EELA Stakeholder Forum

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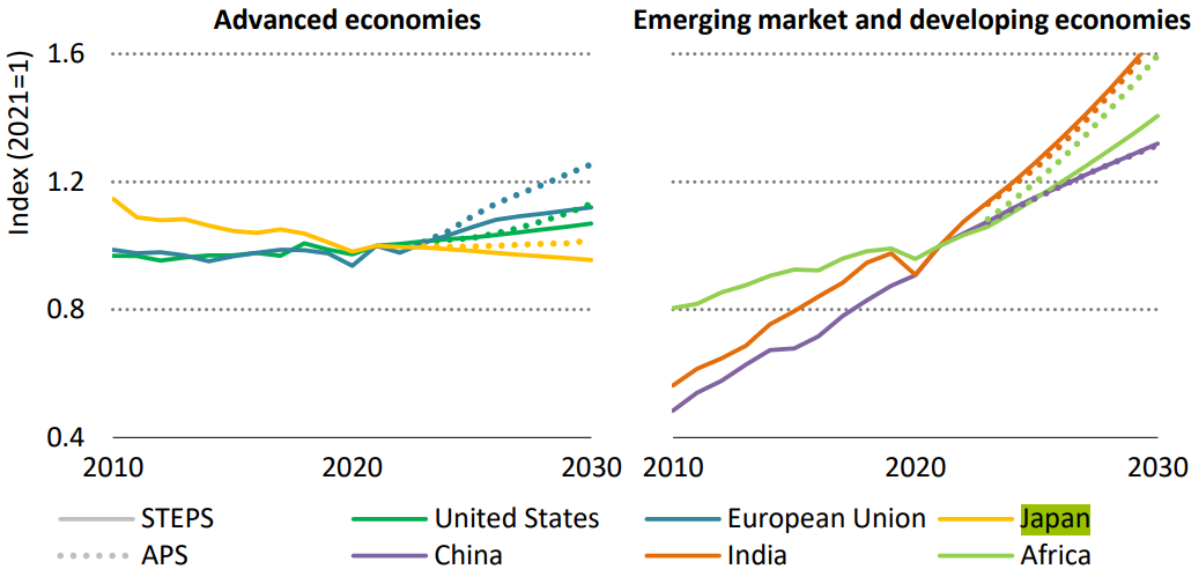
International Energy Agency

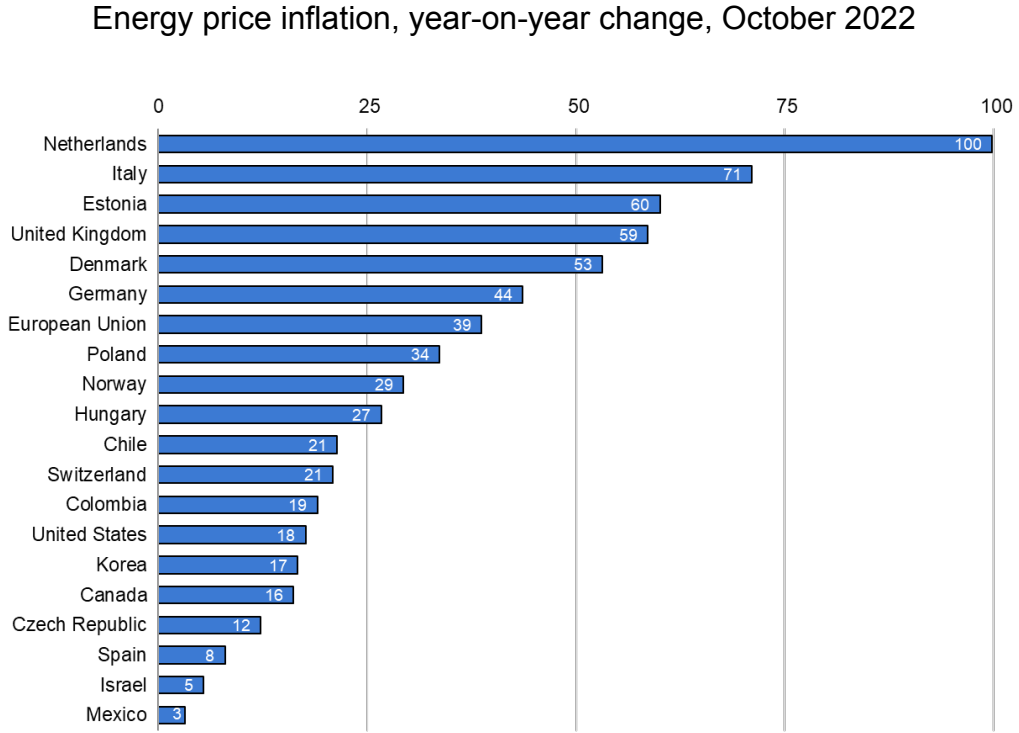
Growing electricity demand in Emerging and Developing Economies

