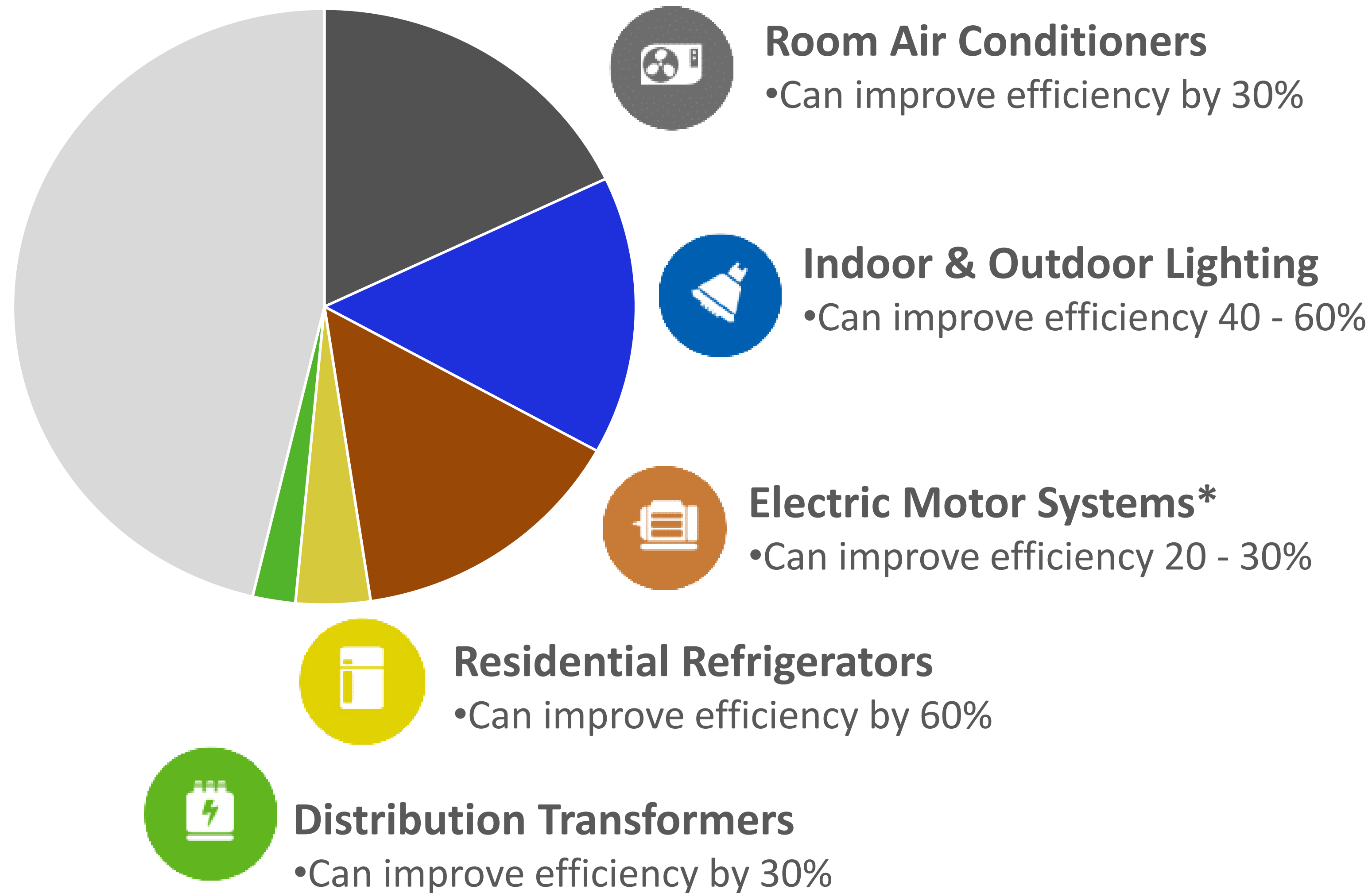


Role of Regulations and Financial Mechanisms in Scaling Up Sustainable Cooling

Global Programming Conference
Songdo, Republic of Korea
21 August 2019

Patrick Blake
UN Environment Programme (UNEP)

