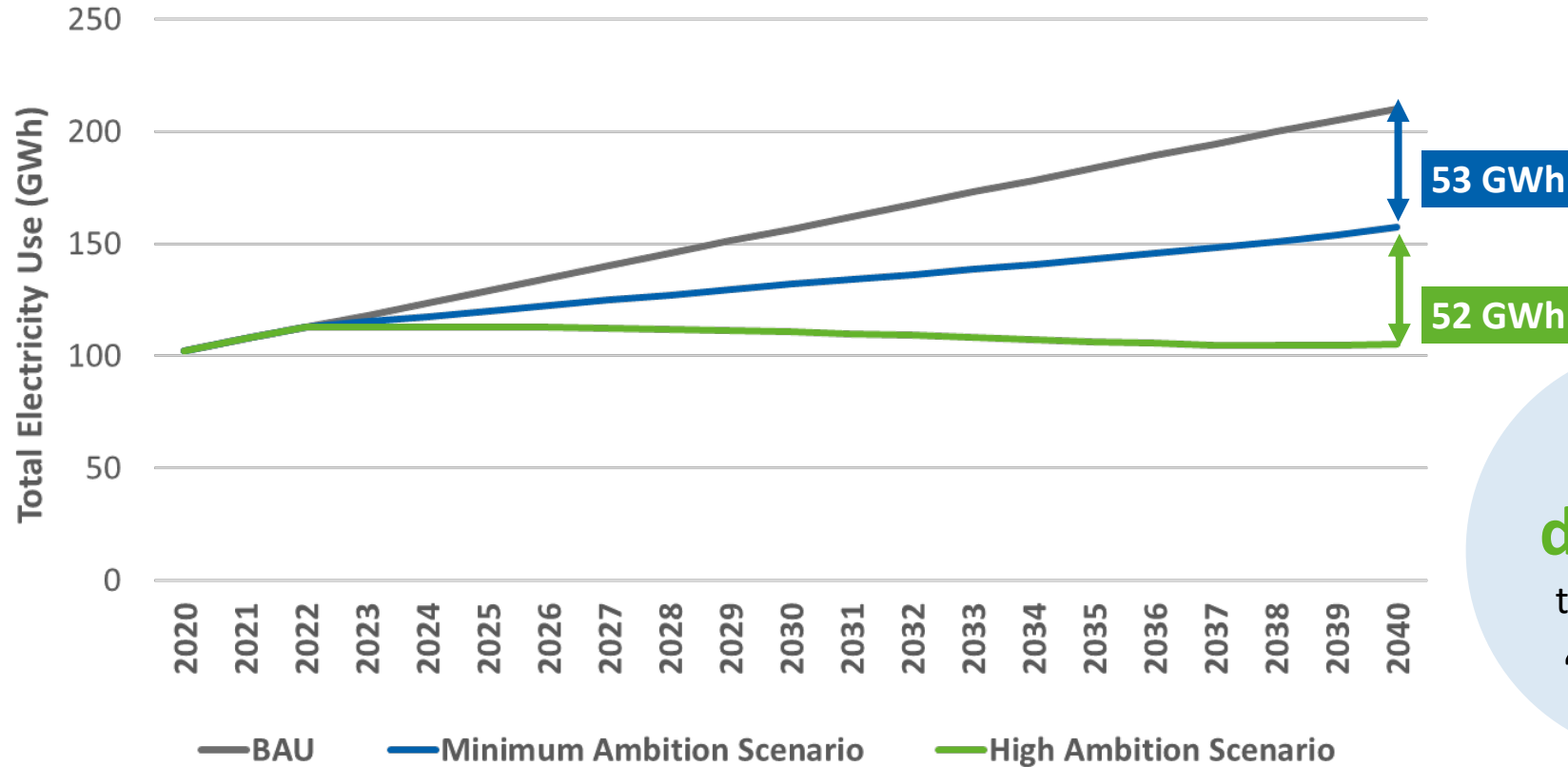
# Overview of U4E Tools and Guidance

Resource: <https://united4efficiency.org/resources/accelerating-global-adoption-energy-efficient-climate-friendly-refrigerators/>  
<https://united4efficiency.org/resources/accelerating-global-adoption-energy-efficient-air-conditioners/>





