Mission Efficiency

# Energy Efficiency's Expanding Impact:

## Case Studies from the Global South

Supported by:

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IKI INTERNATIONAL CLIMATE INITIATIVE

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# Executive summary: context and case studies

**Energy efficiency is an often-overlooked opportunity that enables energy access, resilience, affordability, and economic growth in the Global South**.

**Alongside cleantech, action on energy efficiency can achieve these benefits faster, fairer, and cheaper:**

- **Energy access and savings:** Global South energy use is on track to grow 70% by midcentury, accounting for 70% of global growth in that time. Without the past decade of energy efficiency improvements, Global South fossil fuel demand would be more than 30% higher, requiring much more energy for the same level of prosperity.
- **Energy security:** 3 in 4 people in the Global South live in countries that import fossil fuels, with huge risks for supply reliability. A decade of energy efficiency saved these countries ~100bn USD in 2022 alone by avoiding further imports.
- **Energy affordability:** Two-thirds of fossil fuel energy is wasted in its production, transportation, and use — costing as much as 9% of GDP in major Global South economies, double the global average. Energy efficiency can reduce waste and the need for investments in new power system infrastructure, thus increasing affordability for consumers.

**Efficiency also has a ripple effect, with other benefits that reach widening circles. These include:**

- **Jobs and economic growth.** Investing in efficiency can yield 3x-5x returns overall and 2x-3x more jobs per investment dollar vs. solar power and fossil fuels (respectively), according to the World Bank.
- **Improved health.** The past decade of efficiency in the Global South is helping to save more than a million lives annually from fuel pollution.

**But progress on energy efficiency is lacking.** Despite the immense benefits of energy efficiency for countries across the Global South, efforts to increase efficiency remain fragmented and far below its potential.

**Observed barriers. In this report we analyze 11 initiatives that helped lower costs, increase awareness, improve standards, and build up skills across Global South regions.** These initiatives addressed several common barriers:

- Lack of user knowledge about energy efficiency solutions and/or benefits
- Complicated or burdensome implementation
- High cost of energy efficiency solutions
- Imperfect or dated energy efficiency policies that distort incentives

**Together, the case studies show that barriers to energy efficiency often require a systemic problem-solving approach.** Initiatives used a combination of measures to overcome these barriers, including:

- Community outreach programs to increase awareness
- User and advisories and technical support to build know-how around implementation
- Consumer financing mechanisms and bulk procurement to increase affordability
- Updating regulations and synchronizing standards across regions

In addition to significant cost and emission savings, these initiatives also resulted **in a wide range of benefits** for consumers, including reduced energy bills, improved quality of life, and increased decision-making capacity. Much more is possible if these approaches are scaled across the world.

Sources given in the following slides.

# The role of efficiency in the Global South

| Key priorities for energy planning: | How energy efficiency contributes: |
| --- | --- |
| ***1. Energy access and savings*** | |
| Energy demand in the Global South is set to grow rapidly, driven by economic and population growth | Energy efficiency means energy demand can be met with less energy supply, allowing new and existing infrastructure to go further |
| ***2. Energy security*** | |
| Countries in the Global South are seeking to increase resilience and reduce import reliance | Energy efficiency means less reliance on fossil fuel imports and less exposure to fuel price volatility |
| ***3. Energy affordability*** | |
| The high price of energy remains a challenge for Global South countries and households alike | Energy efficiency means less money spent on wasted energy at both the country and household level |

# The Global South is set to drive 70% of global growth across sectors

Which equates to a 70% total growth in Global South final energy demand by midcentury