Tackle Products That Use >50% of Electricity



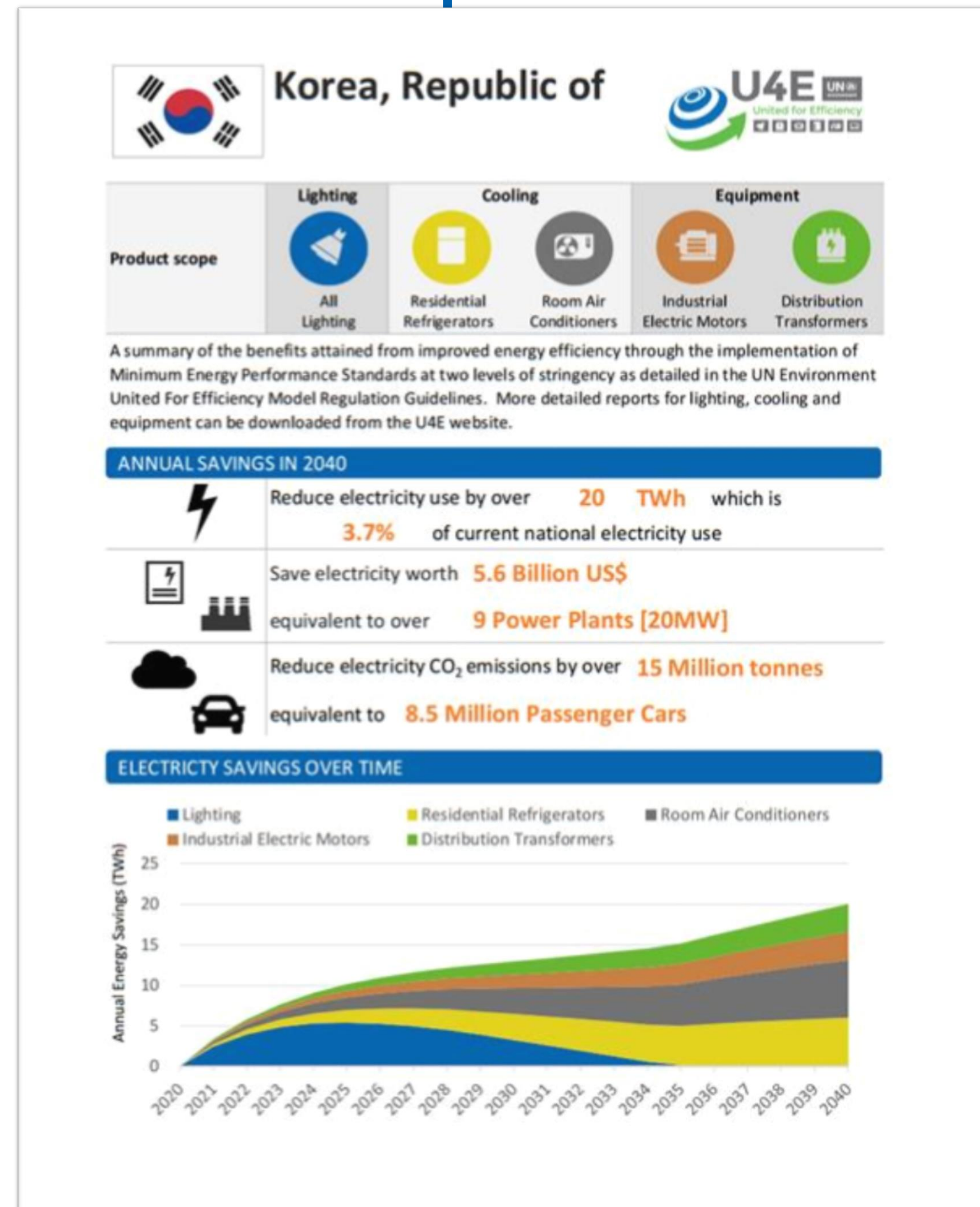
Sources: International Energy Agency; Lawrence Berkeley National Laboratory; UN Environment