# Saving Opportunities in The Gambia for Room Air Conditioners, and Residential Refrigerators



By 2040 the **electricity consumption** used for cooling is forecasted to increase by **86%**

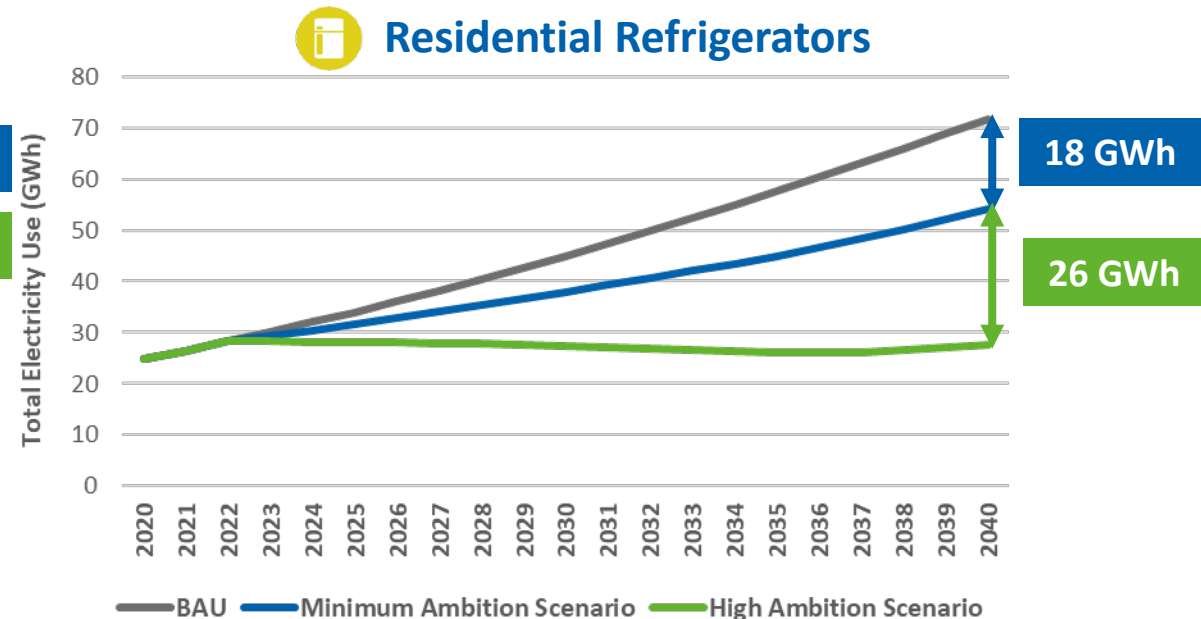
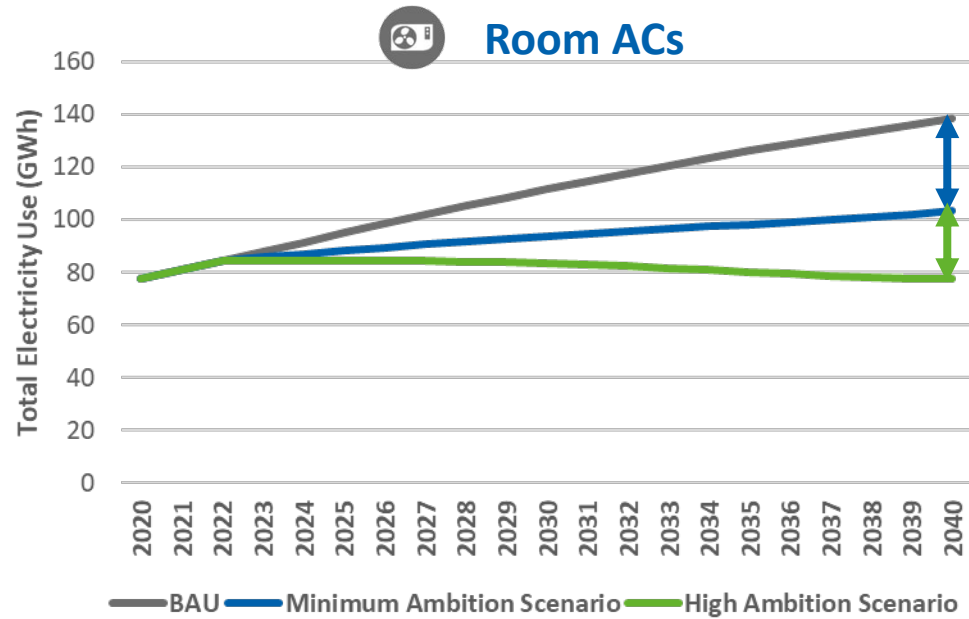
\*Policies can **decrease** this growth to **40%** in 2040

