COUNTRY SAVING ASSESSMENTS

POTENTIAL FINANCIAL, ENVIRONMENTAL AND ENERGY BENEFITS FROM THE TRANSITION TO ENERGY EFFICIENT PRODUCTS

BACKGROUND

The United Nations Environment Programme United for Efficiency (U4E) Country Savings Assessments show the potential monetary savings, carbon mitigation and environmental benefits that are possible by transitioning to energy-efficient lighting, cooling appliances and equipment. For 156 developing and emerging economies, they provide details of the savings that can be achieved by implementing policies that primarily regulate the energy consumption of six product groups which together consume more than 50% of electricity worldwide:

Lighting

All Lighting

Cooling

Residential Refrigerators

NEW

Commercial Refrigeration

Room Air Conditioners

Equipment

Industrial Electric Motors

Distribution Transformers

By providing information on the potential financial, environmental, energy, and societal benefits that are possible by transitioning markets to energy efficient and climate friendly products, the Country Savings Assessments enable policymakers to make informed decisions on, and build robust business cases for, the implementation of energy-efficiency policies to meet their nationally determined contributions (NDCs) whilst providing them with an overview of the potential carbon emissions that could be offset. For each country, the Country Savings Assessments provide an overview report with an analysis of all six products. These are available on the U4E website at:
https://united4efficiency.org/countries/country-assessments/

RECENT UPDATE

The Country Savings Assessments have been produced by U4E since 2012 and continuously updated for expanded scope, improved methodology and additional data collected. In 2021-22, an additional analysis was undertaken for commercial refrigeration products and the underlying assumptions in the analyses for the original products were updated. The Country Saving Assessments are funded by the Global Environment Facility (GEF), the Clean Cooling Collaborative and the United Kingdom's Department for Environment Food and Rural Affairs (DEFRA).

ASSESSMENT SCENARIOS

Three scenarios have been modelled based on the level of energy efficiency of products sold on the market:

- **Business as Usual Scenario**: Assumes that no policies are introduced and that the efficiency of products in the market continues to develop in line with historical trends in the absence of regulation.
- **Minimum Ambition Scenario:** In which policies are introduced in line with the basic requirements of the U4E Model Regulation Guidelines.
- **High Ambition Scenario:** In which more stringent policies are implemented in line with the highest levels proposed in the U4E Model Regulation Guidelines.

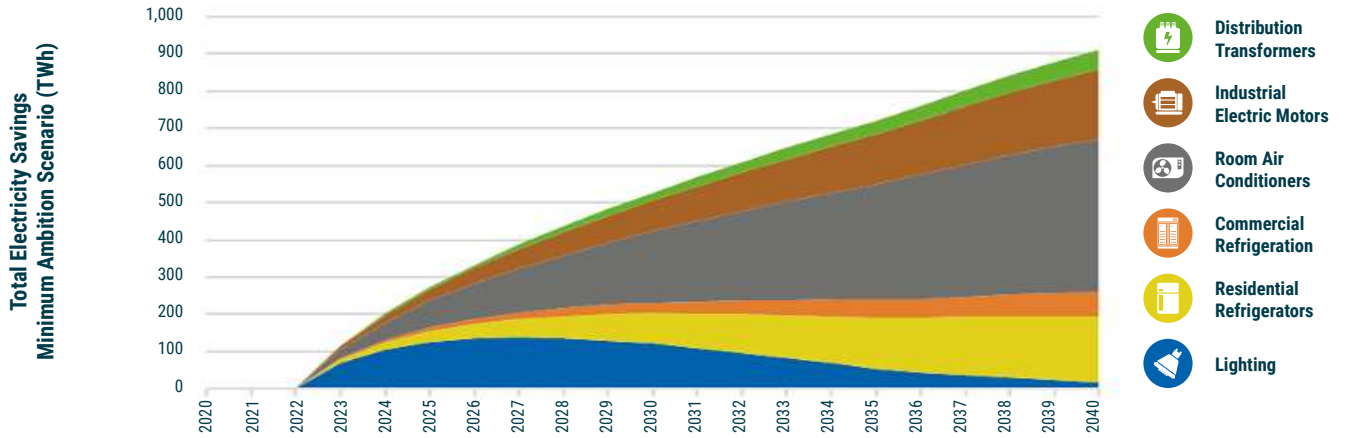
The savings potential is calculated based on the difference between total energy consumption in the ambition scenarios and that of the Business as Usual scenario. In both the minimum and high ambition scenarios, it is assumed that policies are implemented in 2022, but only come fully into force by 2023.