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

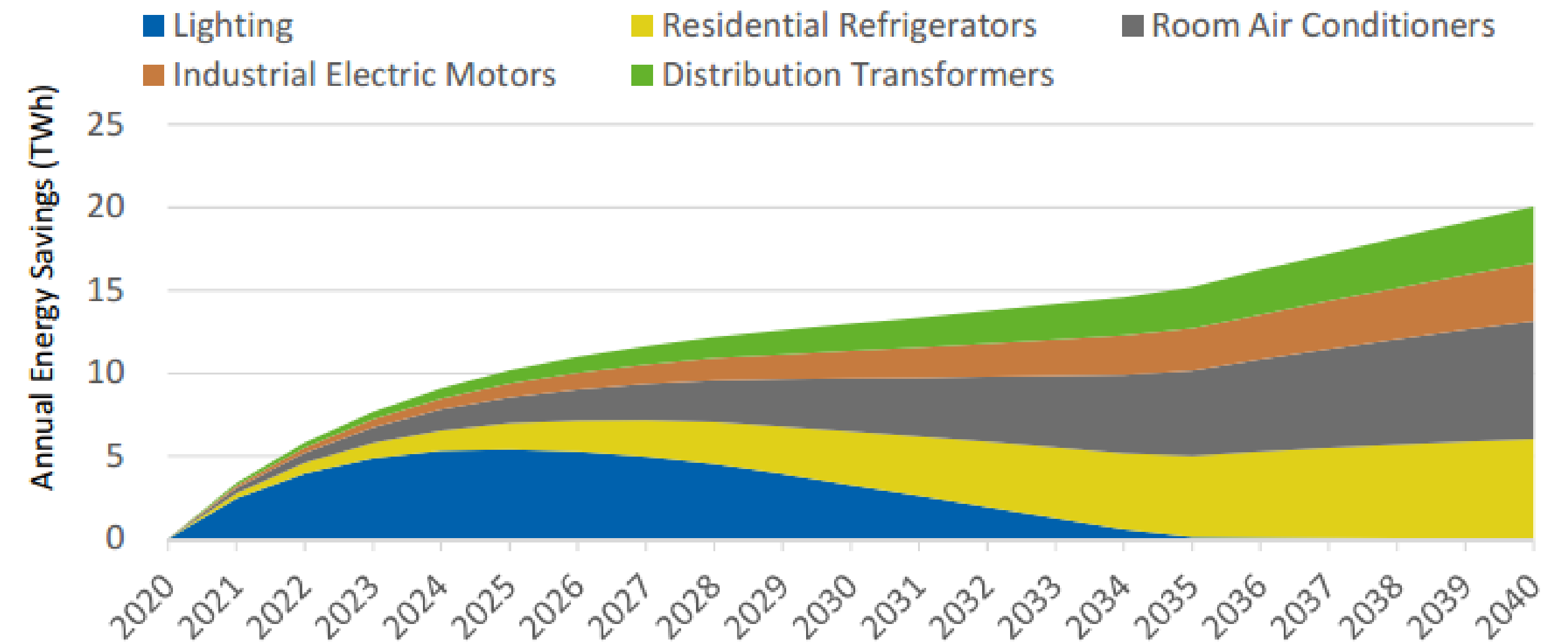
U4E Country Savings Assessments

Example - Draft



Available for 150+ countries on
united4efficiency.org

Electricity Savings Available



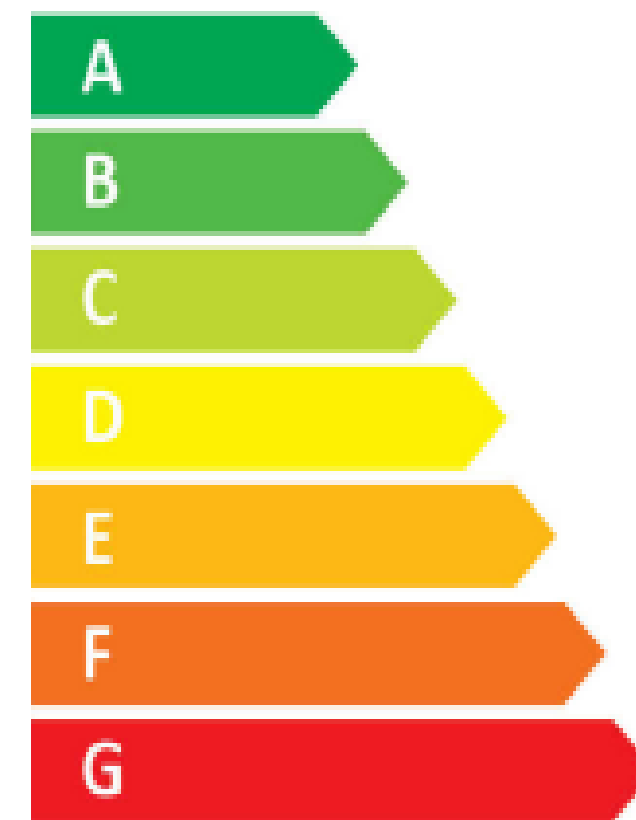
Cooling accounting for large part of
the savings



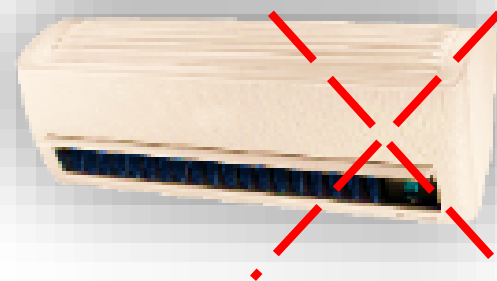
Tools to Transition a Market



Financial incentives
support adoption of the
best products



Labels help
buyers
understand
energy
efficiency
benefits



**Minimum Energy
Performance Standards
(MEPS)** ban the worst
products



Test to Verify
compliance,
Enforce rules



RATED VALUES	
Rated Min. Voltage: *	<input type="text"/> V
Rated Max. Voltage: *	<input type="text"/> V
Rated Min. Frequency: *	<input type="text"/> Hz
Rated Max. Frequency: *	<input type="text"/> Hz
Number of phases: *	<input type="text"/> 1 2
Rated power input - cooling: *	<input type="text"/> W
Rated capacity - cooling: *	<input type="text"/> W
GENERAL SPECIFICATIONS	
Type of air distribution? *	Type of refrigerant? *
Non-Ducted <input type="text"/>	R134A <input type="text"/>
Does the air-conditioner have variable output capacity (lag inverter)?	
No <input type="text"/>	Yes <input type="text"/>

