

# Overview of International Best Practices on Policy Interventions

EELA Webinar Series: Enabling policies for a market transformation towards EELA

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# Why appliances?

- Appliances improve our quality of life through the services they make possible:



- Cooling
- Lighting
- Entertainment/  
access to  
information
- Cleaning
- Heating



- **Energy efficiency** enables you to enjoy the same services while using less electricity.

# Benefits of energy efficient products

- **Household savings** - reduce household energy bills (but still enjoy the same services);
- **Grid reliability** – improved service quality; reduce electricity shortages (brown-outs / black-outs) due to reduced peak power demand;
- **Save national investment** – reduce capital and loans tied up in power stations and grid upgrades;
- **Market protection** - avoid becoming dumping-ground for technologies banned elsewhere due to efficiency regulations/requirements;
- **Increased productivity & positive economic impact**– increased industrial investment and employment;
- **Climate change** – develop on a ‘soft energy path’, avoid becoming a high CO<sub>2</sub> emission country.



# Attributes of a policy intervention

- **Significant outcomes**

- Achievable, ambitious and futuristic

- **Complementary**

- Understand what is existing; nationally, regionally and internationally



# Policy Interventions for Market Transformation



- **Energy & Quality Standards:** Push the market toward high-quality, high-efficiency products; including MEPS and performance requirements.



- **Labeling & Buyer Education:** Labels communicate energy, performance, and quality to consumers & other buyers, inspiring demand for sustainability.



- **Incentives & Bulk Procurement:** accelerate market saturation of high-quality, high-efficiency products & reduce market risk. Encourage mass adoption.



- **Compliance, Testing & Quality Assurance:** Ensure products meet the standards and perform as promised and level the markets.



- **Global Collaboration & Knowledge Sharing:** Leverage cutting edge & collective knowledge and forge productive partnerships.

# Lighting: Global Transition

- **Europe; transition**

- Incandescent lamps, 2009 – 2012
- Mains-voltage halogen spot lamps in 2016
- Non-directional halogen lamps in 2018
- Compact Fluorescent Lamps in 2021
- Linear Fluorescent T12 in 2021; T8 in 2023
- Moving towards an all-LED market

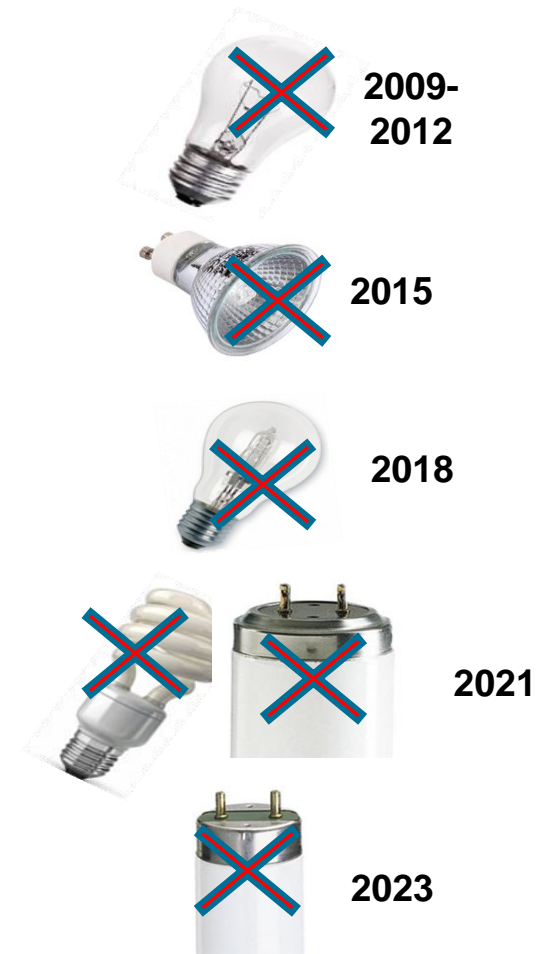
- **Other countries that have phased out incandescent bulbs**

- Argentina, Australia, China, Cuba, Ecuador, South Africa, Uganda, Vietnam, USA, Zambia, Zimbabwe (and many more...)