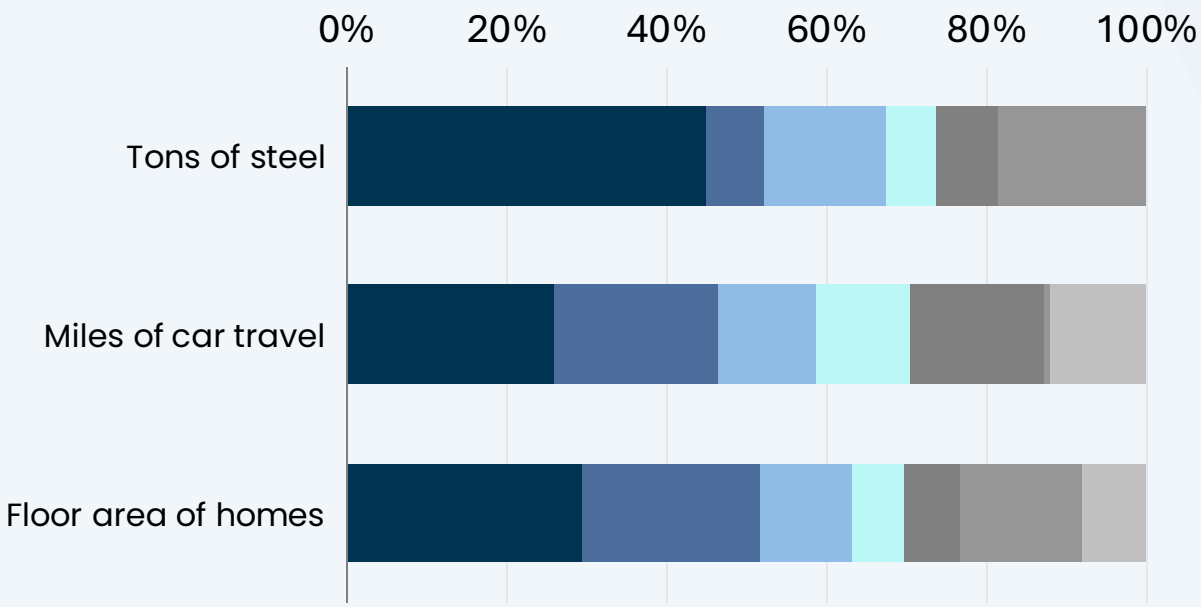
**Global South regions**

South Asia | Africa | Southeast Asia | Latin America

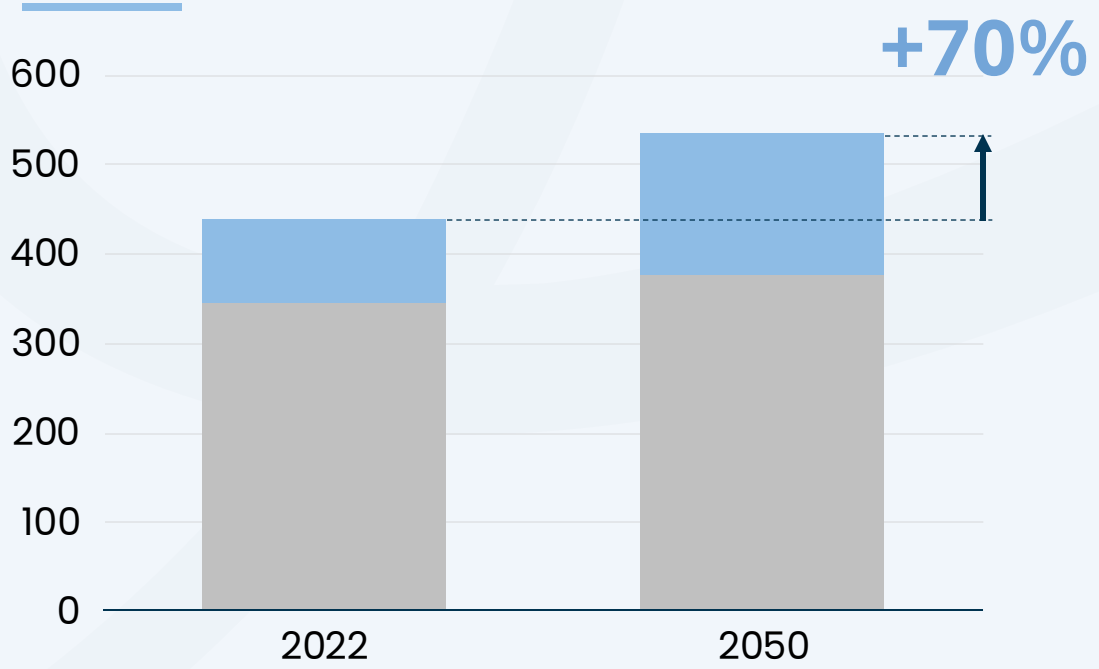
**Other regions**

Eurasia & Middle East | Global North | Greater China

**Fraction of projected global growth from 2022 to 2050**



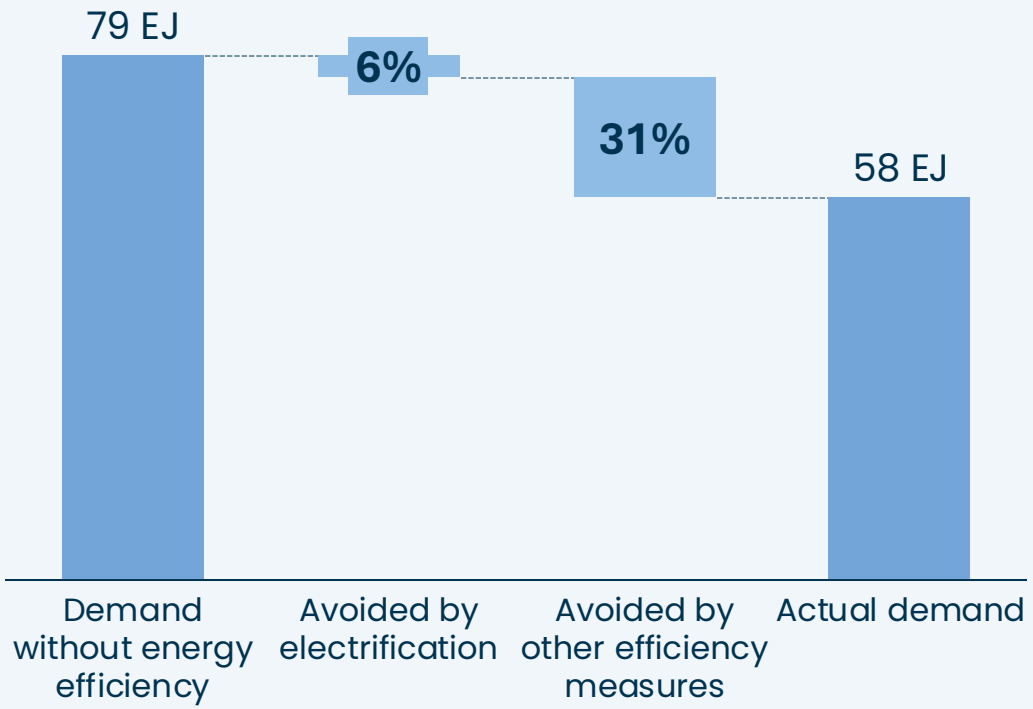

**Final energy demand from 2022 to 2050,** GJ




**Source:** IEA *World Energy Outlook* (2023-24), Stated Policies Scenario.

# Energy efficiency has helped manage demand growth, avoiding nearly 40% of extra demand across the Global South

**Global South fossil fuel final energy demand in 2022, with vs. without 2012–2022 progress**




***Case: Energy service companies (ESCOs)***

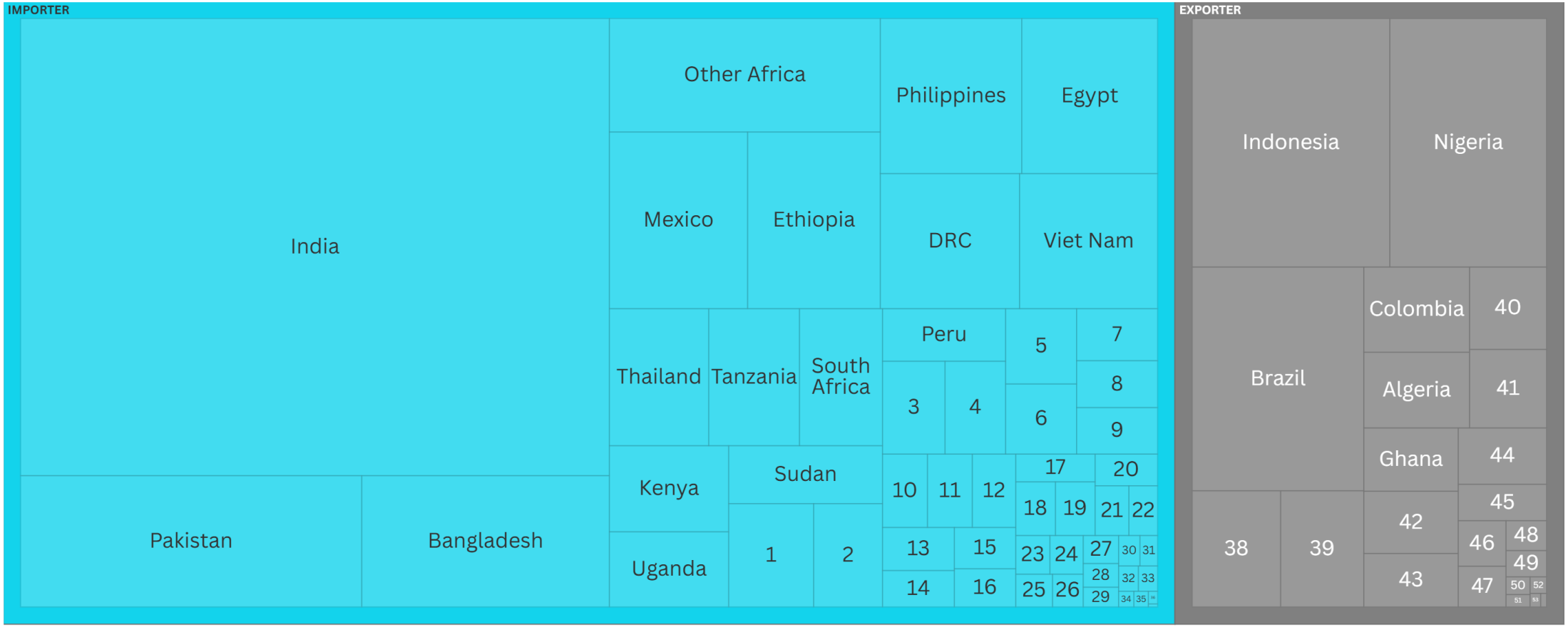
- Energy service companies (ESCOs) are companies that deliver guaranteed energy savings for institutional energy users
- Across many Asian markets, ESCOs undertake energy efficiency projects at the plant or building level, increasing the combined system efficiency of space cooling, compressed air, lighting, motors, and building management systems
- Some ESCOs also offer support with financing mechanisms such as off-balance sheet investment
- ESCO performance contracts typically achieve an average **30%–50% of energy savings** from the measured baseline.

*Note: Counterfactuals compound assuming 2012 levels of final energy productivity and percent of final energy from electricity and fossil fuels. Renewable energy also contributes to the efficiency totals, requiring 2x–3x less primary energy for the same amount of electricity generation.*
Sources: (Left) IEA *World Energy Balances* (2024), World Bank *Indicators* (2024), RMI *Powering Up the Global South* (2024), RMI analysis; (Right) Interview with Alexander Ablaza, Founding Convenor and Co-chair, Asia-Pacific ESCO Industry Alliance (APEIA)

*2. Energy security*

# Most countries in the Global South rely on imported fossil fuels

3 of 4 people live in countries that are net fossil fuel importers




***Note:*** *Boxes sized by population. Numbers denote Argentina[1], Morocco[2], Nepal[3], Madagascar[4], Côte d'Ivoire[5], Niger[6], Sri Lanka[7], Zambia[8], Chile[9], Guatemala[10], Senegal[11], Cambodia[12], Zimbabwe[13], Rwanda[14], Benin[15], Tunisia[16], Haiti[17], Dominican Republic[18], Cuba[19], Honduras[20], Togo[21], Laos[22], Nicaragua[23], Paraguay[24], ElSalvador[25], Other Americas[26], Costa Rica[27], Panama[28], Eritrea[29], Uruguay[30], Jamaica[31], Botswana[32], Namibia[33], Mauritius[34], Eswatini[35], Suriname[36], Curaçao[37], Other Asia[38], Myanmar[39], Angola[40], Malaysia[41], Mozambique[42], Venezuela[43], Cameroon[44], Ecuador[45], Bolivia[46], South Sudan[47], Libya[48], Congo[49], Gabon[50], Equatorial Guinea[51], Trinidad and Tobago[52], Guyana[53], Brunei Darussalam[54].*

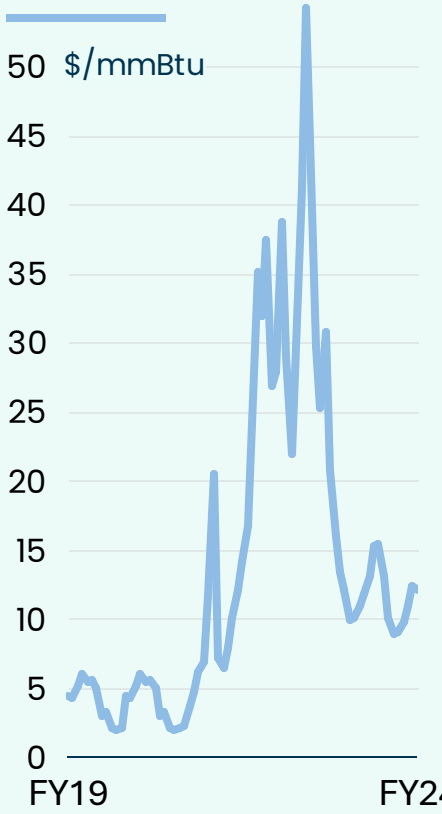
**Sources:** RMI *Powering Up the Global South* (2024), IEA *World Energy Balances* (2024).

