United for Efficiency Initiative

IEA Training Week for Sub-Saharan Africa
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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

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Partner Organisations

Manufacturers & Industry Associations

GREE 格力 · signify · ABB · Electrolux · 三花控股集团 SANHUA HOLDING GROUP · International Copper Association Copper Alliance · OSRAM · B/S/H/ · arçelik · Whirlpool · mabe

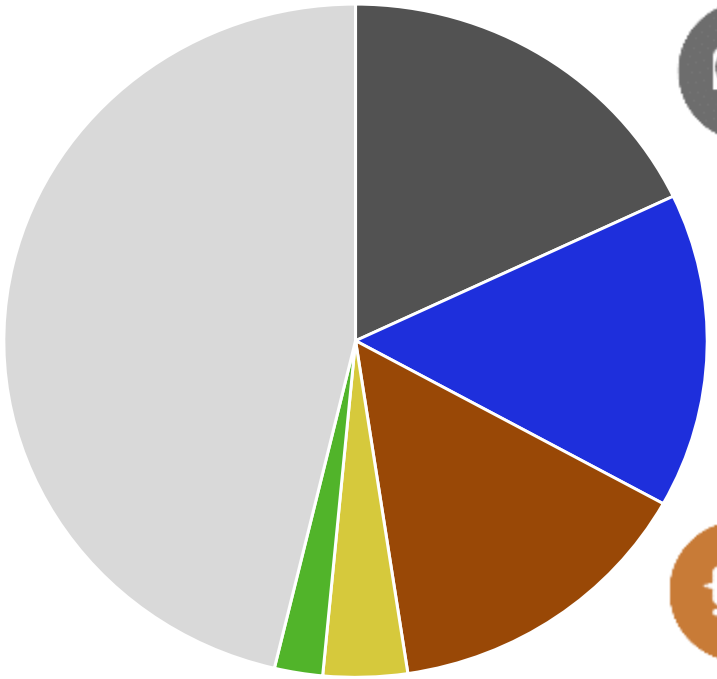
Technical Organisations & Initiatives

GELC · clasp · giz · NRDC · CARBON TRUST · IIEC · BASE · COPENHAGEN CENTRE ON ENERGY EFFICIENCY SE4ALL EE HUB · EESL · NIS · toptenn · AMBILAMP · GLOBAL LIGHTING CHALLENGE · AC ADVANCED COOLING CHALLENGE · GLOBAL CLIMATE PARTNERSHIP FUND managed by responsAbility · 4E

Funders & Implementing Agencies

gef · KIGALI COOLING EFFICIENCY PROGRAM · UN environment · UNDP

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

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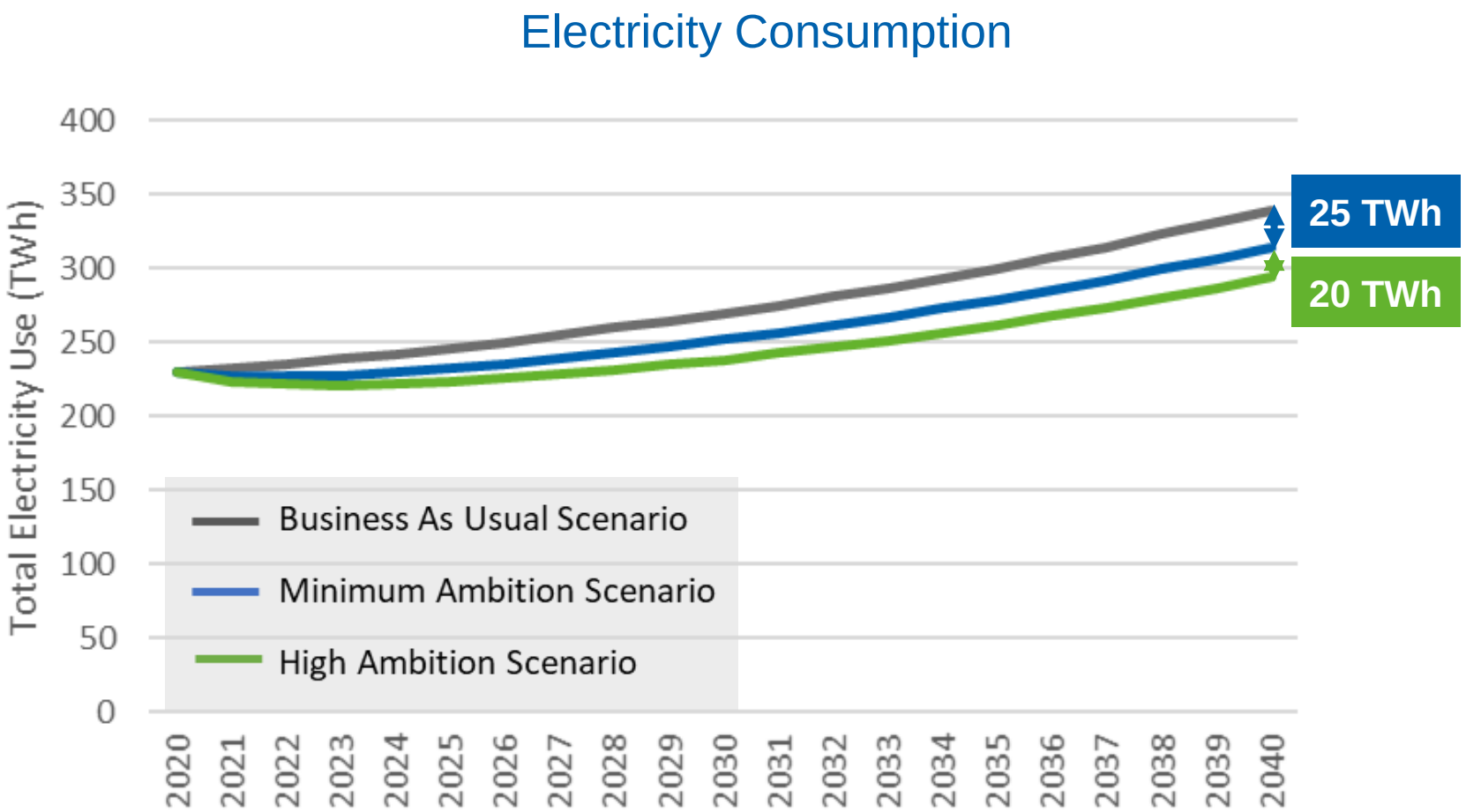
Increasing Electricity Demand and Saving Opportunities in lighting, cooling and equipment in SADC