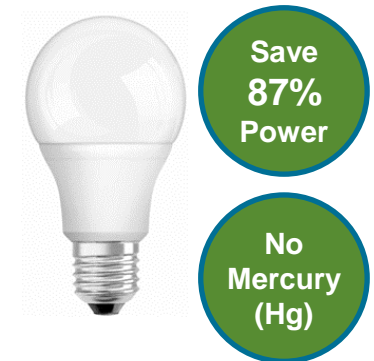
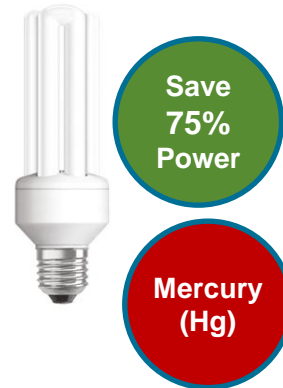
- **Ongoing work**

- UN Environment U4E working in over 10 countries
- Eight SICA countries developing MEPS on lighting

## EU – Timeline



# Payback period on general lighting in South Africa is short and R125 savings from LED compared to equivalent CFL



Item	Halogen	CFL	LED
Life	2000 hrs (2 yrs)	6000 hrs (6 yrs)	15000 hrs (15 yrs)
Price each*	R 21.99	R 29.99	R 29.99
Power	60 W	15 W	8 W
Use (3hr/day)*	65.7 kWh/yr	16.4 kWh/yr	8.8 kWh/yr
Elec cost.*	R 82.1/yr	R 20.5/yr	R 11.0/yr
<b>10-year cost</b>	<b>R 953.2</b>	<b>R 265.3</b>	<b>R 139.5</b>
Payback period		7 weeks	6 weeks

\* Lamp prices from Pick n Pay in Rosebank, 26 Oct 2018. All regular prices, no special offers or discounts. Usage assumptions are: 3 hours/day, 365 days/year. Electricity is R 1.25/kWh.

# Air Conditioners(ACs) – A Dumping Study

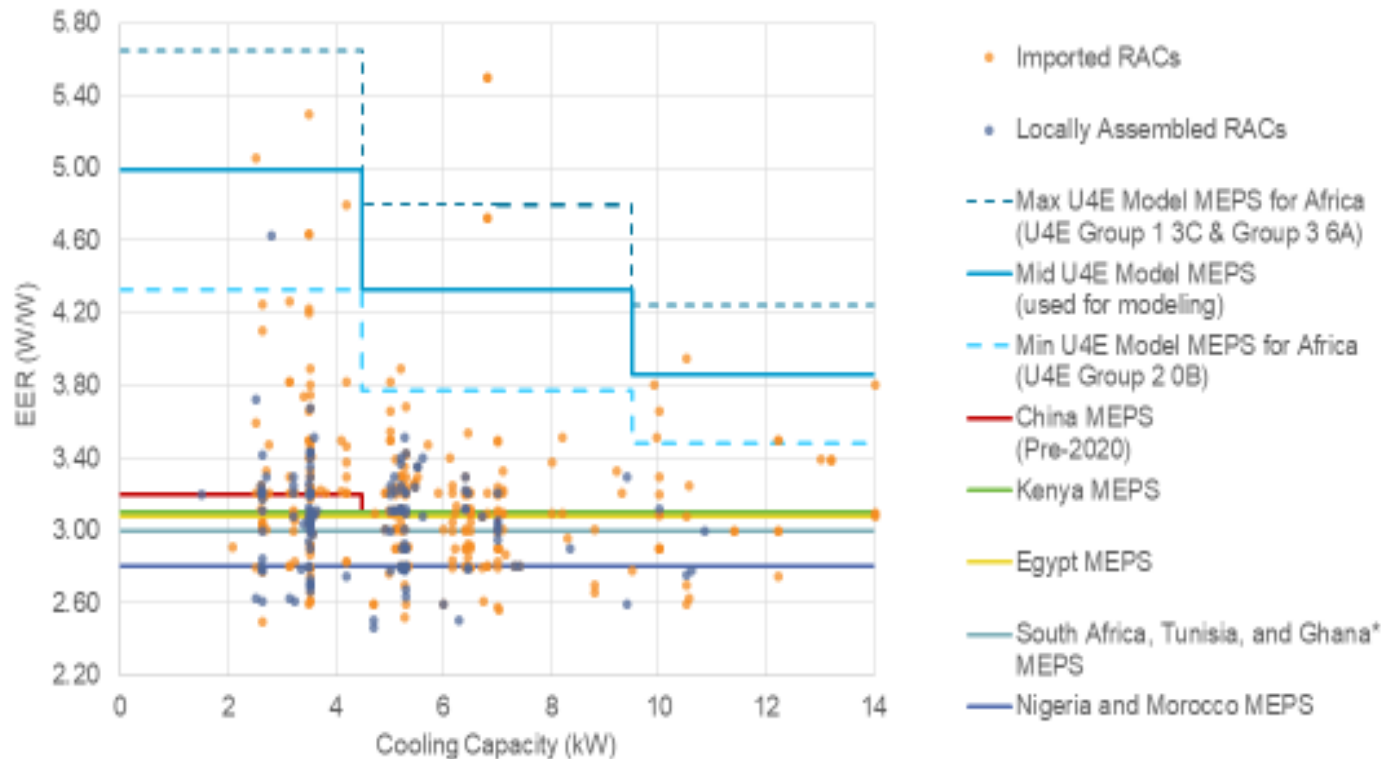
Country	Minimum Energy Performance Standards (MEPS)	Split RAC MEPS Level (if applicable)	Energy Labelling
Algeria	None		PNA 16.537
Egypt	(Mandatory) Egypt Standard 3795-1/2016 and 3795-2/2017	Fixed speed: EER of 3.077 W/W Inverter: SEER of 11 btu/hr/W	(Mandatory) Egypt Standard 3795-1/2016 and 3795-2/2017
Ethiopia	None		Believed to have
Ghana	(Mandatory – Under review) Ghana Standard 362:2001	EER 2.80 W/W **Recently committed to raising the MEPS for spit RACs to 3.0 W/W.	(Mandatory) Ghana Standard 362:2001
Kenya	(Mandatory) KS 2463:2019 - Non-ducted air conditioners — testing and rating performance	EER 3.10 W/W	(Mandatory) KS 2463:2019
Morocco	(Mandatory)	EER 2.8 W/W	(Mandatory) NM 14.2.300 – 2012
Nigeria	(Voluntary) NIS: ECOSTAND 071-2:2017EE	EER 2.8W/W	(Voluntary) NIS: ECOSTAND 071-2:2017EE
South Africa	(Mandatory – Under review) SANS 941	EER 3.0 W/W (EU B-class)	(Mandatory) SANS 941
Tanzania	None		Believed to have
Tunisia	(Mandatory)	EER 3.0 W/W (EU B-class)	Mandatory