*2. Energy security*

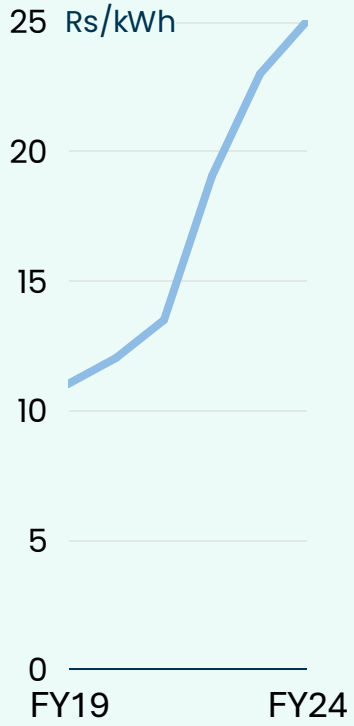
# This can expose countries to price volatilities and supply chain risks

After Russia invaded Ukraine, LNG prices in Asia rose up to 10x — hitting hardest in the Global South

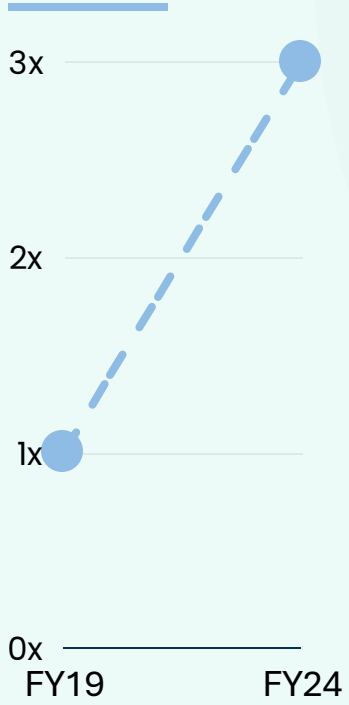
**LNG spot price in Asia**




**Power generation costs in Pakistan**




**Electricity share of LMI household budget in Pakistan**




***Case: Impacts on Pakistan***

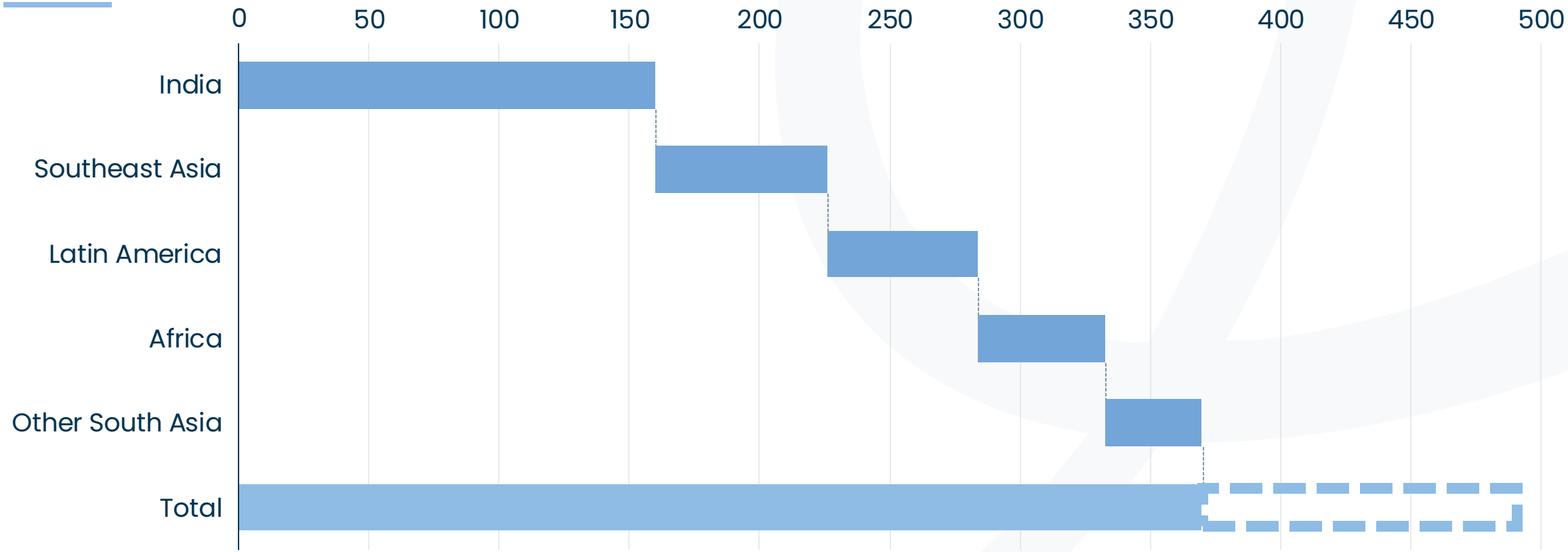
- Suppliers failed to deliver at least 11 contracted cargoes, leading to severe fuel shortages
- Emergency supply backups cost billions of dollars, and required further coal imports from Afghanistan
- Nationwide load shedding reached 10–18 hours a day in parts of 2022, with frequent blackouts as well
- The loss of electricity led to 20% losses in Pakistan's prominent textile exports, as well as fertilizer shortages which affected food security
- These trends were intensified by catastrophic flooding, leading to a humanitarian crisis

*Note: LMI = low and medium income; phrased as "poor, vulnerable, or aspiring middle-class consumers" in the original source.*

Sources (L to R): International Monetary Fund via FRED (2025), World Bank *Pakistan Development Update* (2024), Bloomberg "How Energy Traders Left A Country In the Cold", ISSI (2022)

# A decade of progress on energy efficiency saved more than $100 billion in 2022 alone, by avoiding additional fossil fuel imports