ANNUAL SAVINGS* FOR 156 COUNTRIES AND ALL SIX PRODUCTS IN 2040

		MINIMUM AMBITION SCENARIO	HIGH AMBITION SCENARIO	
Electricity consumption of		**910 TWh**	**1,900 TWh**	
Which is equivalent to approximately		**416**	**849**	power stations [500 MW each]
		**820**	**1,700**	million tonnes of CO_2
		**130**	**270**	billion USD on electricity bills

*numbers are rounded

ELECTRICITY SAVINGS FOR EACH PRODUCT IN 2040



METHODOLOGY

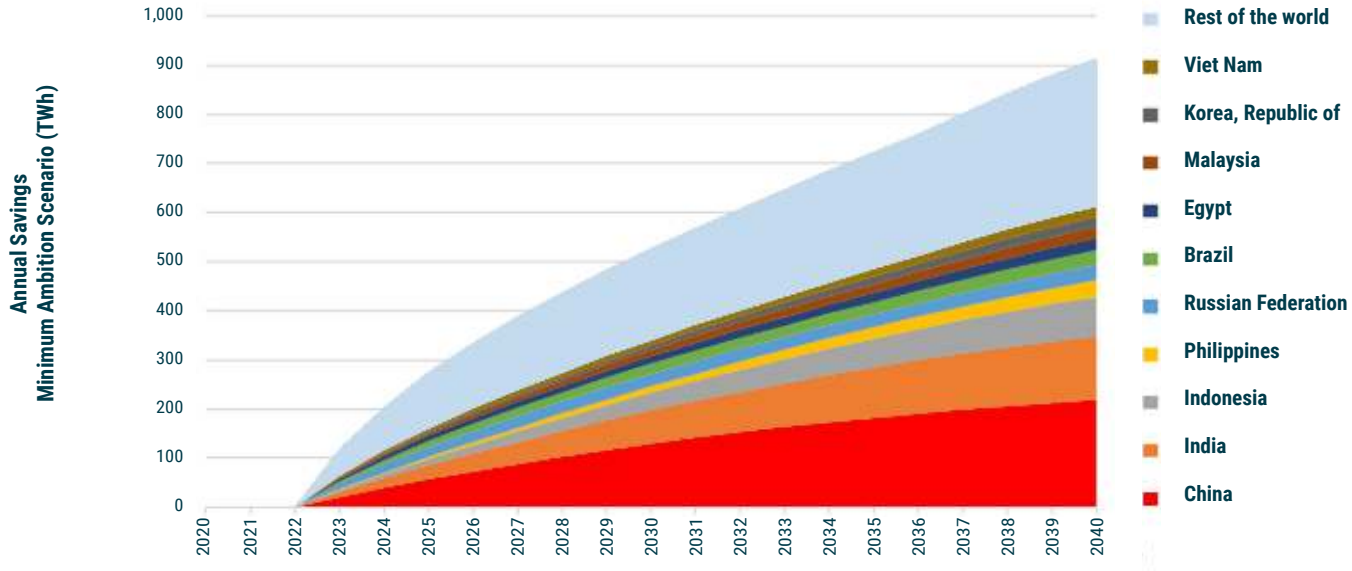
The underpinning methodology used to develop the Country Savings Assessments has been in place since 2012 but has been refined and improved over the years as more detailed information has become available. Where available, robust local data is used in the analysis, obtained via questionnaires and surveys issued to country officials, analysis work with regional partners, surveys completed by U4E partners and technical experts, regional and country projects undertaken by U4E and its partners and relevant published reports. Additional data and assumptions are sourced for each country from reputable, independent sources and a broad group of experts from the public and private sector have reviewed the model and shared available market intelligence.

The full methodology and a list of more detailed sources is available on our website at :

https://united4efficiency.org/resources/u4e-country-savings-assessments-methodology-and-assumptions

A more detailed methodology for each product group is available on request.

ELECTRICITY SAVINGS BY COUNTRY IN 2040



MODEL REGULATION GUIDELINES ARE AVAILABLE TO HELP

Governments who intend to transform their markets to more energy-efficient and environmentally sound technologies can use the U4E Model Regulation Guidelines, which are available on the U4E website at:
https://united4efficiency.org/resources/model-regulation-guidelines/

United Nations Environment Programme United for Efficiency

ECONOMY DIVISION,
Energy and Climate Branch
1 Rue Miollis, Building VII, 75015, Paris, FRANCE

+33 (0)1 44 37 14 50
unep-u4e@un.org

For more information about United for Efficiency, please visit: **united4efficiency.org**