Monitor what
enters

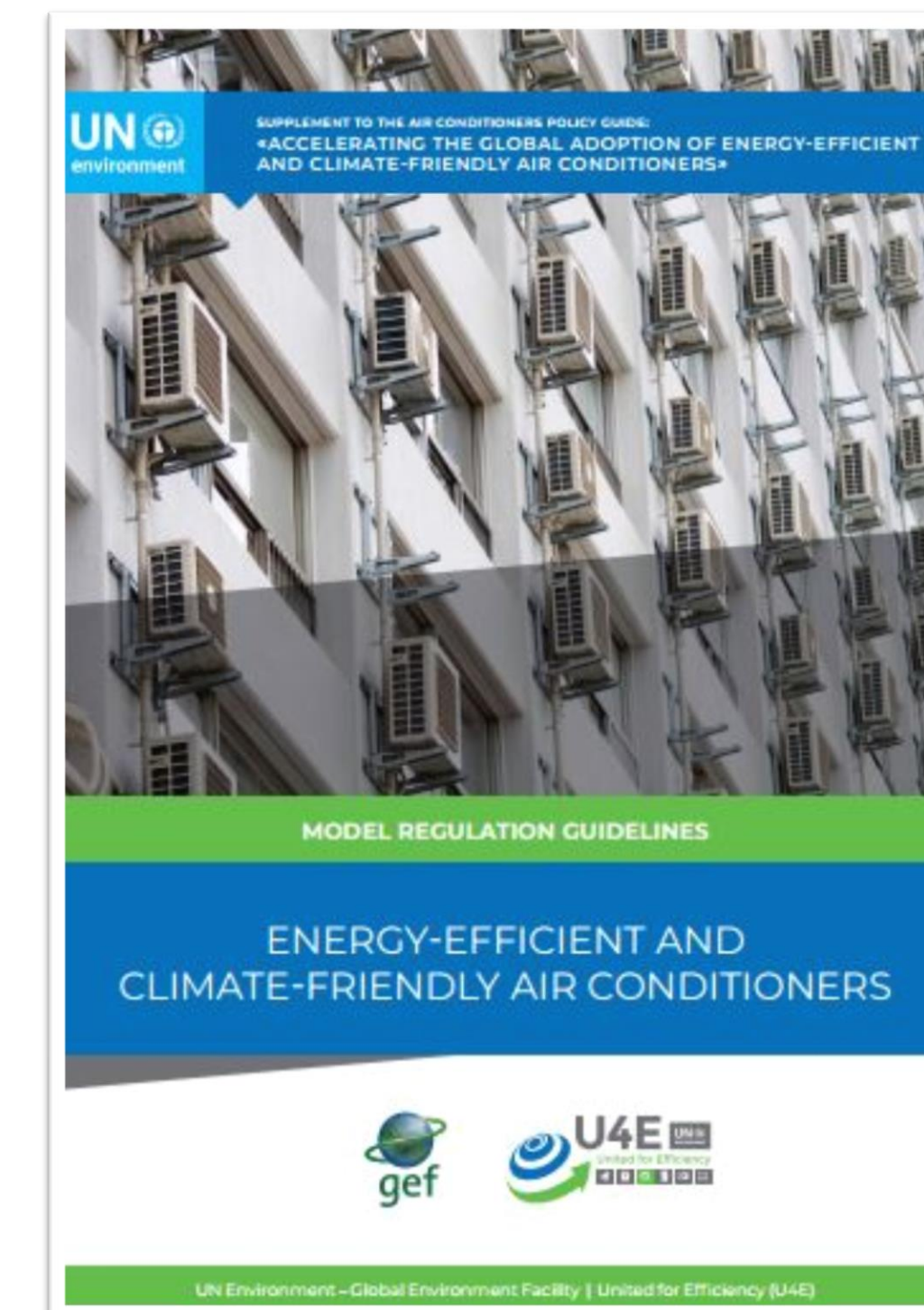
Model Regulation Guidelines

U4E Model Regulation Guidelines are:

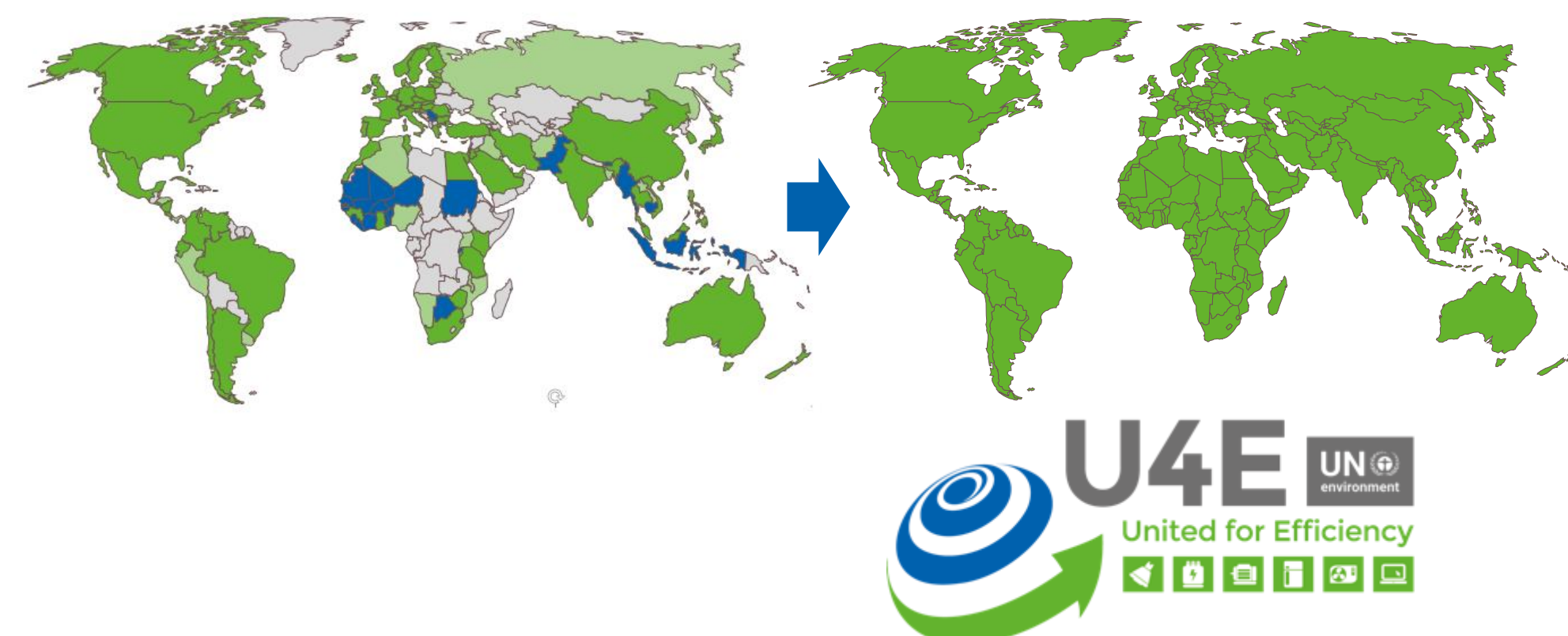
→ intended as a guideline to help **inform regulatory authorities and policy makers** in developing and emerging economies.

→ 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:



Partner Organisations

Manufacturers & Industry Associations



Technical Organisations & Initiatives



Funders & Implementing Agencies



Innovative financial mechanisms in development

Types of Energy Efficiency Financial Mechanisms

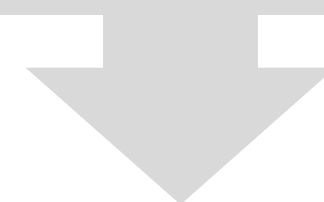
- On-bill financing
- Service Model (“cooling as a service”)
- Revolving loan fund
- Vendor/retail financing
- Qualified purchase lists
- Partial risk guarantees
- Bulk procurement

Examples of Current Projects Underway

- **Rwanda:** coolease scheme that enables suppliers and consumers of air conditioning and refrigeration products to transition to the latest technology without an upfront investment.
- **Dominican Republic:** cooling as a service model, which moves from the traditional product purchase model to a pay-per-service model.
- **Costa Rica:** revolving loan fund for government procurement of energy-efficient products.

Potential Components for GCF Readiness Project

1. Developing a **national energy-efficient product strategy** bringing together all national and sub-national actions, including policy framework, financial mechanisms and communication campaigns.
2. Establishing of the regulatory framework for energy-efficient products, including **minimum energy performance standards**;
3. Developing systems such as a **product registration system database** to track the use of electrical products;



4. Developing a **financial mechanism** for the purchase of energy-efficient products, such as service based models, vendor based financing or on-bill financial mechanism.

Recommended submission in regional groupings to have economies scale and harmonization between countries.