**Indicative fossil fuel imports in 2022,** billion USD



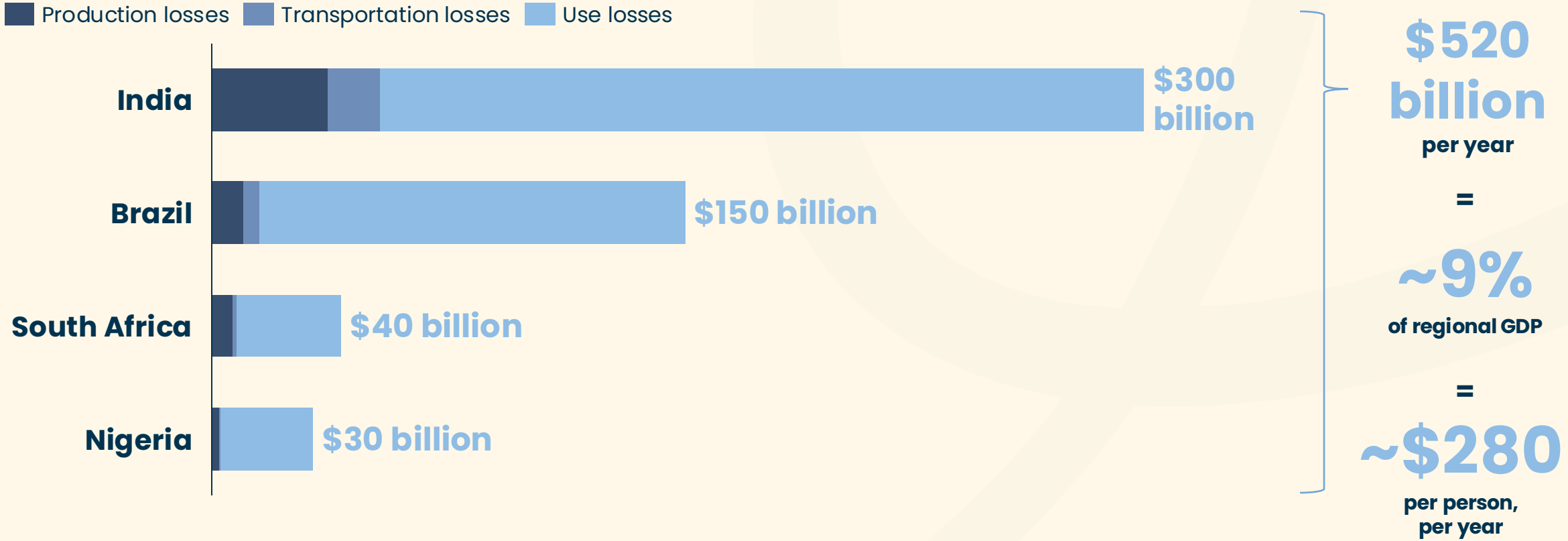

*Note: avoided costs are indicative based on regional average efficiency savings.*

Source: RMI *Powering Up The Global South* (2024), RMI analysis

*3. Energy affordability*

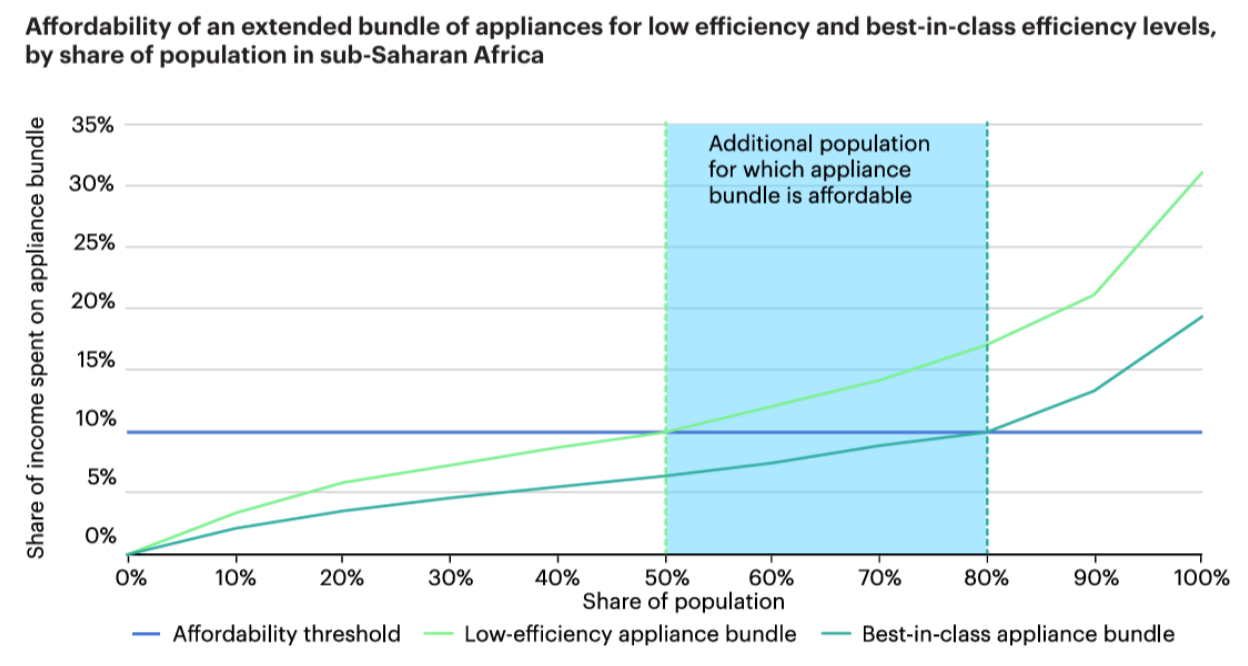
# High rates of energy use inefficiency across the Global South leads to higher energy bills for end-users

**Wasted energy spending**, $ billion per year, 2019 (Brazil, India, Nigeria, South Africa)




**Note:** Brazil, India, Nigeria, and South Africa make up about 40% of the Global South's primary energy demand. Global South as defined in RMI *Powering Up the Global South* (2024); excludes Greater China and the Middle East.
**Sources:** RMI analysis based on IEA World Energy Balances; De Stercke, Dynamics of Energy Systems: a Useful Perspective (2014) [Data retrieved from IIASA PFU Database]; Energy Institute Statistical Review; IEA Energy Prices, BNEF Climatescope, and World Bank DataBank.

# High-efficiency appliances can save billions and enable affordable access for nearly twice as many people



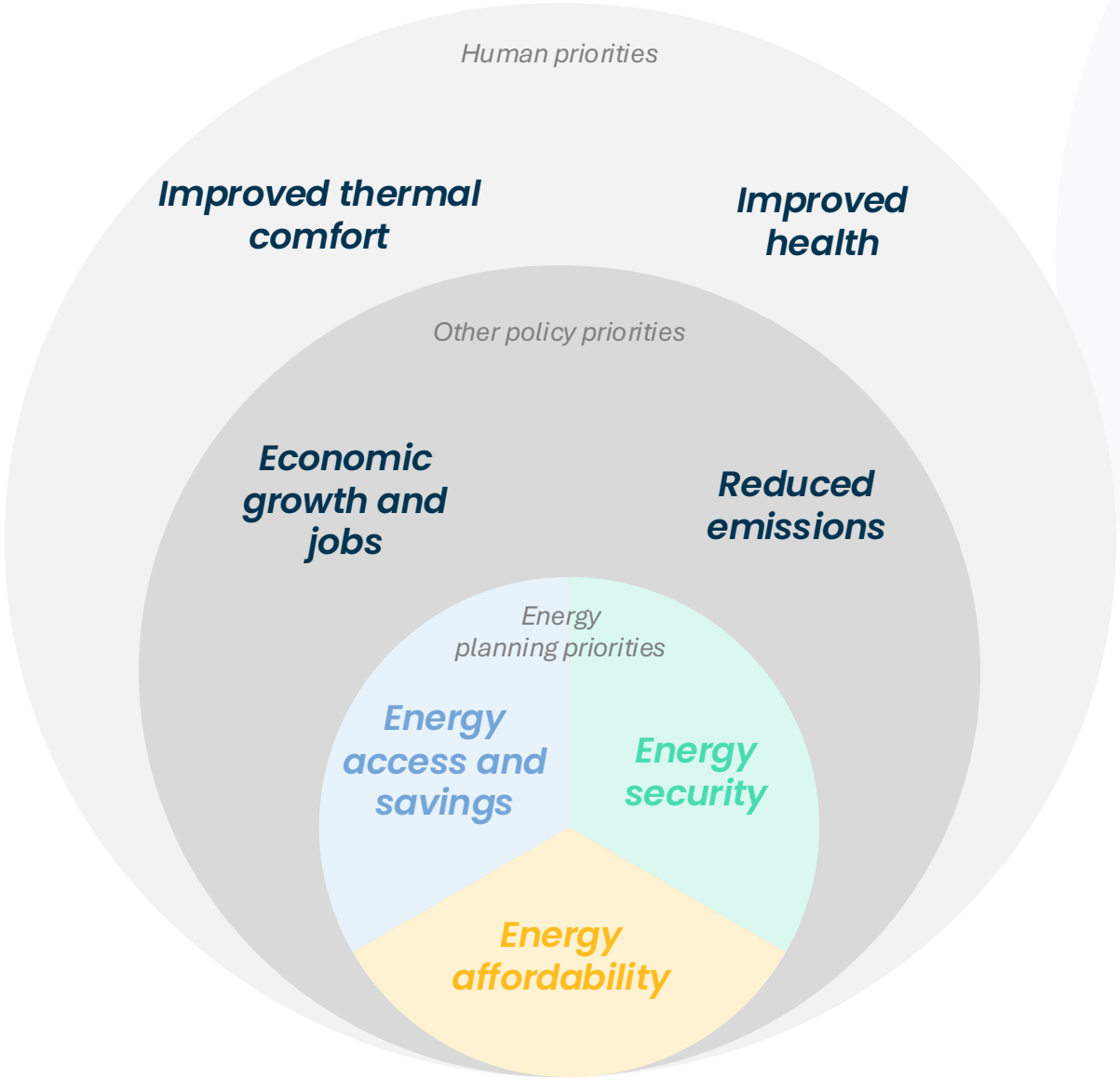

Lifetime savings from several efficient products:
**40%** for refrigerators **50%** for air conditioners **90%** for LED light bulbs

***Case: Bulk procurement of LEDs***

- The Government of India launched the Unnat Jyoti by Affordable LEDs for All (UJALA) scheme in 2015 to lower the cost of LED bulbs.
- The scheme leverages the government's purchasing power to acquire LED bulbs from manufacturers at low rates. The discounted LED bulbs are then distributed to program participants.
- The scheme has resulted in an estimated US $2 billion saved annually on household electricity bills.