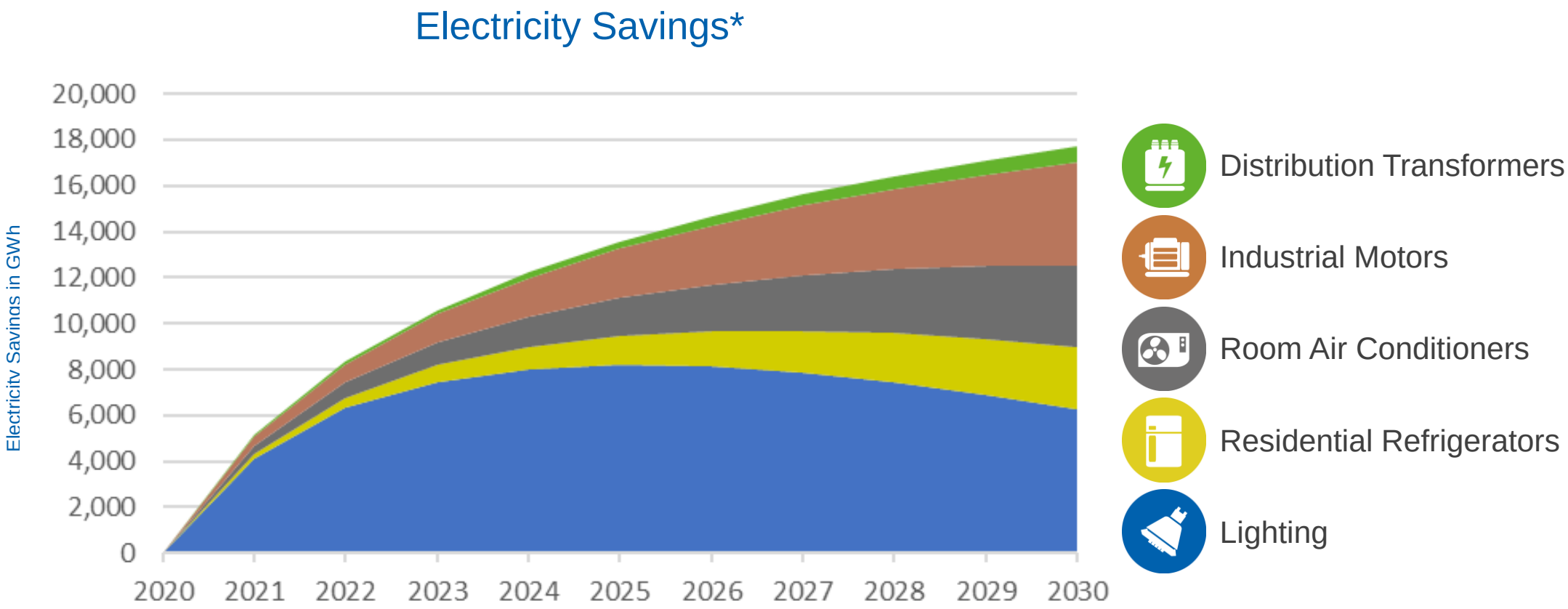
Annual Savings in 2040*:

25 TWh of electricity consumption, which is equivalent to**:**

- **12 power stations** [500 MW each]
- **19** Million tonnes of **CO_2**
- **3** Billion **USD on electricity bills**