Contact

TRANSFORMING MARKETS TO ENERGY-EFFICIENT PRODUCTS



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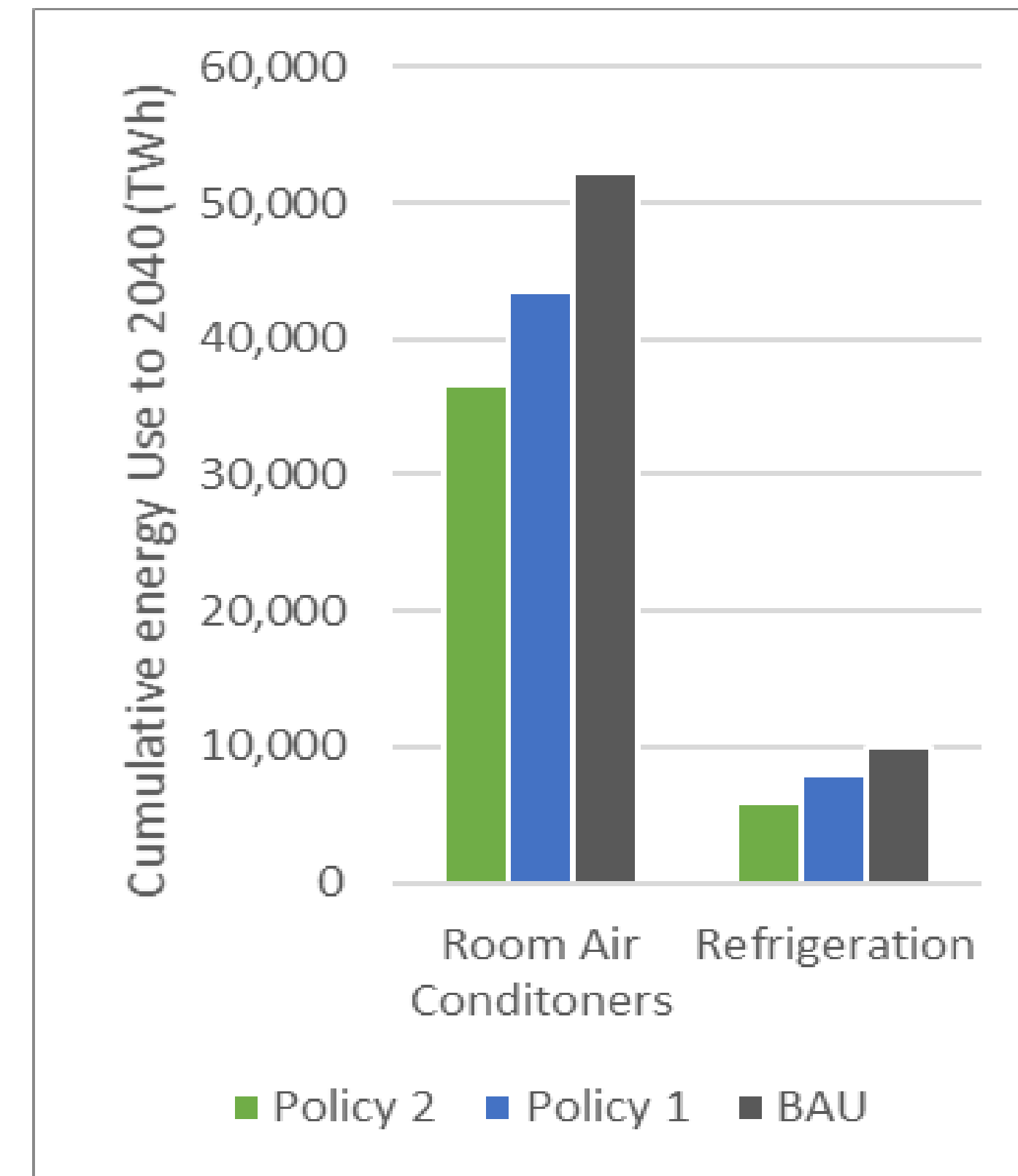
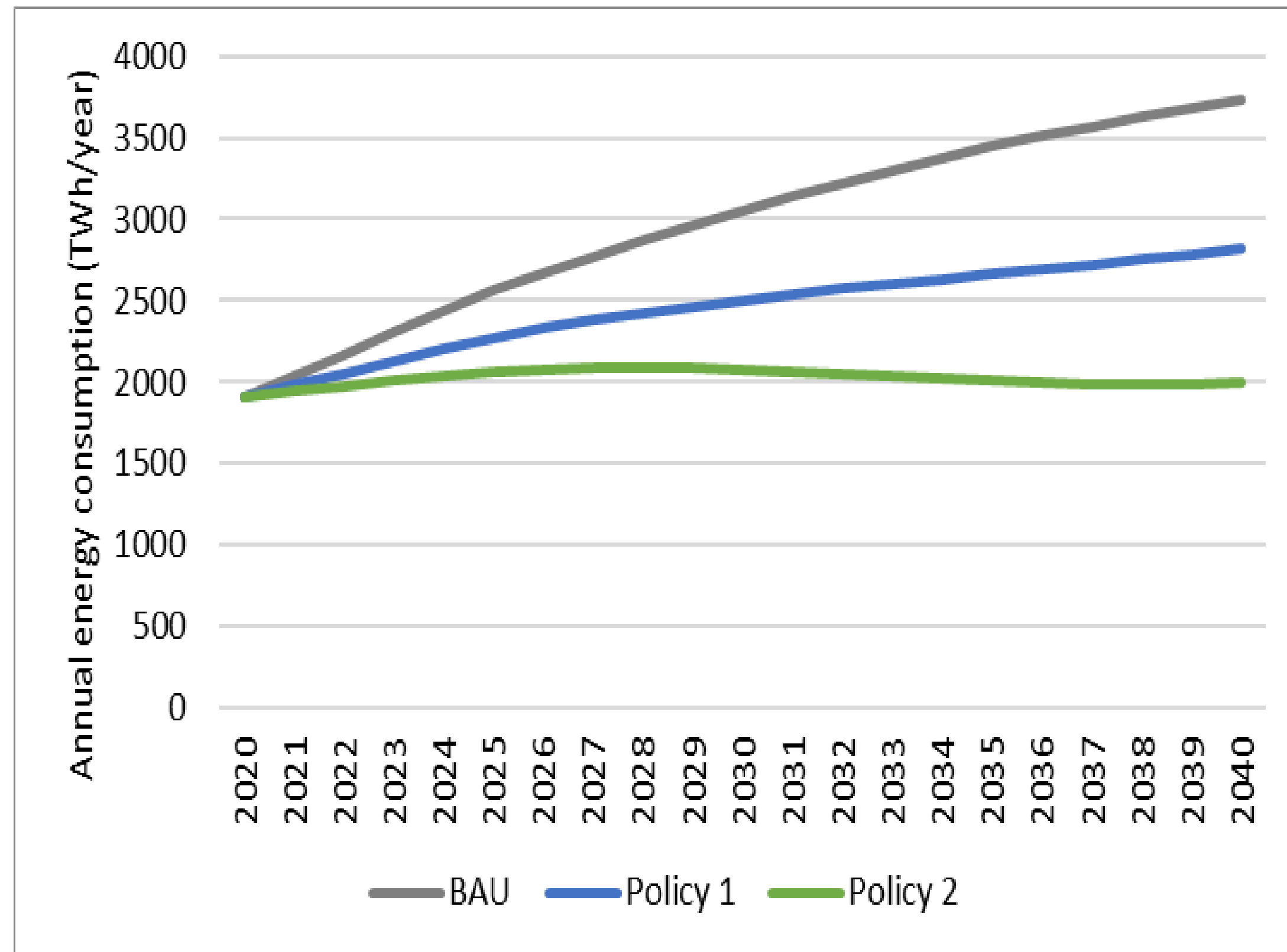
U4E@un.org