Sources: (Left) IEA *Energy Efficiency* (2024), RMI *Bringing Super Efficient Air Conditioners to the Market* (2025), World Bank *Power More With Less* (2025); (Right) CLASP, *Lighting a Billion: The UJALA Program's Transformational Impact in India*

# Energy efficiency contributes to more policy and human priorities




## Energy Efficiency can make the transition:

**Faster:** By shrinking the total amount of energy that we need, efficiency can enable a carbon-free energy system a decade or more earlier than would be possible otherwise.

**Cheaper:** Global efficiency efforts can provide $2 trillion in annual savings, including 30–50% or more of household costs and similar benefits for utilities and industries.

**Fairer:** By reducing cost and access inequities as well as climate impacts that hit vulnerable communities first and worst, energy efficiency brings disproportionate benefits.

# Investment in efficiency brings dividends and boosts the impact of renewables

## The economic opportunity of Energy Efficiency:

**3–5x returns**

Yielded by energy efficiency, including savings on energy bills, reduced infrastructure costs, and job creation

**$11.6bn savings**

In power supply investments by 2050 for a typical middle-income country.

**2–3x jobs**

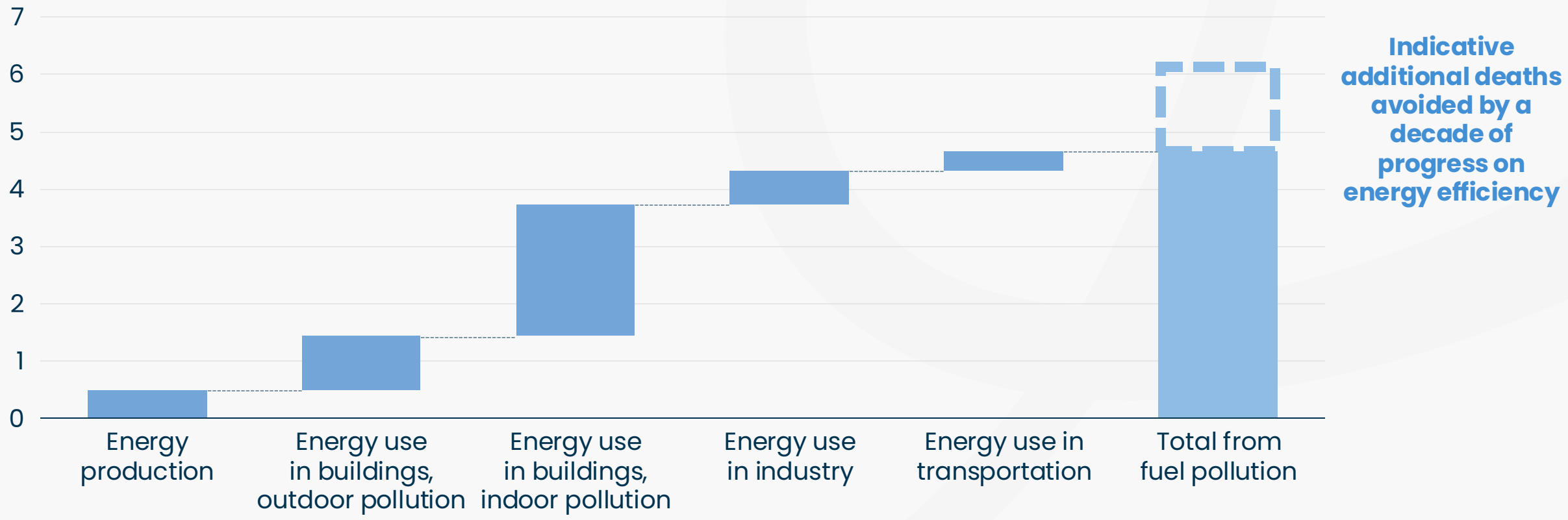
Created per investment dollar compared to solar power and fossil fuels, respectively.

Source: World Bank *Power More With Less* (2025)

*Improved health*

# This decade of progress is likely saving more than a million lives annually due to avoided fuel pollution

## Millions of annual deaths from fuel pollution in the Global South

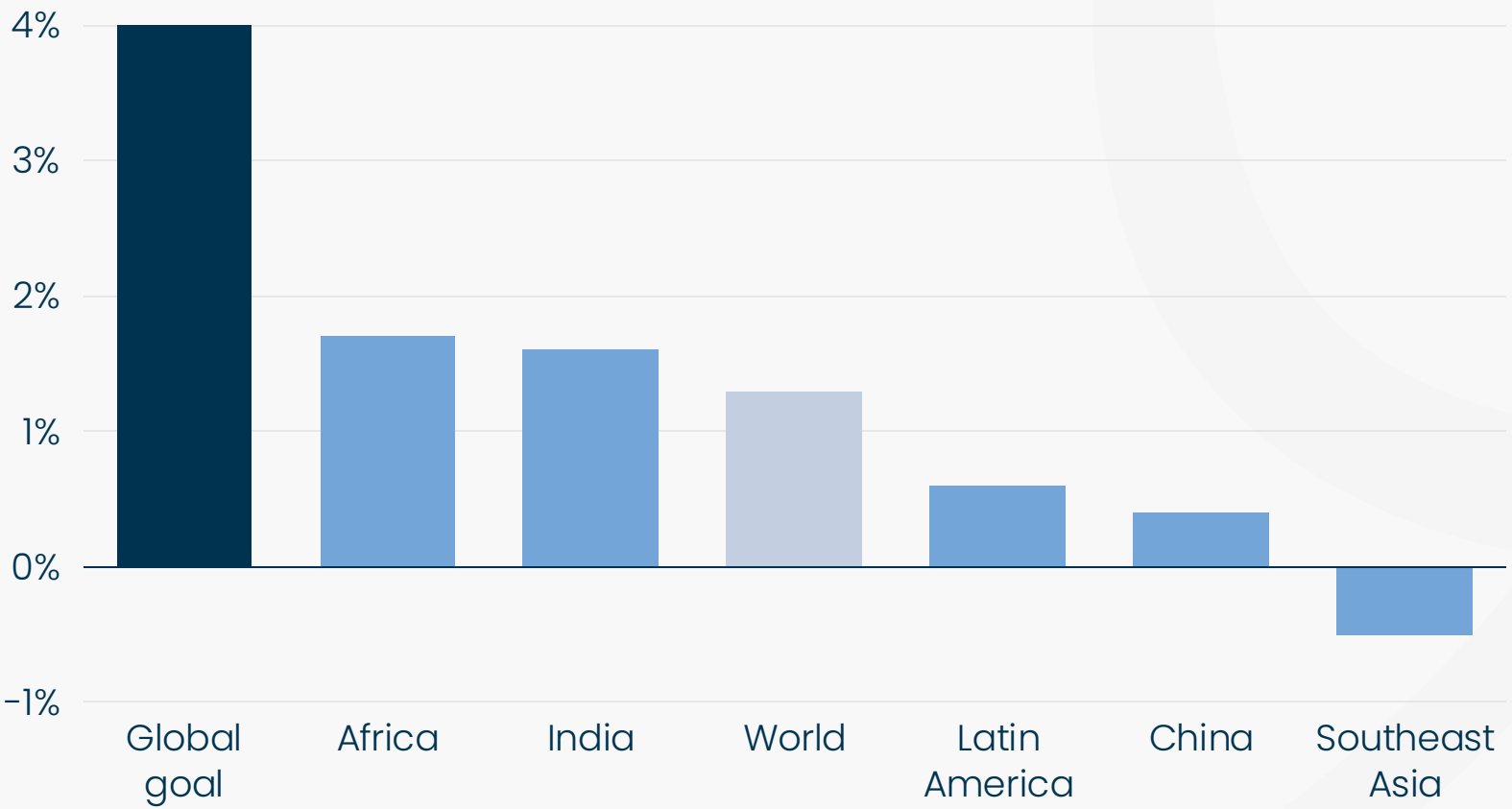



**Sources**: Lelieveld et al. (2023) for total deaths from outdoor pollution, McDuffie et al. (2021) for sectoral allocation, WHO (2024) for indoor pollution, and RMI analysis for sectoral and regional grouping under the prior definition of Global South. Data is for 2019 but similar to current regional totals.