* With Minimum ambition scenario

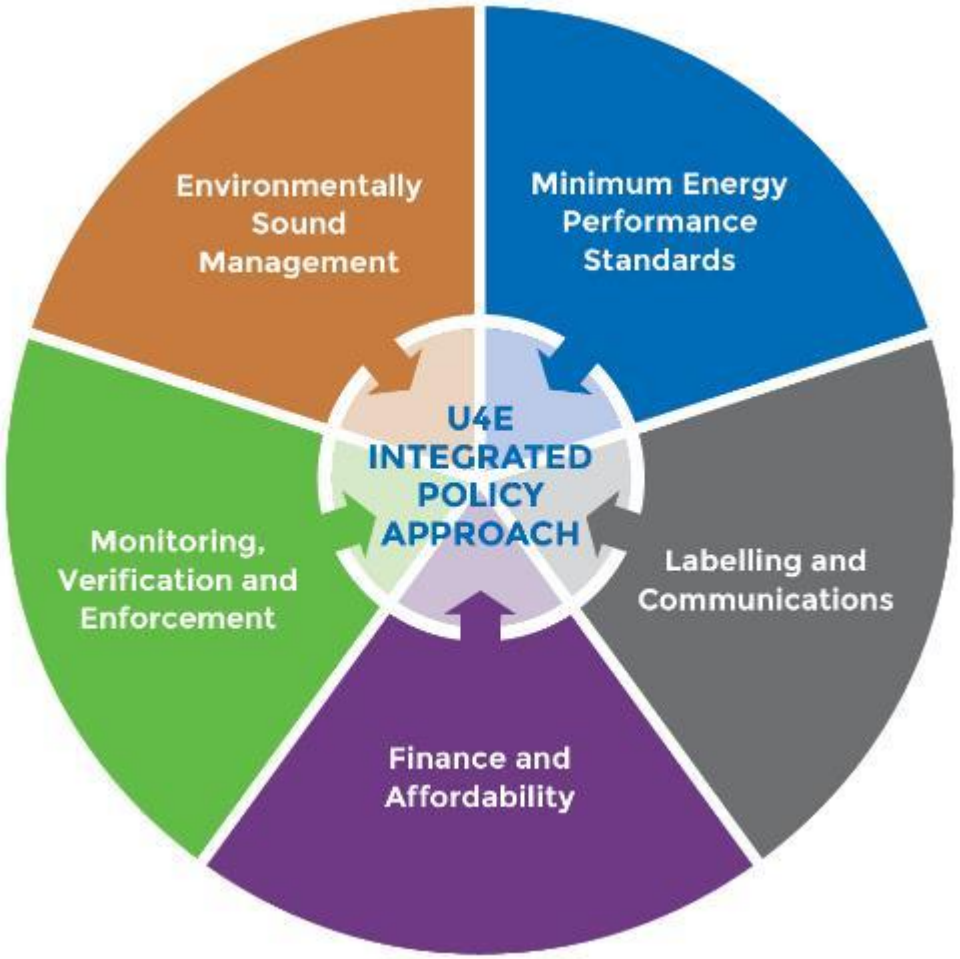
Share of Savings Opportunities in lighting, cooling and equipment in SADC