# RAC MEPS Comparison

## Current RAC Market vs. U4E Model MEPS

All RACs in Africa compared to local and international MEPS



\*Ghana recently committed to revising MEPS to at least EER 3.0 W/W

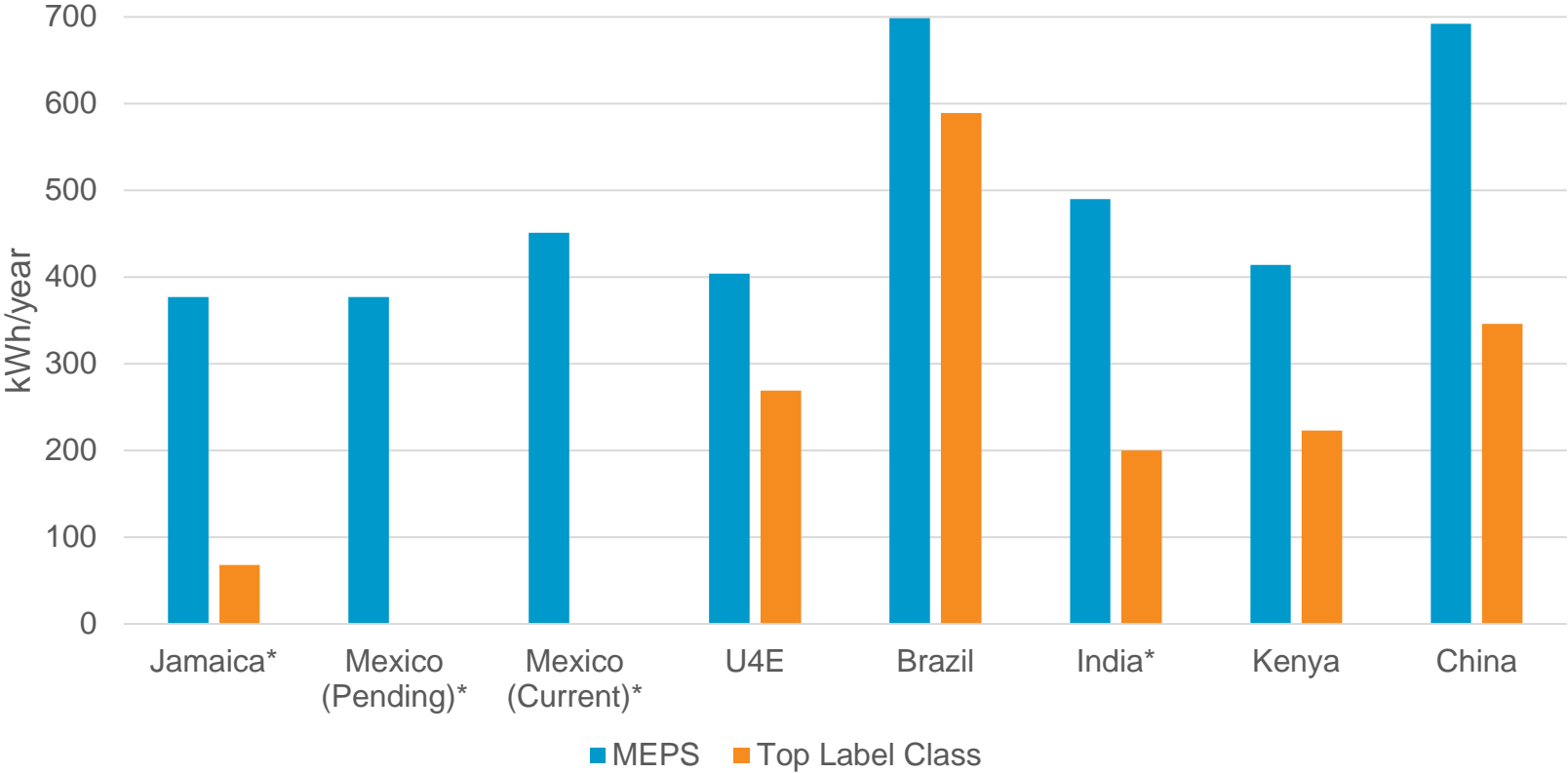
# Refrigerators, Advancing Efficiency Through MEPS