# But barriers remain for achieving global efficiency goals

All regions are far short of the "double down" efficiency goal set at COP28

## Estimated annual energy efficiency improvement, 2021–2024




## Example barriers to deployment of energy efficiency measures [1]

> *Communities didn't have much knowledge of the impact of behavior changes on their electricity bills.*

> *Companies were reluctant to halt plant operations for implementation of energy efficiency measures.*

> *Cost is still a massive barrier, and financing mechanisms may be necessary to examine.*

> *Only very few countries have standards in place and they are not aligned…this is confusing for consumers.*

**Source**: IEA *Energy Efficiency* (2024)

1. Quotes from survey of 11 case studies of energy efficiency measures in the Global South

# Barriers to energy efficiency remain; and many require a systemic problem-solving approach

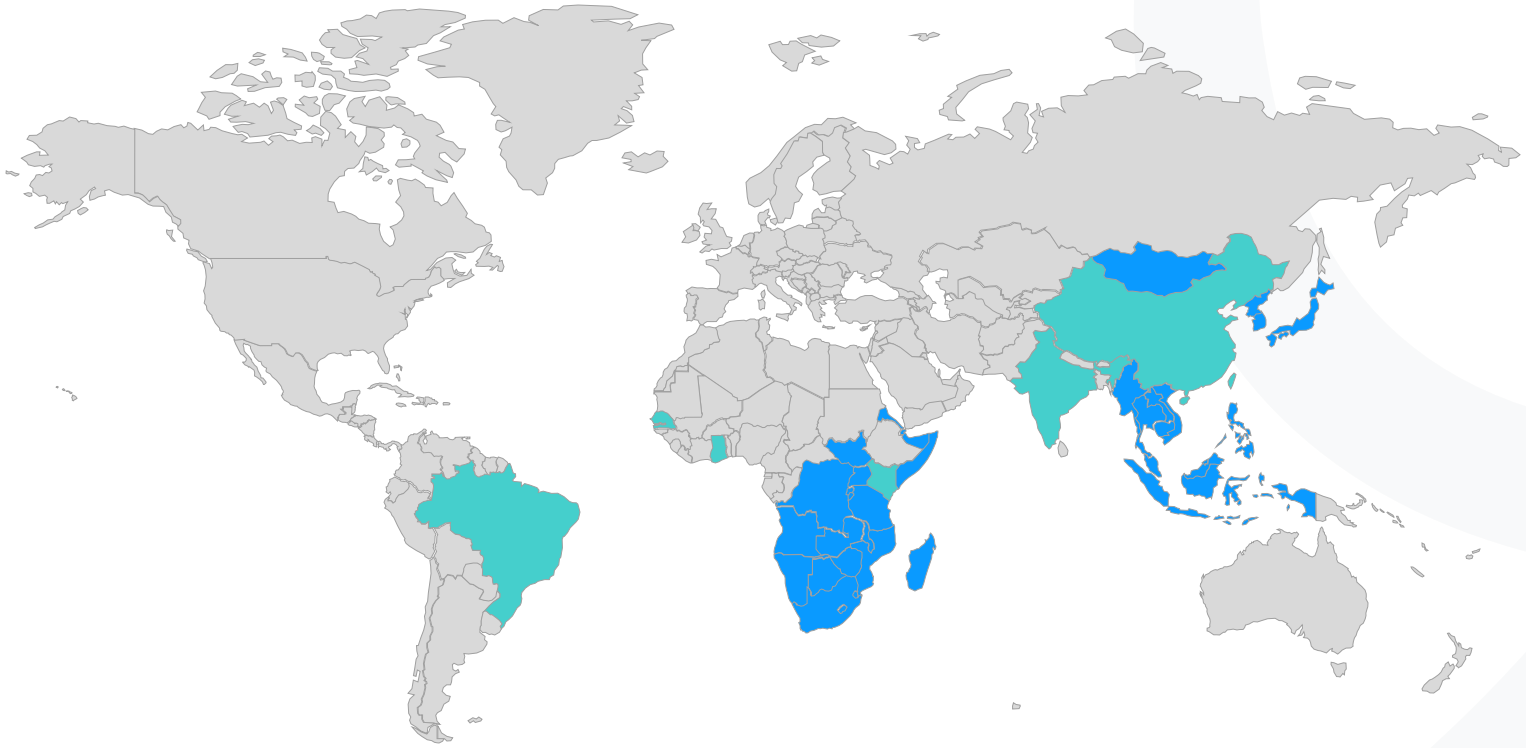
The next section is a compilation of 11 case studies of successful energy efficiency initiatives across the Global South

| Barriers to energy efficiency identified in case studies: | Example solutions in case studies: |
| --- | --- |
| Users do not know about energy efficiency solutions and/or their benefits | **Increase awareness:** Community outreach programs |
| Implementation is complicated or burdensome | **Build know-how:** User advisories, technical support (including ESCOs) |
| The up-front cost of energy-efficient solutions is too high for users | **Increase affordability:** Consumer financing mechanisms, bulk procurement |
| Imperfect or dated energy efficiency policies distorting incentives | **Update regulations:** Refreshing and cross-region synchronization of policies and standards |

# Case studies collection

# Progress on energy efficiency is clear in the collected case studies

*Featured initiatives have saved billions of dollars every year, with many other benefits — from the grid to global emissions*



**Participating organizations:**

Asia-Pacific ESCO Industry Alliance
China National Institute for Standardization
CLASP
Consumer Education & Research Centre
Energy Efficiency Services Limited
GIZ Ghana
Kenya Power and Lighting Company
The Energy and Resources Institute
United Nations Development Program (UNDP)
United Nations Environment Program (UNEP)
WRI India

**Countries of focus** **Regions of focus**

Note: Case studies have been collected through online forms and calls with 15+ energy efficiency experts working in the Global South.
We received 11 case studies of energy efficiency measures in these regions that were already implemented and showed demonstrated impact.

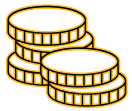
# Case studies overview:

## Increase awareness

- Door-to-door training on energy efficiency in Ghana
- Energy education and community outreach through Indian schools

## Build know-how

- Incentivizing Kenyan consumers to reduce peak electricity demand
- Scaling the impact of ESCOs across the Asia-Pacific region
- Promoting energy efficiency in the Indian secondary steel sector
- Reward-driven building energy efficiency challenge in Mexico



## Increase affordability

- Accelerating the adoption of efficient cooling in Ghana and Senegal
- Lowering upfront costs of LED lighting through bulk procurement in India

## Update regulations

- Harmonizing standards across Eastern and Southern Africa
- Updating energy labels for refrigerators in Brazil
- Pioneering air conditioner efficiency standards in China

INCREASE AWARENESS

# Door-to-door training on energy efficiency in Ghana

## Measures

Training and certification of Energy Efficiency Advisors
Door-to-door educational visits by advisors
Distribution of energy saving timer switches
Educational video on basic energy efficiency tips

## Outcomes

**80%** out of **20,000** of households reported a change in behavior, with **up to 30% reduction** in light bills for beneficiaries

## Initiative details

**Location**
Accra, Kumasi, and Koforidua, Ghana

**Timeframe**
2015 to 2021

**Organization**
GIZ Ghana

giz

**Objectives**

- Promote energy efficiency behaviors among consumers
- Reduce energy bills and carbon footprint for consumers
- Manage load growth

**Lessons learned**

- Beneficiaries did not have much prior knowledge of the impact of small behavior changes on their electricity bills
- In general, beneficiaries were receptive and demonstrated willingness to adopt energy-efficient behaviors