* With Minimum ambition scenario

U4E Approach for Transforming Markets

Comprehensive Market Transformation



Detailed Guidance Notes Available

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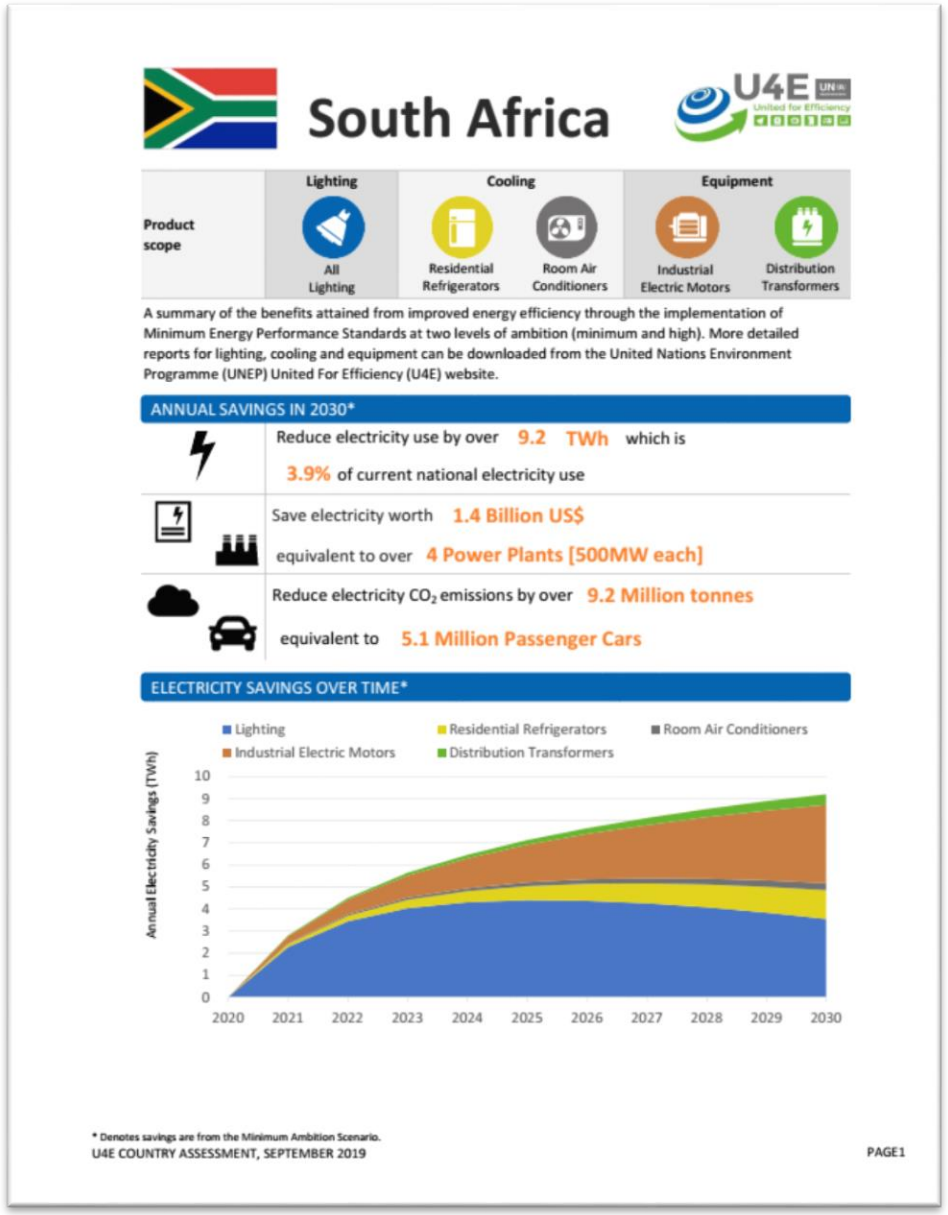
Recently Released - Country Saving Assessments



South Africa

Product scope	Lighting	Cooling		Equipment	
	All Lighting	Residential Refrigerators	Room Air Conditioners	Industrial Electric Motors	Distribution Transformers

A summary of the benefits attained from improved energy efficiency through the implementation of Minimum Energy Performance Standards at two levels of ambition (minimum and high). More detailed reports for lighting, cooling and equipment can be downloaded from the United Nations Environment Programme (UNEP) United For Efficiency (U4E) website.

ANNUAL SAVINGS IN 2030*

Reduce electricity use by over **9.2 TWh** which is **3.9%** of current national electricity use

Save electricity worth **1.4 Billion US$** equivalent to over **4 Power Plants [500MW each]**

Reduce electricity CO_2 emissions by over **9.2 Million tonnes** equivalent to **5.1 Million Passenger Cars**

ELECTRICITY SAVINGS OVER TIME*

* Denotes savings are from the Minimum Ambition Scenario.