\*\*More stringent policies can even **decrease** this growth to **7%** than current level

\*Minimum Ambition Scenario  
\*\*High Ambition Scenario



# Saving Opportunities in The Gambia for Room Air Conditioners, and Residential Refrigerators



Electricity consumption growth by 2040		
Business As Usual Scenario (BAU)	<b>64 %</b>	<b>154%</b>
With Minimum Ambition Scenario (MEPS)	22%	91%
With High Ambition Scenario (HEPS)	(8)%	(2%)

Annual Savings in 2040**		
Electricity Savings (GWh)	<b>35</b>	<b>18</b>
<i>equivalent to:</i>		
Power Stations [5 MW]	2	1
Thousands of CO <sub>2</sub>	19	10
millions of USD in electricity bills	7	4

\*\*Minimum Ambition Scenario

\*( ) indicates 2040 % demand is below the 2022 electricity consumption

Graph refers to the minimum and high ambition scenarios that had been assessed for the U4E Country Saving Assessments.



# Project Overview

Readiness Project funded by the GCF; \$400,000.00 Budget; UNEP Delivery partner

## Rationale:

- Absence of regulatory frameworks and energy standards for appliances has resulted in inefficient products
- Country has high electricity tariffs
- The demand for air conditioners and refrigerators in The Gambia is predicted to rise up to 44% by 2040.

## Objectives

- Develop comprehensive legislative framework for energy-efficient air conditioners and refrigerators in The Gambia that will ultimately reduce GHG emissions
- Develop a National Cooling Action Plan (NCAP) based on a robust market assessment and a policy framework for MEPS and labelling scheme for air conditioners and refrigerators.
- Additionally, the proposal includes capacity building for the Ministry of Petroleum and Energy (MOE) and key stakeholders. In the long-term, the project will catalyse broader market transformation for energy efficiency in the Gambia.

# Project Overview Cont.

## Activities

- Capacity building on Energy Efficient Appliances
- Capacity Building through a study tour for the Ministry of Petroleum and Energy and key project stakeholders.
- National market assessment on refrigerators and air conditioners.
- Development of a National Cooling Action Plan to provide a framework for policy interventions in The Gambia for the cooling sector
- Establishment of a regulatory framework (for air conditioners and refrigerators) with subsequent implementation including both minimum energy performance standards (used for all products in the market) and high energy performance standards
- Development of a draft Project Concept Note in collaboration with relevant AE.
- Establishment of a PWG to ensure involvement of all necessary stakeholders.



# Contact

TRANSFORMING MARKETS TO ENERGY-EFFICIENT PRODUCTS



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# Backup