Electricity demand in key regions by scenario, 2010-2030



Electricity demand rebounds in most advanced economies after a decade of flat demand, while it continues to grow strongly in emerging market and developing economies

High fossil fuel prices are a major concern globally causing hardship



Governments allocated more than USD 550 billion in temporary support to help with affordability in 2022

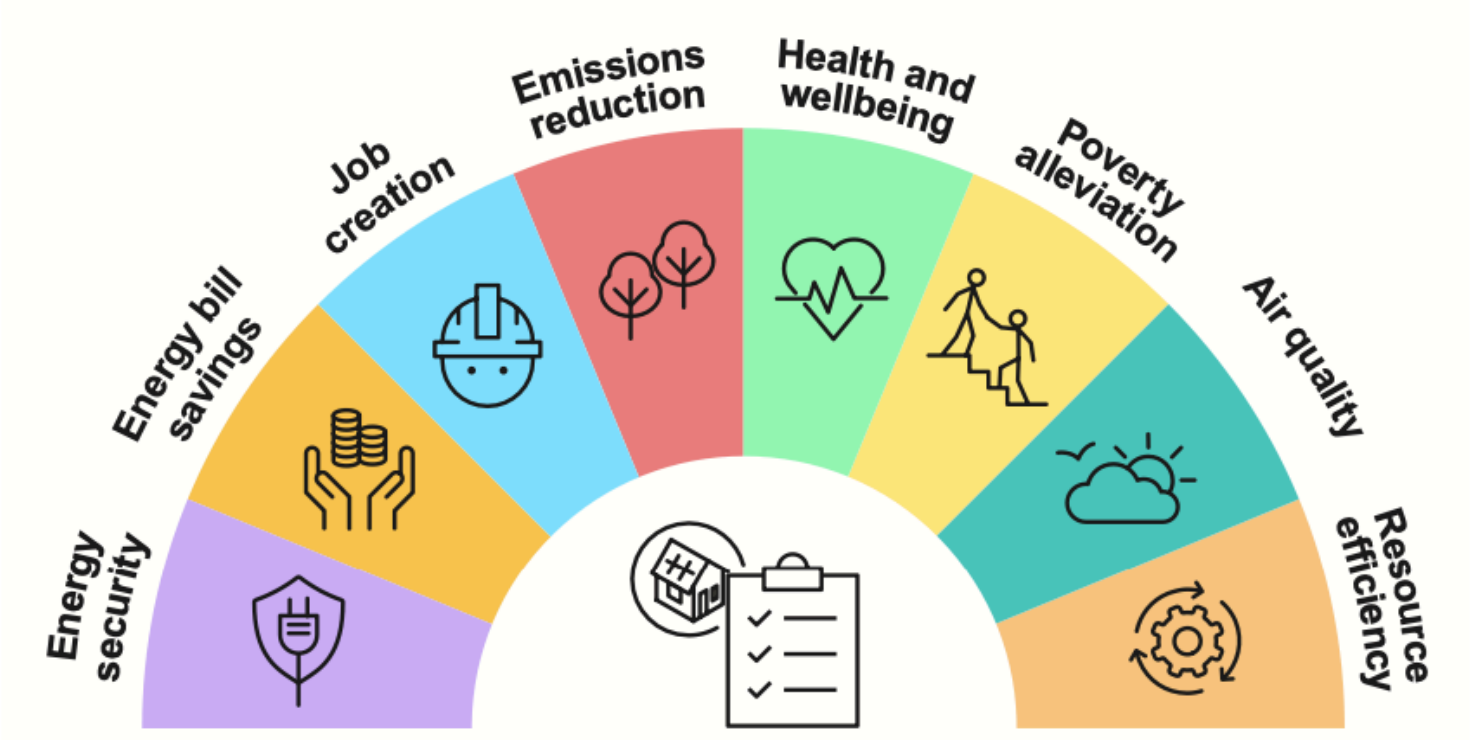
Today's drivers for Energy Efficiency

- Energy and cost-of-living crisis
- Covid-19 impacts on people, business, governments
- Pressure on energy systems – changing rain patterns on hydro-reliant energy systems; integration of variable renewable resources; growing demand, particularly for electricity