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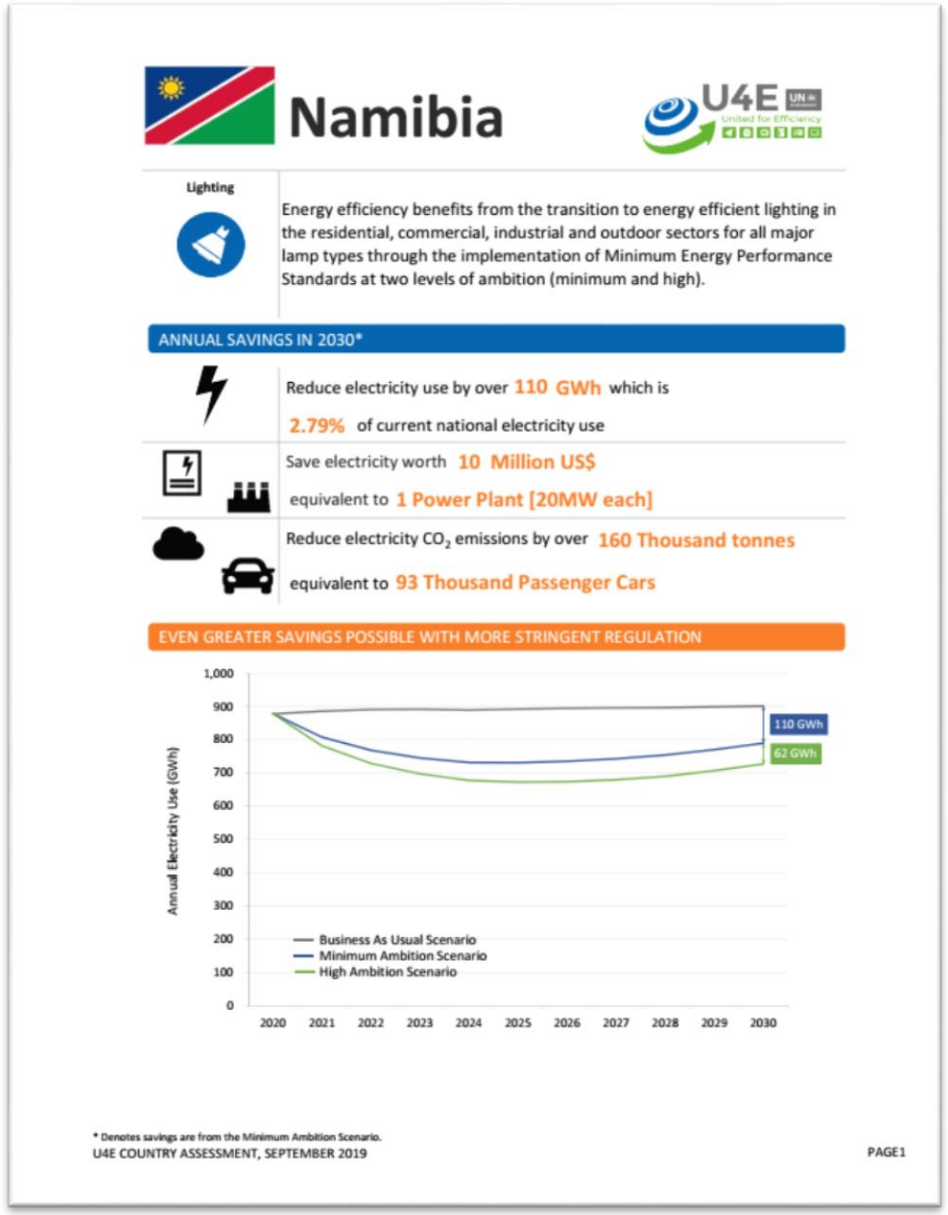
Available for:

- **Cooling**
- **Lighting**
- **Equipment**

Available for 150+ countries on united4efficiency.org



Namibia

Lighting

Energy efficiency benefits from the transition to energy efficient lighting in the residential, commercial, industrial and outdoor sectors for all major lamp types through the implementation of Minimum Energy Performance Standards at two levels of ambition (minimum and high).

ANNUAL SAVINGS IN 2030*

Reduce electricity use by over **110 GWh** which is **2.79%** of current national electricity use

Save electricity worth **10 Million US$** equivalent to **1 Power Plant [20MW each]**

Reduce electricity CO_2 emissions by over **160 Thousand tonnes** equivalent to **93 Thousand Passenger Cars**

EVEN GREATER SAVINGS POSSIBLE WITH MORE STRINGENT REGULATION

* Denotes savings are from the Minimum Ambition Scenario.

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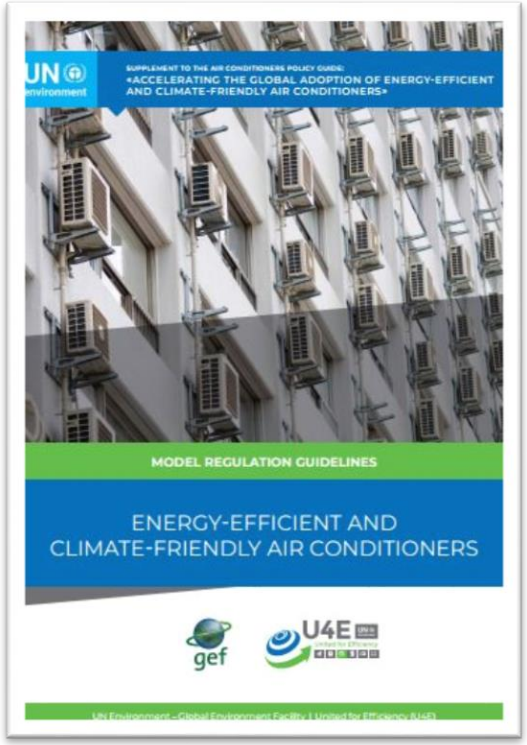
Model Regulation Guidelines

U4E **Model Regulation Guidelines** are:

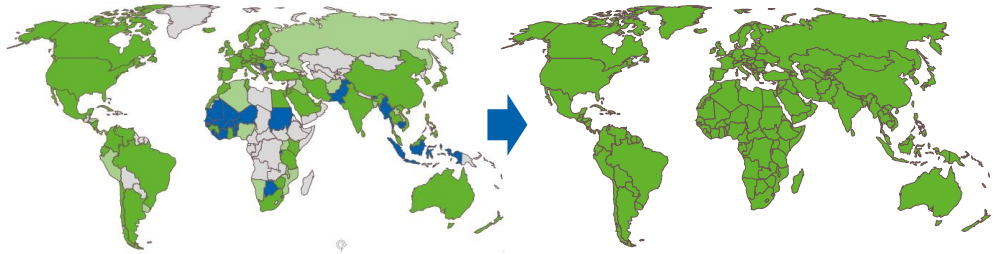
→intended as a guideline to help **inform regulatory authorities and policy makers** in developing and emerging economies.