	Jamaica*	Mexico (pending) and USA*	Mexico (current)*	U4E	China	India*	Kenya	Brazil
MEPS	0.520 (377 kWh)	0.520 (377 kWh)	0.622 (451 kWh)	0.488 (354 kWh)	0.954 (692 kWh)	0.676 (490 kWh)	0.569 (414 kWh)	0.973 (698 kWh)
Top Label Class	0.094 (66 kWh)	Energy Star: 0.467 (339 kWh)	N/A	0.236 (325 kWh)	0.477 (346 kWh)	0.276 (200 kWh)	0.307 (223 kWh)	0.812 (589 kWh)

\* These countries do not use IEC test methods

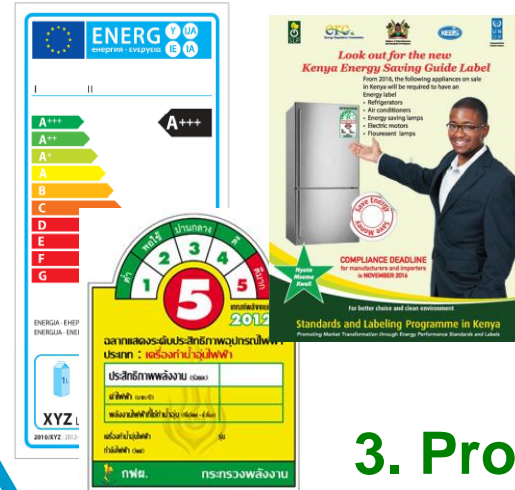
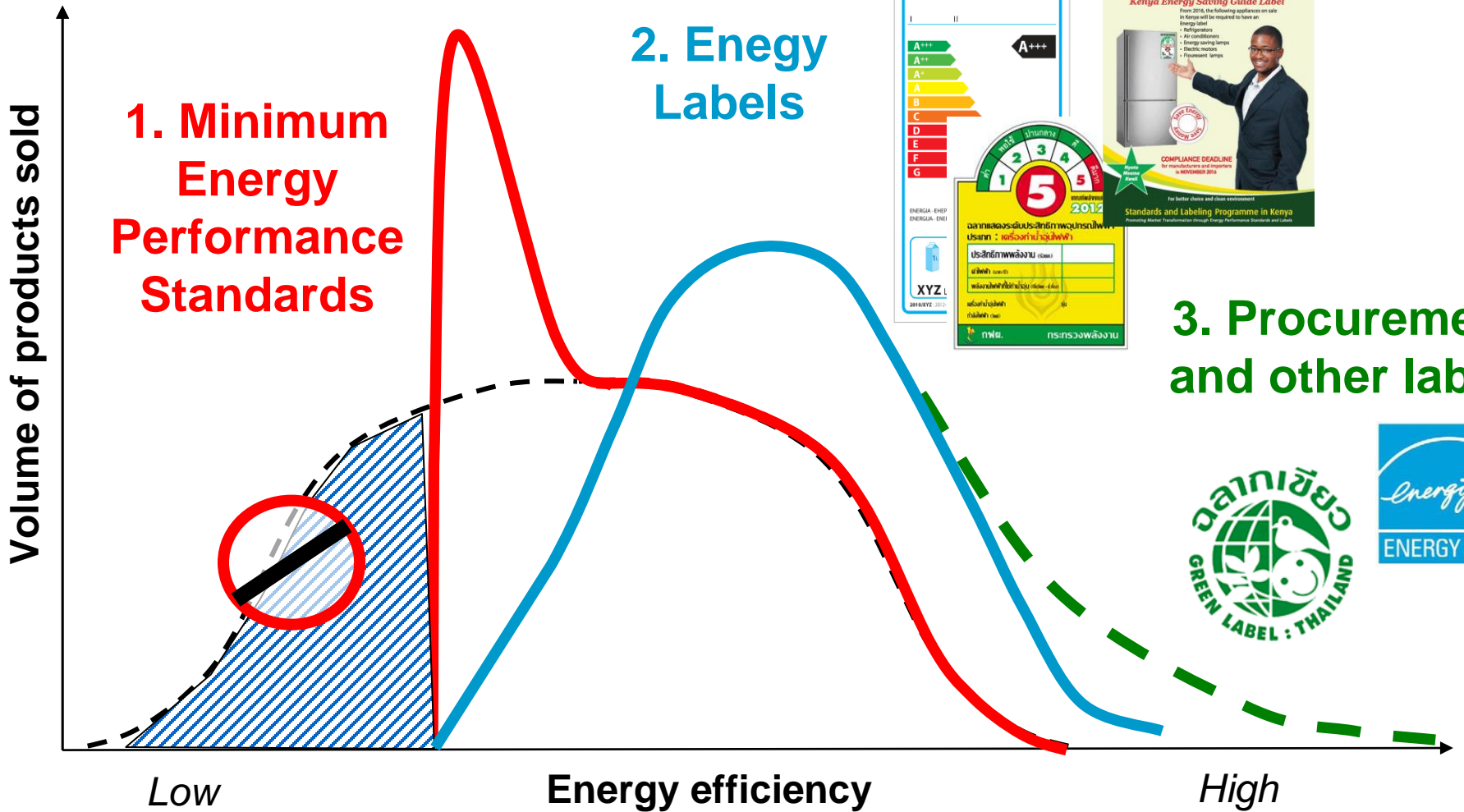
# Impact on Refrigerator Consumption

Electricity Consumption of 500L AV Combined Frost-Free Refrigerator