WEBSITE

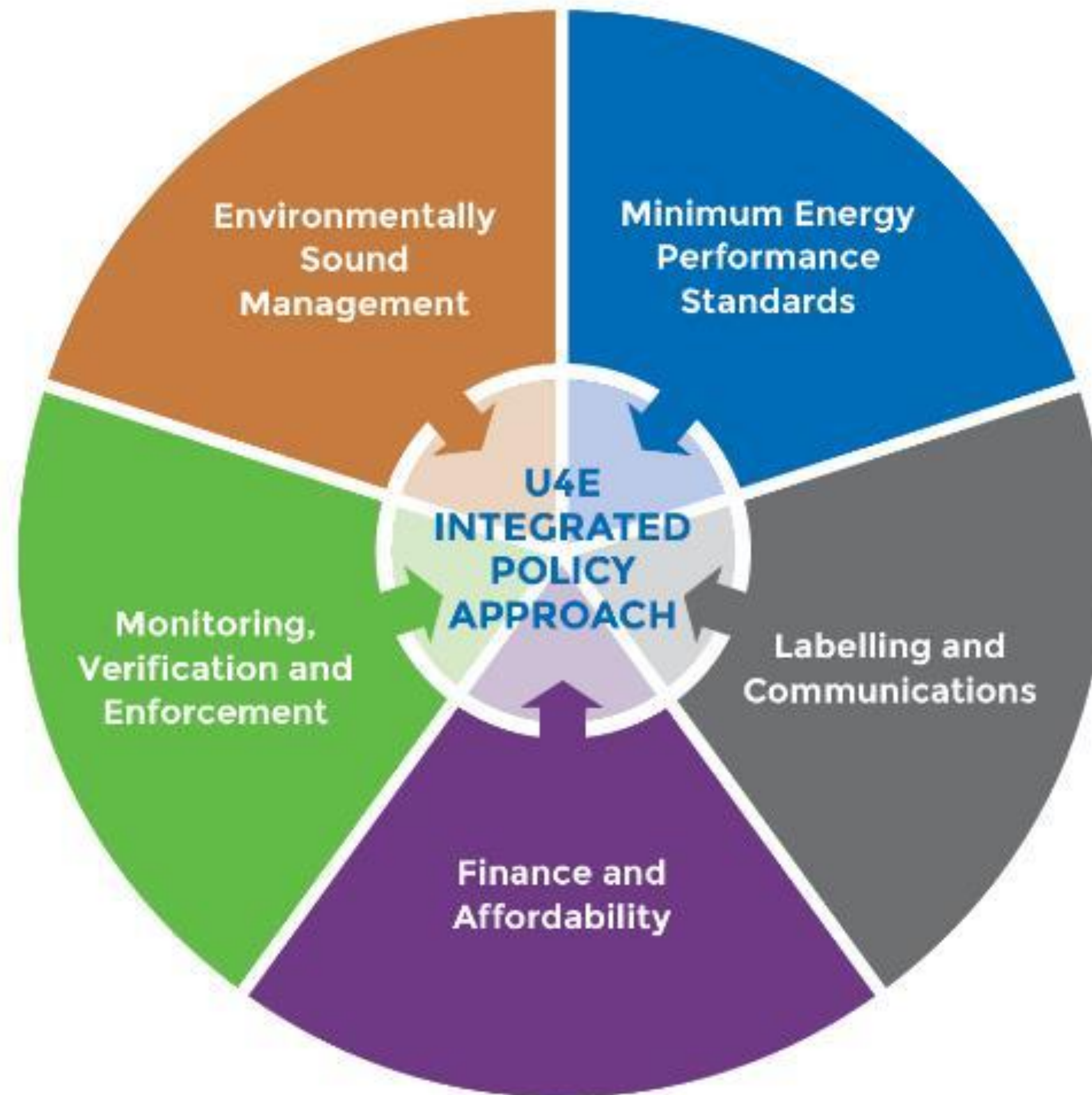
united4efficiency.org

Nearly a Doubling of Electricity Consumption by 2030 from Cooling Products



U4E Approach for Transforming Markets

Comprehensive Market Transformation