Interviewee: Kwabena Twumasi, Programme Analyst, UNDP

INCREASE AWARENESS

# Energy education and community outreach through Indian schools

## Measures

School-based interactive learning and community outreach programs to train school-aged "Conservation Ambassadors" who influence their families and communities

## Outcomes

**27,000+ students** reaching over 100,000 family and community members

## Initiative details

**Name**
Greenmosphere for Life

**Location**
India

**Timeframe**
2022-2025

**Organization**
Consumer Education & Research Centre

CERC
SINCE 1978

**Objectives**

- Reduce household energy use
- Increase awareness of energy efficiency measures

**Lessons learned**

- The project shows strong scaling potential, in part due to its strong alignment with India's national energy and energy
- efficiency goals and with youth education priorities
- However, scaling is limited by funding and by logistical challenges in coordination with schools

Source: Consumers International

BUILD KNOW-HOW

# Incentivizing Kenyan consumers to reduce peak electricity demand

## Measures

User advisories on peak shifting and energy efficiency
Time of use tariffs

## Outcomes

**Less than 10%** of electricity dispatched from thermal energy in 2024

## Initiative details

**Location**
Nairobi, Kenya

**Timeframe**
2023 to present

**Organization**
Kenya Power and Lighting Company

**Objectives**

- Managing load growth with aging grid infrastructure
- Managing transmission and distribution losses
- Reducing thermal dispatch from peaking plants

**Lessons learned**

- Financing mechanisms likely necessary to **overcome cost barriers** to downstream energy efficiency
- Grid losses remain high (23.9%); additional **investment in transmission and distribution** infrastructure still needed
- Electrification will require high efficiency installations right away for the sake of sustainability and scalability

Interviewee: Bryan Micheni, Transmission System Operator, Kenya Power and Lighting Company

BUILD KNOW-HOW

# Scaling the impact of ESCOs across the Asia-Pacific region

## Measures

Energy service companies (ESCOs) deliver guaranteed energy savings for commercial, industrial and government clients

## Outcomes

**30%–50%** energy savings through ESCO performance contracts

## Initiative details

### Location
China, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, and Thailand

### Timeframe
2018 to present

### Organization
Asia-Pacific ESCO Industry Alliance

APEIA
Asia-Pacific ESCO Industry Alliance

### Objectives
- Improve system or plant-based efficiency
- Increase off-balance sheet investments
- Increase third-party expertise on energy efficiency in the government, commercial and industrial sectors

### Lessons learned
ESCO and EE markets grow faster when:
- ESCO and EE policy frameworks are in place
- Governments are a large buyer of ESCO services and solutions
- Clients can evaluate, trust, and engage ESCO services and solutions
- ESCOs can access debt and/or equity capital

Interviewee: Alexander Ablaza, Founding Convenor and Co-chair, Asia-Pacific ESCO Industry Alliance (APEIA)

BUILD KNOW-HOW

# Promoting energy efficiency in the Indian secondary steel sector

## Measures

Hot charging in steel rolling mills
Waste heat recovery from flue gases
Installation of solar PV system
Electric induction furnace upgrade

## Outcomes

**600,000 USD** saved in costs

**6,600 tonnes** of $CO_2$ emissions avoided

## Initiative details

**Location**
New Delhi, India

**Timeframe**
2024 to 2025

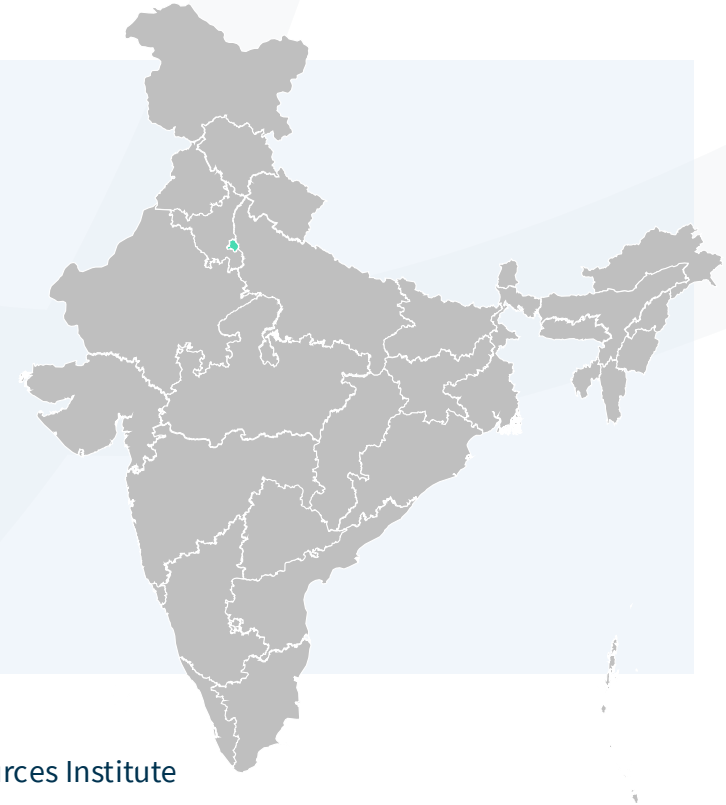
**Organization**
The Energy and Resources Institute

**Objectives**

- Promote energy efficiency and water use efficiency
- Identify pathways to decarbonize secondary steel industries in the Micro, Small and Medium Enterprise (MSME) sector

**Lessons learned**

- MSME entrepreneurs are aware of available technologies but reluctant to halt plant operations for implementation. Clarity on possible cost savings helped encourage implementation
- Changes to state policies and regulations discouraged adoption of energy efficiency measures



Interviewees: Vijayakumar Chellakkannu, Senior Fellow, and Sambit Ghatak, Research Associate, The Energy and Resources Institute

BUILD KNOW-HOW

# Reward-driven building energy efficiency challenge in Mexico

## Measures

The “Building Efficiency Challenge”:
Organizations commit to reducing their energy consumption by 10% over one year, in exchange for technical support, training, access to a knowledge network, and public recognition

## Outcomes

**1.9 million kWh** avoided
**825 tons** of $CO_2$ emissions avoided
**3.1 million pesos** in economic savings

## Initiative details

**Name**
Building Efficiency Challenge

**Location**
Mexico City, Sonora, and Monterrey, Mexico

**Timeframe**
2020-2024

**Organization**
WRI Mexico

WORLD RESOURCES INSTITUTE

**Objectives**

- Accelerate the transition to sustainable, efficient buildings
- Cut down cities’ expenses on implementing additional infrastructure, reducing energy consumption, and GHG emissions, resulting into a better quality of life for the citizens.

**Lessons learned**

- Capacity building at the local level can accelerate the implementation of energy efficiency measures by showing their economic, environmental, and social benefits
- There is a lack of knowledge products and awareness raising regarding energy efficiency

Interviewees: Fairuz Loutfi, Energy Efficiency and Circular Economy Manager, WRI Mexico

INCREASE AFFORDABILITY

# Accelerating the adoption of efficient cooling in Ghana and Senegal

## Measures

On-bill and on-wage financing mechanisms to facilitate consumer purchases of energy-efficient and climate-friendly refrigerators and air conditioners

## Outcomes

2700 units sold, expected to result in:

**1230 MWh** of annual electricity savings

**20,330 tonnes** of avoided lifetime emissions

## Initiative details

**Name**
ECOWAS Refrigerators and Air Conditioners (ECOFRIDGES)

**Location**
Ghana and Senegal

**Timeframe**
2019 to 2025

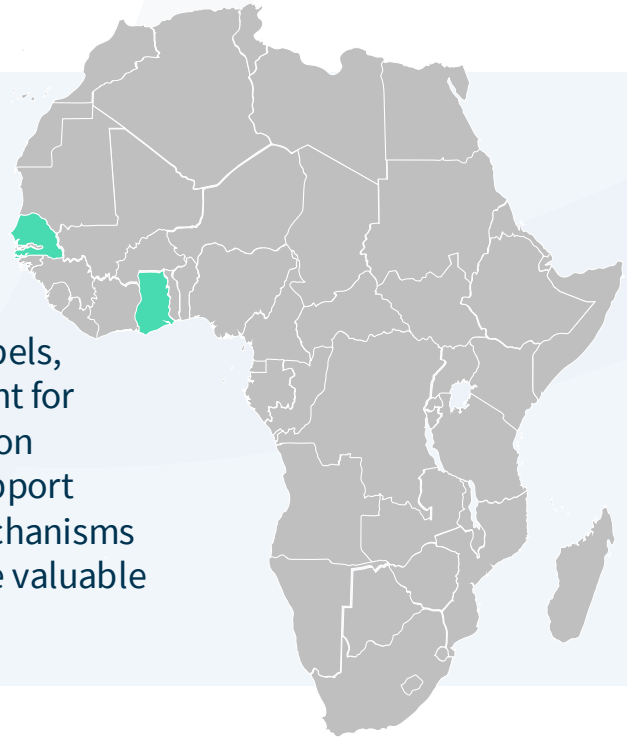
**Organization**
UN Environment Program, U4E

