

SUSTAINABLE PUBLIC PROCUREMENT



BACKGROUND

The public sector stands out in its capacity to exert enormous purchasing power, representing 12% of GDP in OECD countries and up to 30% in developing countries, presenting a considerable potential for public procurement to be leveraged to drive a Nation's economy towards a greener and more sustainable one.

Public procurement refers to the purchases made by governments, state and semi-state-owned enterprises for goods, services and works. By building in consideration of environmental, social, and economic aspects, Green Public Procurement can help to transform markets by leveraging the power of public purchases to drive markets towards sustainability, reducing governments' environmental footprint and contributing significantly to reductions in greenhouse gas emissions. Sustainable public procurement also allows governments to serve as an exemplary model and send strong market signals, fostering private sector and consumer behaviour change, enabling the overall transition to a green, sustainable economy.

In order to help countries in the transition, the United Nations Environment Programme (UNEP) United for Efficiency (U4E) initiative has developed Green Public Procurement Technical Guidelines which aim to simplify the deployment, adoption and enforcement of regulations in developing and emerging countries.

AIM

The series of Green Public Procurement Technical Guidelines aim to:

- Provide a set of technical specifications for countries to develop their requirements for tendering processes in order to procure only higher energy efficiency products (targeting at least the 20% most efficient models in the market).
- Instigate and accelerate the market penetration of high impact electrical products such as lighting and cooling appliances (refrigerators and room air conditioners).

SCOPE OF THE TECHNICAL GUIDELINES

Lighting



Office/large buildings lighting (LED luminaires and LED tubes) and all street/outdoor lighting luminaires.

Refrigerator appliances



Domestic refrigerators and freezers, commercial/professional refrigeration appliances, vending machines and laboratory grade refrigerators.

Room air conditioners



Portable air conditioners, split air conditioners (single and multi-split), window air conditioners and ducted air conditioners.

STEP-BY-STEP APPROACH INTENDED FOR PUBLIC PROCURERS, TECHNICAL PERSONNEL AND RELATED POLICY MAKING OFFICERS ON HOW TO APPLY IN THEIR DAY-TO-DAY PROCUREMENT ACTIVITIES, SUSTAINABILITY AND CURRENT BEST TECHNICAL CRITERIA IN ACCORDANCE WITH BEST INTERNATIONAL REGULATORY, SOCIAL AND ENVIRONMENTAL PRACTICES

ADDITIONAL U4E PROCUREMENT TOOLKIT AND SPREADSHEET TOOL

SAVINGS POTENTIAL OF HIGHER EFFICIENCY LIGHTING AND COOLING APPLIANCES

Toolkit:

Provides information on key sustainability considerations (environmental, social and economic) for air conditioners, refrigerators and lighting. It addresses the barriers to Green Public Procurement (financial, awareness, capacity and regulatory), through the presentation of economic analysis of various delivery models, calculation spreadsheet for such models, and overall recommendations for the tendering process.

SPP Excel spreadsheet tool:

Compares the economic cost and environmental impact of different bids during the life span of the appliances. SPP minimum requirements on energy efficiency and refrigerant GWP can be used to easily check the compliance of each bid. Furthermore, the tool can analyze the suitability for early replacement, i.e., replacement of old appliances that are still working.

Select the category of domestic refrigerator from the drop-down list (see the pictures below for help)		Category	Level of efficiency
		Refrigerator-Freezer	Intermediate


Bid code	Number of units	Fill in both, Fresh Food and Frozen compartments!		Maximum energy consumption in kWh per year	Unitary energy consumption in kWh per year	Meets Energy requirements?	GWP for refrigerant	GWP for gas blowing agent	Meets fluid requirements?	Total price of the bid (USD)
		Volume for fresh food compartment [liters]	Volume for Frozen compartment [liters]							

Note: The table below can be used to calculate the Payback and balance cost and emissions due to an early replacement. It considers the emissions of production and distribution of new appliances.

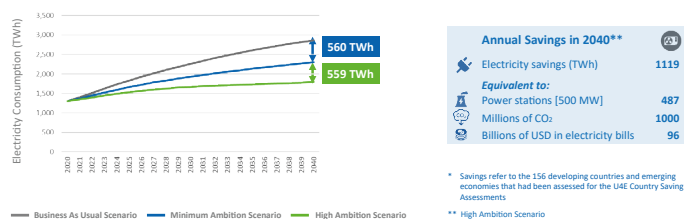
Compare with Bid code	Number of units	Unitary energy consumption in kWh per year	GWP for refrigerant	GWP for gas blowing agent	Discounted Payback Period Cost (years)	Payback Period for CO2 emissions (years)	Expected years left for old appliance	Balance cost for early replacement (USD)	Balance emissions for early replacement (kg CO2 eq)
If the number is negative, or shows an error, the payback is never reached									

The costs and environmental impact are considered for procured amount of refrigerators and for their total lifespan					
Operational cost (USD)	External cost for CO2 emissions (USD)	Total Life Cycle Cost (USD)	Emissions during usage stage kg CO2eq	Emissions Usage + Refrigerants kg CO2eq	Compartments to better preserve food?
					NO

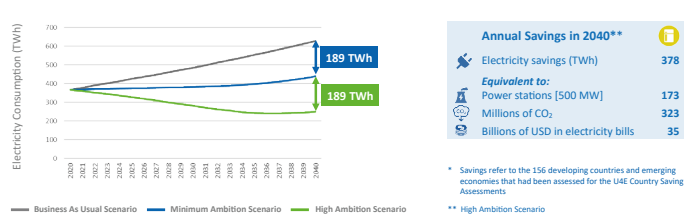
Waste Food GHG avoided in kg CO2eq	Waste Food GHG avoided in kg CO2eq



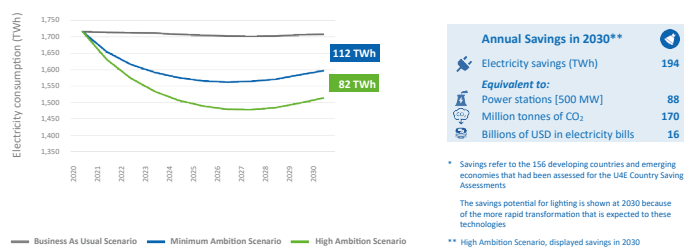
Savings Potential of Room Air Conditioners by 2040*



Savings Potential of Residential Refrigerators by 2040*



Savings Potential of Lighting by 2030*



Total savings potential value of almost **USD\$150 billion per year** across all developing and emerging economies

GET INVOLVED AND JOIN US

U4E is a global initiative led by UNEP, supported by leading companies and organizations with a shared interest in transforming markets for lighting, appliances and equipment, encouraging countries to implement an integrated policy approach to energy-efficient products in order to bring about a lasting, sustainable and cost-effective market transformation.

The Green Public Procurement Guidelines are a supplement to the [U4E Model Regulation Guidelines](#) and other already available international tools, standards and reports from [the U4E portfolio](#).

To download U4E's Green Public Procurement Technical Guidelines, the Excel Spreadsheet Tool and the Toolkit for Lighting, Appliances and Equipment and learn more about other key energy-efficiency market transformation resources, please visit our website at <http://united4efficiency.org>