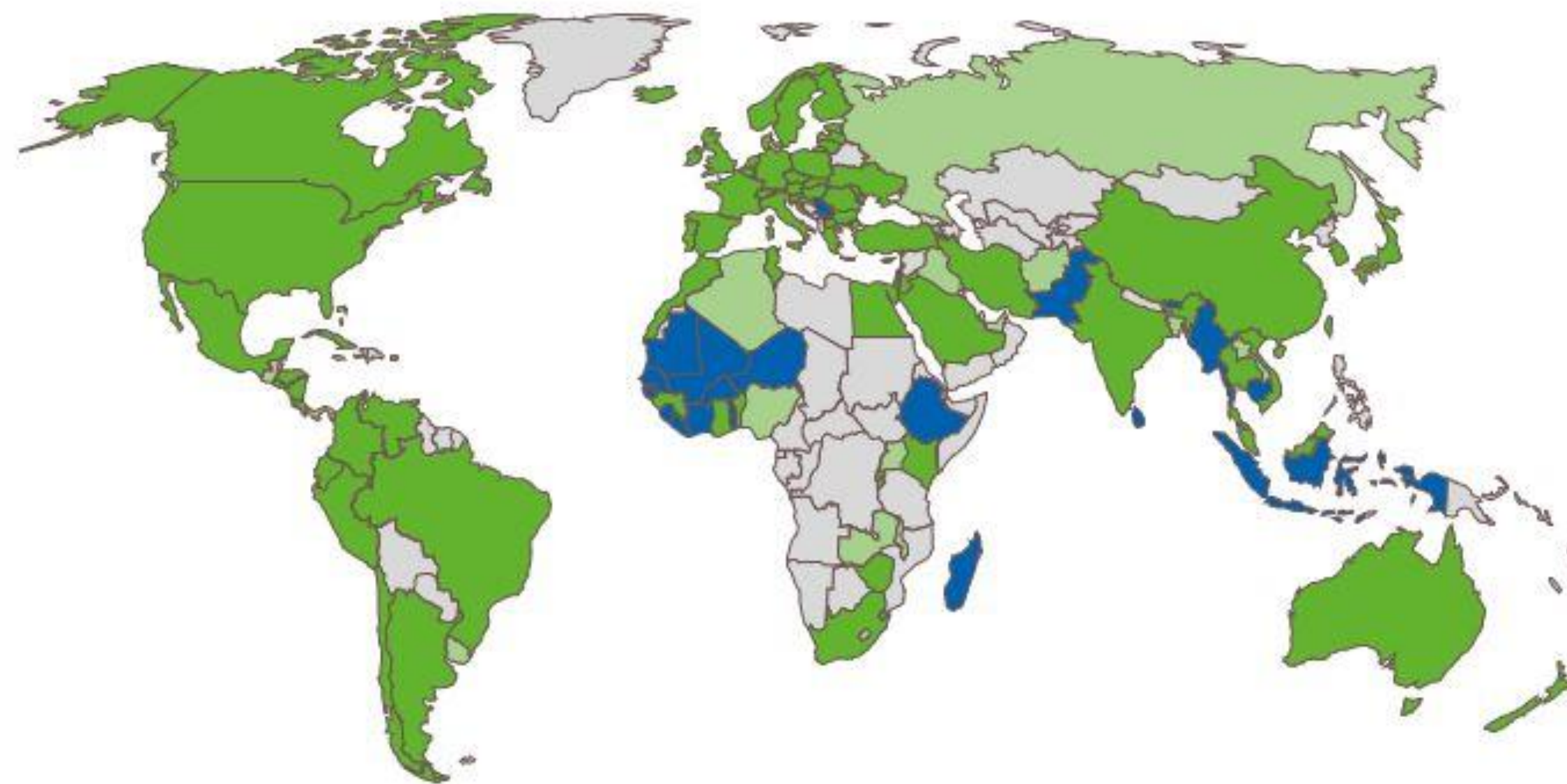


Detailed Guidance Notes Available

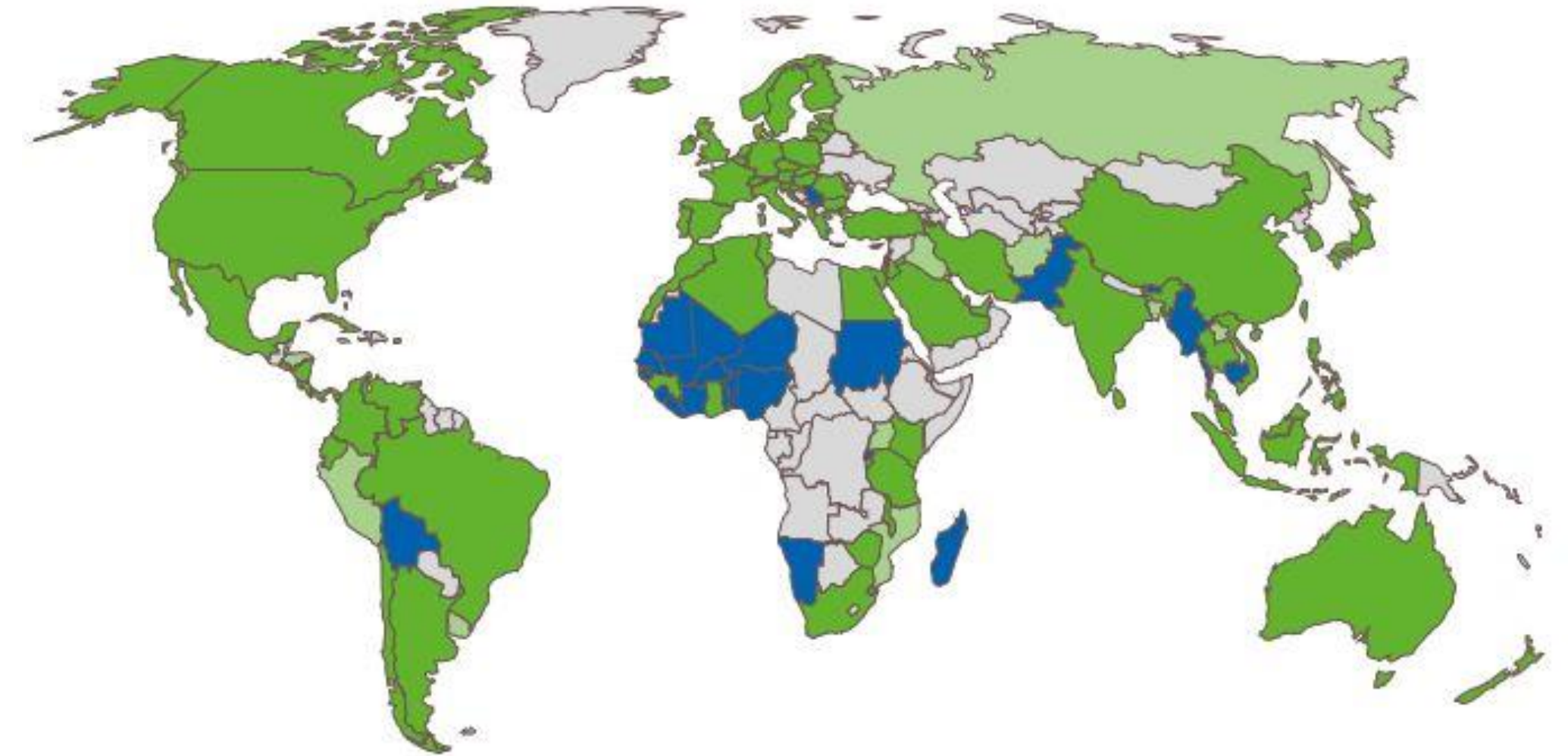


Many Countries have Energy Efficiency Policies but this Doesn't Tell the Whole Story...