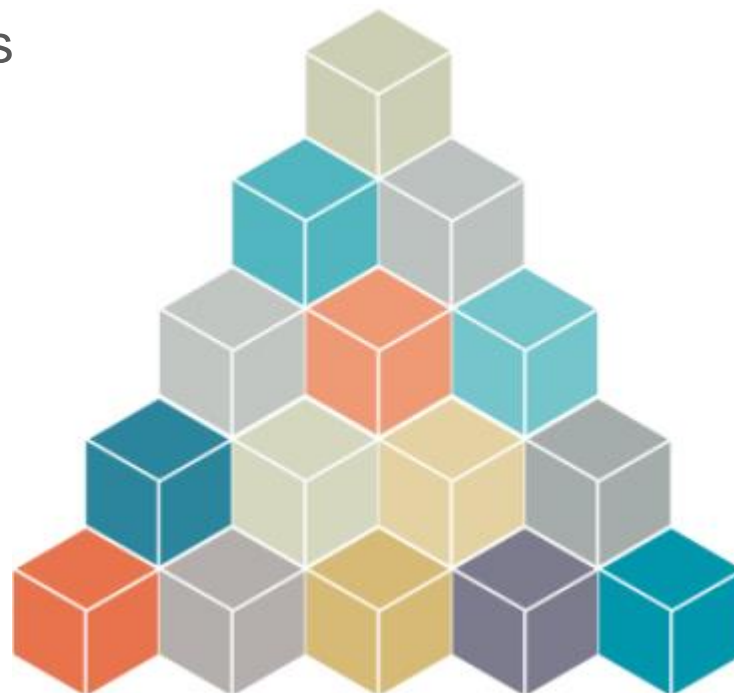
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# Market Push and Pull



# Compliance for Market Transformation

- **Regional compliance**
  - **Key Elements**
    - Strengthened regional centers
    - Regional product registration centers
    - Regional testing capacity and MRAs
- **National Compliance**
  - **Key Elements**
    - Conformity assessment
    - Market surveillance
    - Enforcement/punitive measure



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# Thank you, any questions?



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