United for Efficiency Initiative

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Presentation Overview

✓ Opportunities of Energy Efficient Products in Africa
✓ U4E Model Regulation Guidelines
✓ Product Registration Activities
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.
- The Programme combines the forces of the private and public sectors on high impact opportunities – lighting, appliances and equipment.
- Supports the second goal of the UN Secretary General’s SE4ALL initiative: to double the global rate of improvement in energy efficiency.
### Partner Organisations

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Tackle Products That Use >50% of Electricity

- **Room Air Conditioners**
  - Can improve efficiency by 30%

- **Indoor & Outdoor Lighting**
  - Can improve efficiency 40 - 60%

- **Electric Motor Systems***
  - Can improve efficiency 20 - 30%

- **Residential Refrigerators**
  - Can improve efficiency by 60%

- **Distribution Transformers**
  - Can improve efficiency by 30%

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 account for over half of global electricity use, of which is consumed for ACs and Pumps.
Increasing Electricity Demand and Saving Opportunities in lighting, cooling and equipment in SADC

Annual Savings in 2040*:

25 TWh of electricity consumption, which is equivalent to:

- 12 power stations [500 MW each]
- 19 Million tonnes of CO2
- 3 Billion USD on electricity bills

* With Minimum ambition scenario
Share of Savings Opportunities in lighting, cooling and equipment in SADC

Electricity Savings

*With Minimum ambition scenario*
U4E Approach for Transforming Markets

Comprehensive Market Transformation

Detailed Guidance Notes Available
Recently Released - Country Saving Assessments

Available for:
• Cooling
• Lighting
• Equipment

Available for 150+ countries on united4efficiency.org
Model Regulation Guidelines

U4E Model Regulation Guidelines are:

→ intended as a guideline to help inform regulatory authorities and policy makers in developing and emerging economies.

→ sets a minimum efficiency floor to prohibit future sales of inefficient products from the market.

A range of stakeholders, including governments, manufacturers, technical institutions and environmental groups have contributed to their development.
Aims of the Model Regulation Guidelines

Make it easier to adopt new / enhance existing MEPS and Energy Labels:

- Target energy-efficiency
- Encourage higher performing products through labelling
- Vary requirements to capture climatic differences
- Use proven best practices and tap into global policy and technology trends

Benefits:

- Simplify adoption and implementation of a robust regulation
- Catalyze product innovation, giving consumers more choice
- Easier to harmonize requirements to reduce trade barriers and unlock economies of scale to make products more affordable
- Enable more effective market enforcement using proven test procedures and an easier exchange of compliance info
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Article 1. Scope of Covered products

1.1 Scope

This regulation applies to all refrigerating appliances of the vapor compression type, with a rated volume at or above 10 liters (L) and at or below 1,500 L, powered by electric mains and offered for sale or installed in any application.

1.2 Exemptions

This regulation does not apply to:
   a) wine storage appliances,
   b) refrigerating appliances with a direct sales function,
   c) mobile refrigerating appliances,
   d) appliances where the primary function is not the storage of foodstuffs through refrigeration,
   e) other products that do not meet the definition of a Refrigerator, Refrigerator-Freezer, or Freezer, and
   f) other refrigerating appliances different than vapor compression type.

Article 2. Terms & Definitions

Definitions of the relevant terms in this document are listed, below. Unless otherwise specified, these definitions are harmonized with those in IEC 62552:2015 Household refrigerating appliances – Characteristics and test methods (Part 1, 2, and 3).

Ambient Temperature

Temperature in the space surrounding the refrigerating appliance under test or assessment.

Adjusted Volume (AV)

Volume for the storage of foodstuff adjusted for the relative contribution to the total energy consumption according to the different temperatures of the storage compartments. AV shall be calculated on the basis of the volume, as described in Article 3.

Automatic Defrost

Defrosting where no action is necessary by the user to initiate the removal of frost accumulation at all temperature-control settings or to restore normal operation, and the disposal of the defrost water is automatic.
U4E Model Regulations Guidelines

Light Bulbs
Residential Refrigerators
Air Conditioners
Electric Motors
Distribution Transformers

Find all on https://united4efficiency.org/
Product Registration Systems – Potential Uses and Benefits

- Facilitate the transformation of markets (reduces barriers to trade in EE products, reduces complexity)
- Provide a data resource – (Governments, Industry and Consumers)
- Enable Monitoring, Verification and Enforcement activities (MV&E)
- Facilitate financing through enhanced baseline assessments

Australia and New Zealand Regional System
Product Registration Systems used around the globe

- Australia and New Zealand Regional System
- Pacific Island Nations Regional System
- Japanese System
Guidance Notes (4)

Initial guidance for stakeholders interested in PRS

Prototype

Framework of a product registration, including recommended pages and fields

Specifications

Specifications for use by software developer to develop a PRS

Based off the U4E Model Regulation Guidelines