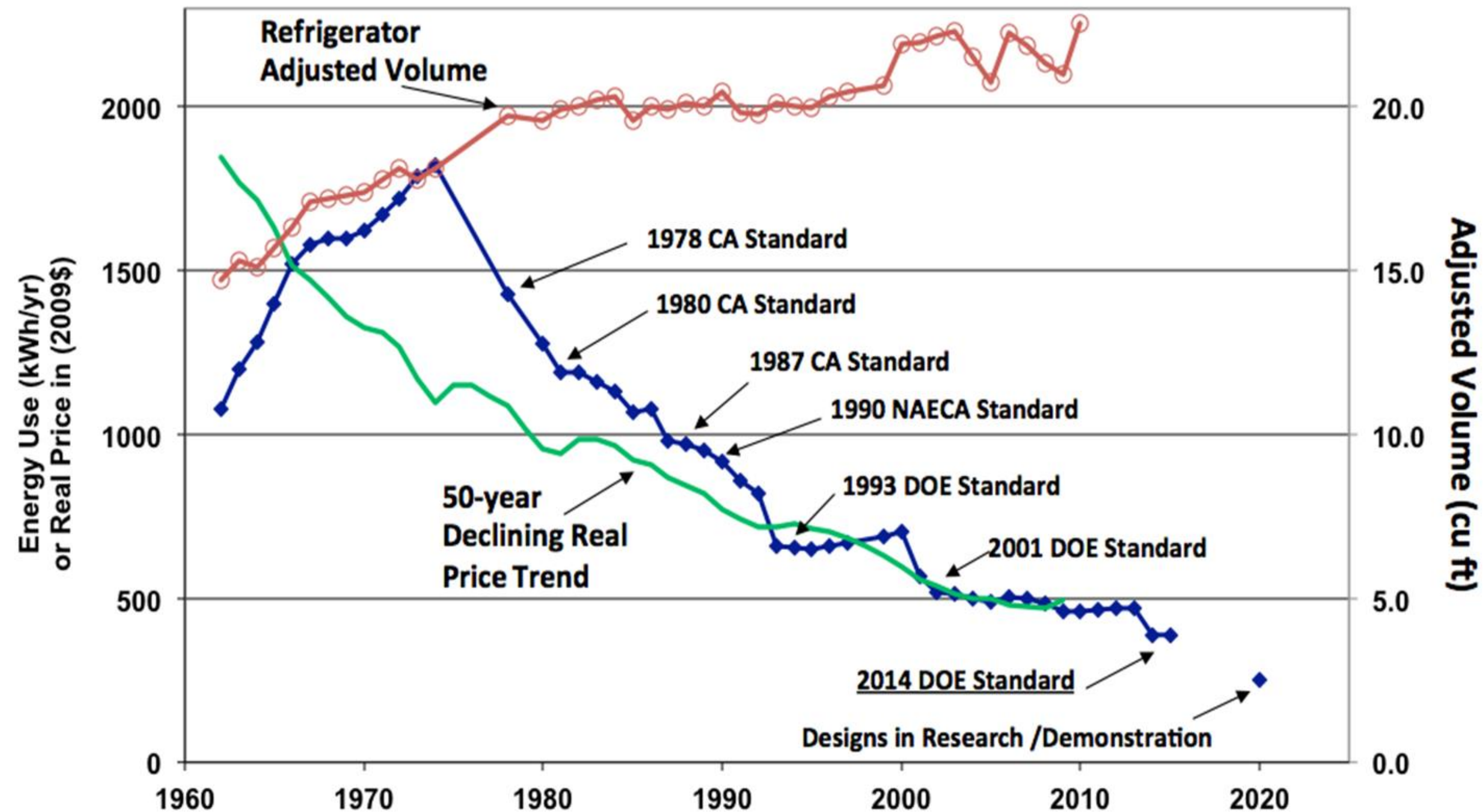
Refrigerators



Air Conditioners



Impacts of Refrigerator Policies, Innovation, and Scale



Sources: AHAM, Rosenfeld (1999),
LBNL, and Bureau of Labor Statistics