### Objectives

- Manage the rise in demand for cooling services, resulting from economic and population growth

### Lessons learned

- Regulatory frameworks, such as energy standards, energy labels, and green lending targets, can create a favorable environment for the development of financing mechanisms and boost adoption
- Recurrent funding is key to providing consistent program support
- Flexibility to adapt and modify the structure of financing mechanisms in response to external circumstances (e.g., COVID-19) can be valuable



Interviewees: Victor Minguez, Alice Moreau, and Madeleine Edl, UNEP

INCREASE AFFORDABILITY

# Lowering upfront costs of LED lighting through bulk procurement

## Measures

Cost reduction of LED bulbs through bulk government procurement
Distribution of discounted LED bulbs to households

## Outcomes

**US $2 billion** saved annually on electricity bills

**37 million tonnes** of $CO_2$ emissions avoided

## Initiative details

**Name**
Unnat Jyoti by Affordable LEDs for All (UJALA)

**Location**
India

**Timeframe**
2015 to present

**Organization**
Energy Efficiency Services Limited & other partners

**Objectives**

- Reduce electricity demand
- Cut greenhouse gas emissions
- Save consumers money

**Lessons learned**

- Open procurement tenders and a focus on market-based mechanisms helped build manufacturing sector acceptance
- The initiative benefited from a strong enabling environment, including consumer awareness and on-bill financing programs, LED mandates in government buildings, financial incentives to boost manufacturing capacity, etc.

Source: Lighting a Billion: The UJALA Program's Transformational Impact in India - CLASP

UPDATE REGULATIONS

# Harmonizing standards across Eastern and Southern Africa

## Measures

Regional standardization of Minimum Energy Performance Standards (MEPS) and energy labels for refrigerators and air conditioners

## Outcomes

Expected to result in **9.8 TWh** of electricity avoided, equivalent to **7.8 million tonnes** of $CO_2$ emissions avoided by 2040

## Initiative details

**Location**
Eastern and Southern Africa

**Timeframe**
2019 to 2025

**Organization**
UN Environment Program, U4E

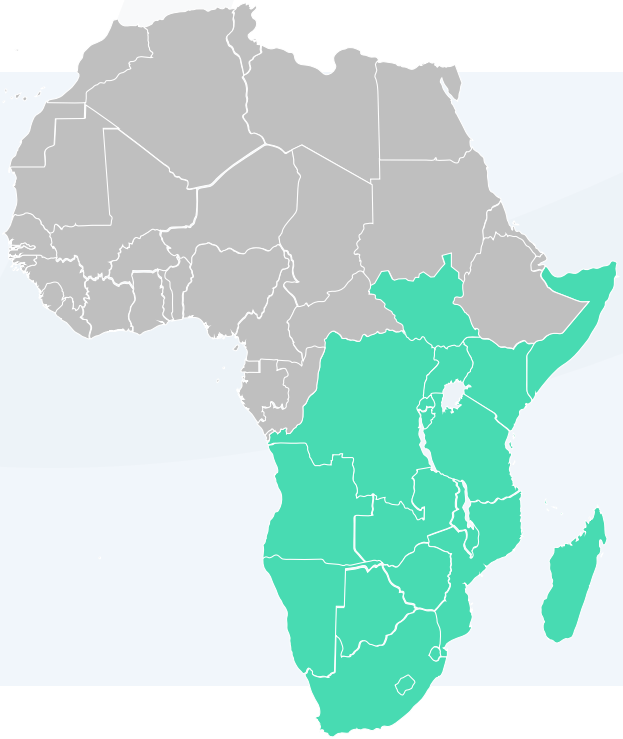
**Objectives**

- Manage the rise in demand for cooling services, resulting from population growth, urbanization, and rising living standards

**Lessons learned**

Harmonization of MEPS and energy labels can:

- Reduce confusion among consumers and facilitate adoption of energy-efficient and climate-friendly appliances
- Reduce market dumping of lower efficiency appliances
- Reduces regulatory burdens for manufacturers and importers



Interviewees: Madeleine Edl and Mzwandile Thwala, UNEP

UPDATE REGULATIONS

# Updating energy labels for refrigerators in Brazil

## Measures

Phase-in of updated label policy for refrigerators

## Outcomes

**10% reduction** in median annual energy consumption of refrigerators available on the Brazilian market (as of 2023)

## Initiative details

**Location**
Brazil

**Timeframe**
2020 to 2031

**Organization**
CLASP

**Objectives**

- Reduce energy bills, especially for low-income households

**Lessons learned**

- Industry resistance to label policy updates were due to concerns around losing eligibility for tax incentives, and serves as a lesson for what other countries should avoid
- Resistance was addressed through a collaborative approach. New policy would be phased in to provide manufacturers with time and greater regulatory certainty

Source: Cooling Down Costs: Updated Energy Labels Save Brazilians Money - CLASP

UPDATE REGULATIONS

# Pioneering Air Conditioner Efficiency Standards in China

## Measures

Development and implementation of new room air conditioner (RAC) Minimum Energy Performance Standards (MEPS)

## Outcomes

Highest-efficiency RACs reach **56%** of market share

Lowest-efficiency RACs nearly eliminated

## Initiative details

**Location**
China

**Timeframe**
2019-2021

**Organization**
China National Institute for Standardization & other partners

**Objectives**

- Reduce summer peak power demand
- Reduce electricity demand
- Cut greenhouse gas emissions
- Have world-leading energy label thresholds

**Lessons learned**

- Collaboration between policymakers, technical experts, and industry was key to successful development of standards
- Deep engagement of industry in the MEPS development process was key to successful adoption of the new MEPS

Source: Revolutionizing Cooling and Climate: China's Pioneering AC Efficiency Standards - CLASP

# There are various policies that can incentivize or enforce energy efficiency improvements

| Policy type | Description | Objective | Examples |
|---|---|---|---|
| Energy efficiency roadmaps and action plans | Defines energy efficiency goals and pathways to achieving those goals | Facilitate alignment and decision-making among various stakeholders | **Ghana:** Energy Master Plan<br>**India, Karnataka:** Energy Conservation and Energy Efficiency Policy 2022-27<br>**Kenya:** Energy Act of 2019 |
| Energy audit requirements | Requires or incentivizes energy audits by accredited third parties | Identify existing inefficiencies and opportunities for energy and cost savings | **India, Tamil Nadu:** Promotion of Energy Audit and Conservation of Energy (PEACE)<br>**India, Haryana:** Energy Audit & Implementation Scheme<br>**Kenya:** Energy (Energy Management) Regulations |
| Minimum energy performance standards (MEPS) | Requires appliances to meet a minimum level of energy performance before they can enter the market | Create incentive for manufacturers to improve the energy efficiency of their products | **China:** GB 21455-2019 (Revision to MEPS for room air conditioners)<br>**Brazil:** Energy Efficiency Act |
| Labeling schemes | Requires appliances to be labeled with a standardized energy efficiency rating to be sold | Enable consumers to make informed purchasing decisions based on energy efficiency;<br>Create incentive for manufacturers to improve the energy efficiency of their products | **Brazil:** Brazilian National Energy Conservation Label (ENCE)<br>**Ghana:** Energy Efficiency Standards and Labelling Regulations |
| Energy efficiency obligations | Requires obligated parties (typically energy companies) to achieve certain energy savings targets | Incentivize obligated parties to engage with final customers to implement energy efficiency measures | **China:** Energy Efficiency Obligation |
| Energy efficiency funding and financing | Provides funding and financing mechanisms for implementing energy efficiency measures | Alleviate financial barriers to implementing energy efficiency measures | **India:** MSME Competitive (Lean) Scheme, Technology Upgradation Fund Scheme, Production Linked Incentive (PLI) scheme for White Goods |

**More information and example policies can be found in the IEA Energy Efficiency Policy Toolkit 2025**

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