→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.



Supporting Global Market Transformation:



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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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Template Text - Ready to Be Considered

Table of Contents

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)*.

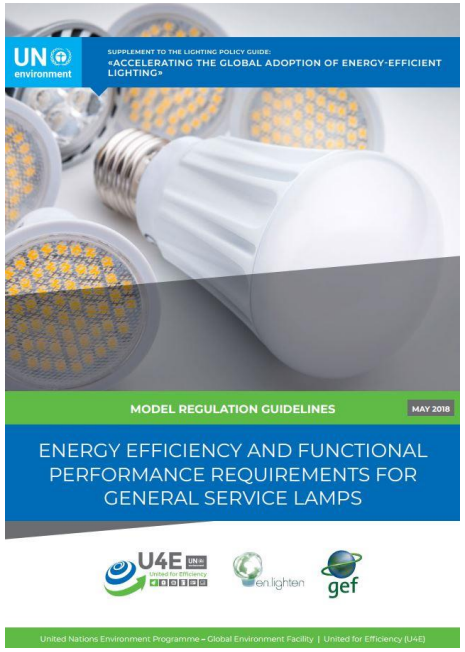
Ambient Temperature
Temperature in the space surrounding the refrigerating appliance under test or assessment.

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.

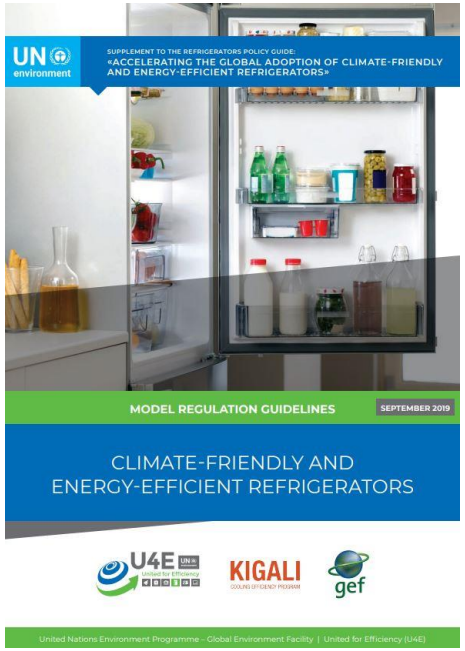
Automatic Defrost
Defrosting where no action is necessary by the use to initiate the removal of frost accumulation at all temperature-control settings or to restore normal operation, and the disposal of the defrost water is automatic.

U4E Model Regulations Guidelines

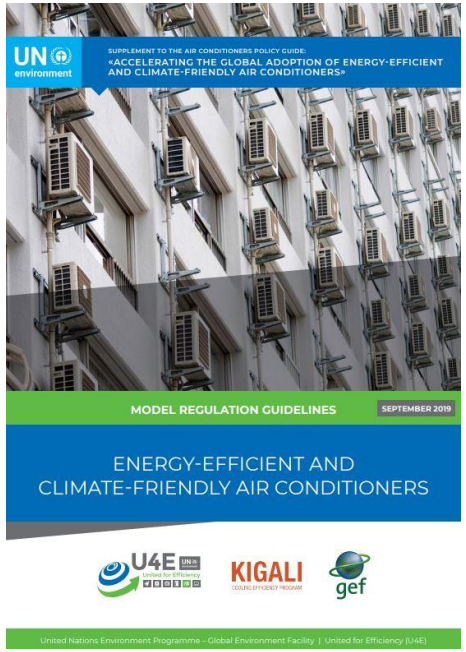
Light Bulbs



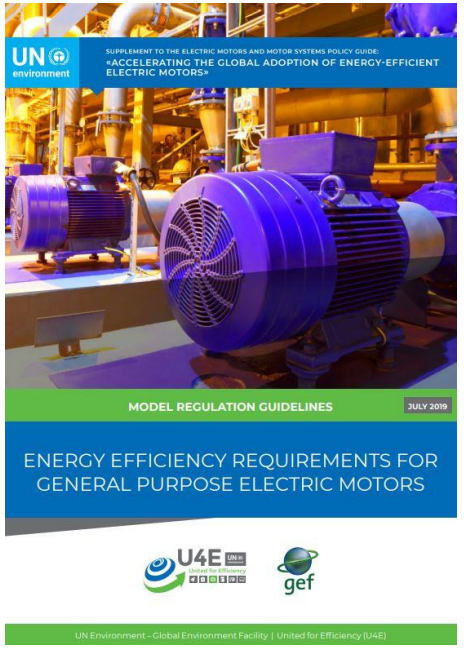
Residential Refrigerators



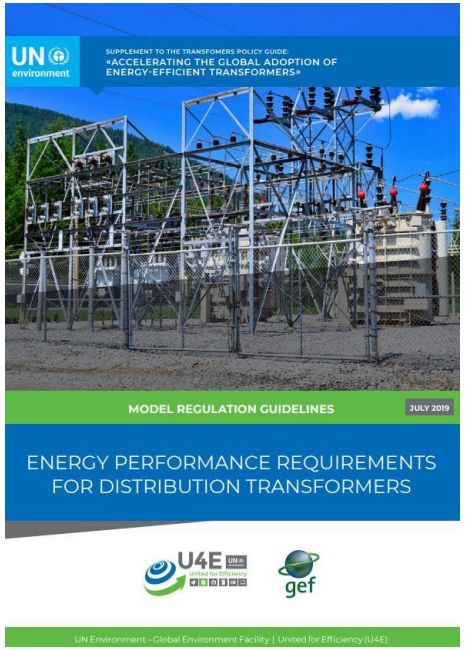
Air Conditioners



Electric Motors



Distribution Transformers



[Find all on https://united4efficiency.org/](https://united4efficiency.org/)

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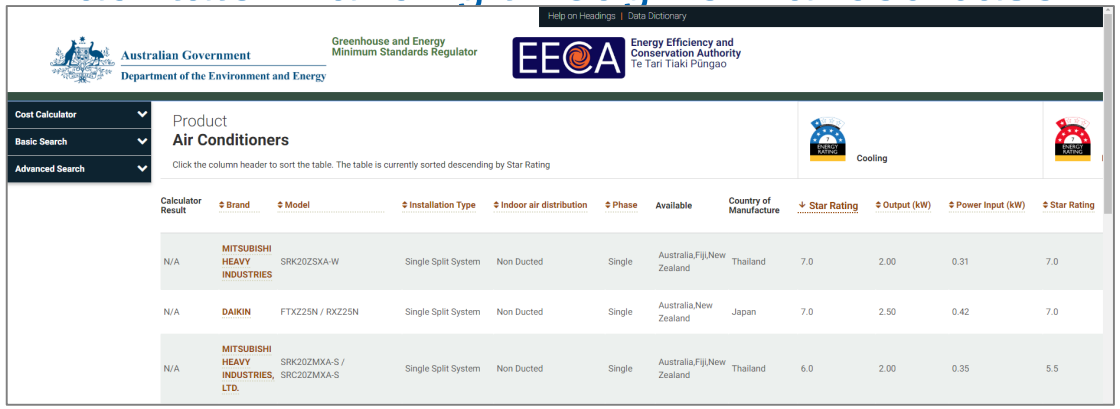
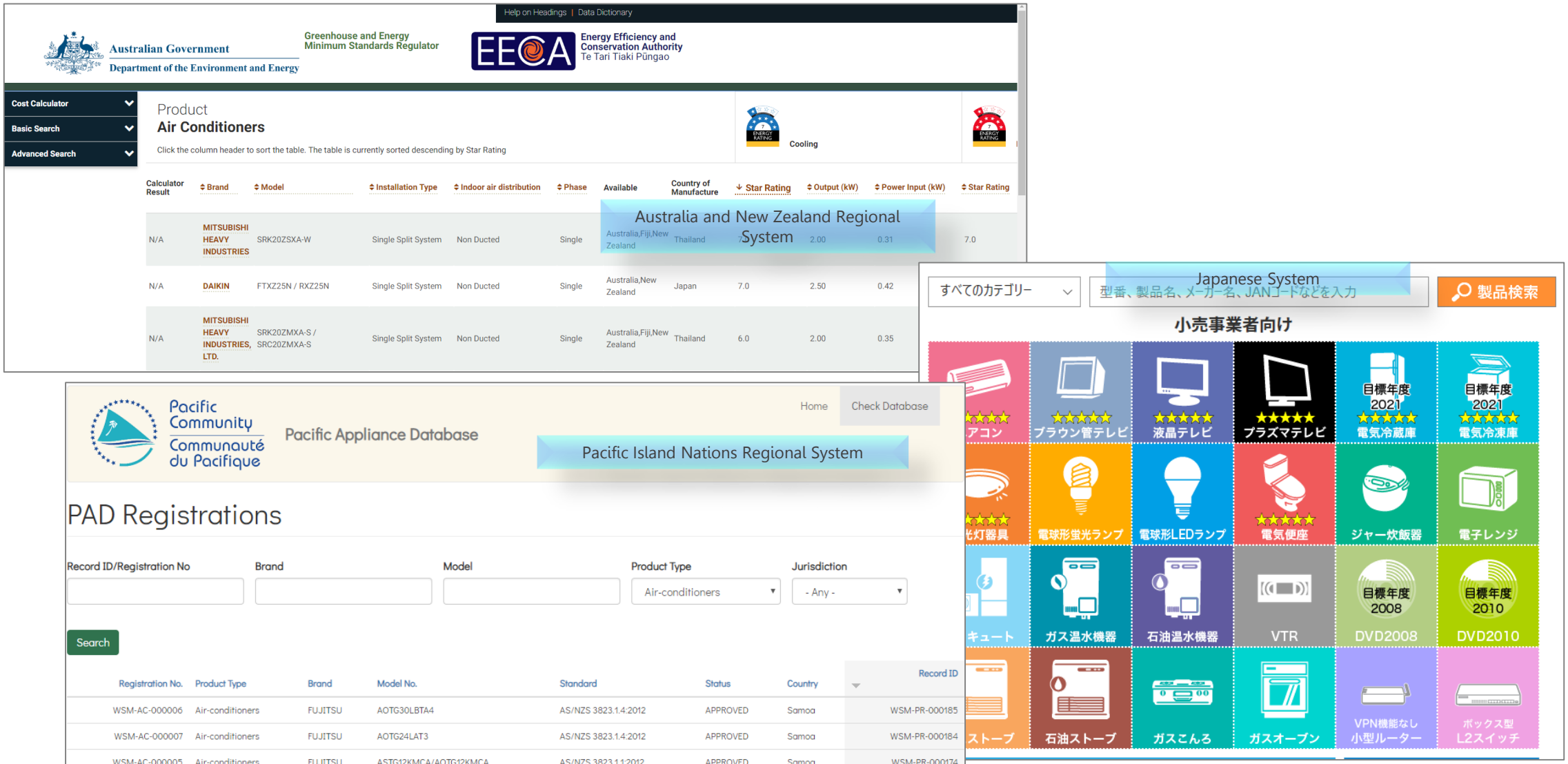
Product Registration Systems – Potential Uses and Benefits

- ✓ 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



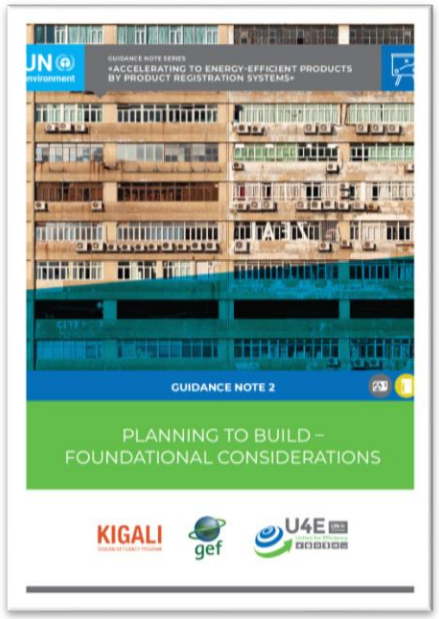
Australia and New Zealand Regional System

Product Registration Systems used around the globe



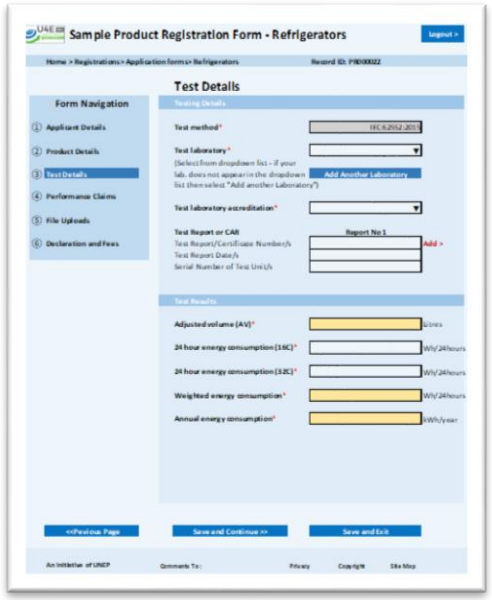
Product Registration System – Global Tools and Templates

Guidance Notes (4)



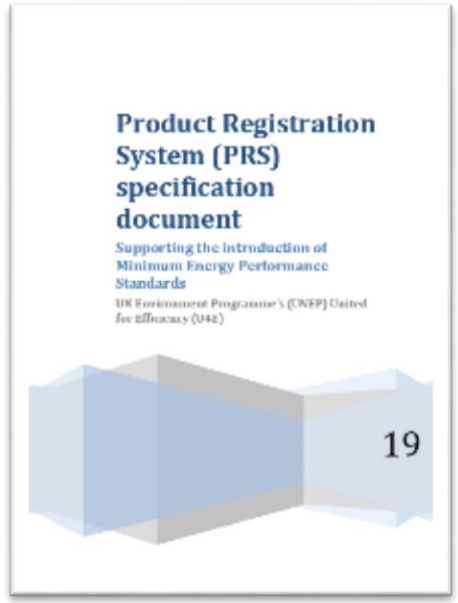
Initial guidance for stakeholders interested in PRS

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

Contact

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