- Challenge of meeting climate goals and reducing pollution
- Need for new skills and career paths to capture opportunities and deliver energy transitions

Benefits of energy efficiency and demand management

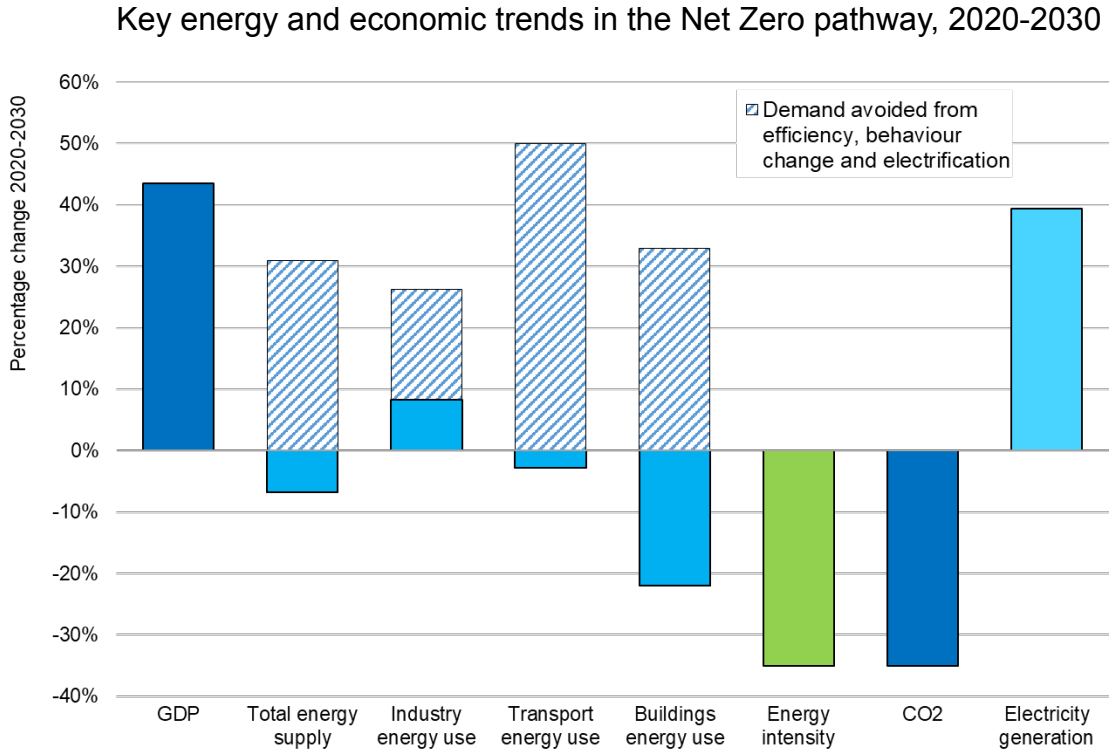
- One of the fastest and cheapest options for short-term emergency situations
- Reduce risk over time while improving access to energy services, saving money and supporting efficient, less costly energy systems
- Managing demand by improving efficiency and making loads more flexible is key to cost-effectively meeting decarbonisation goals.

Selling Energy Efficiency to Senior Decision Makers



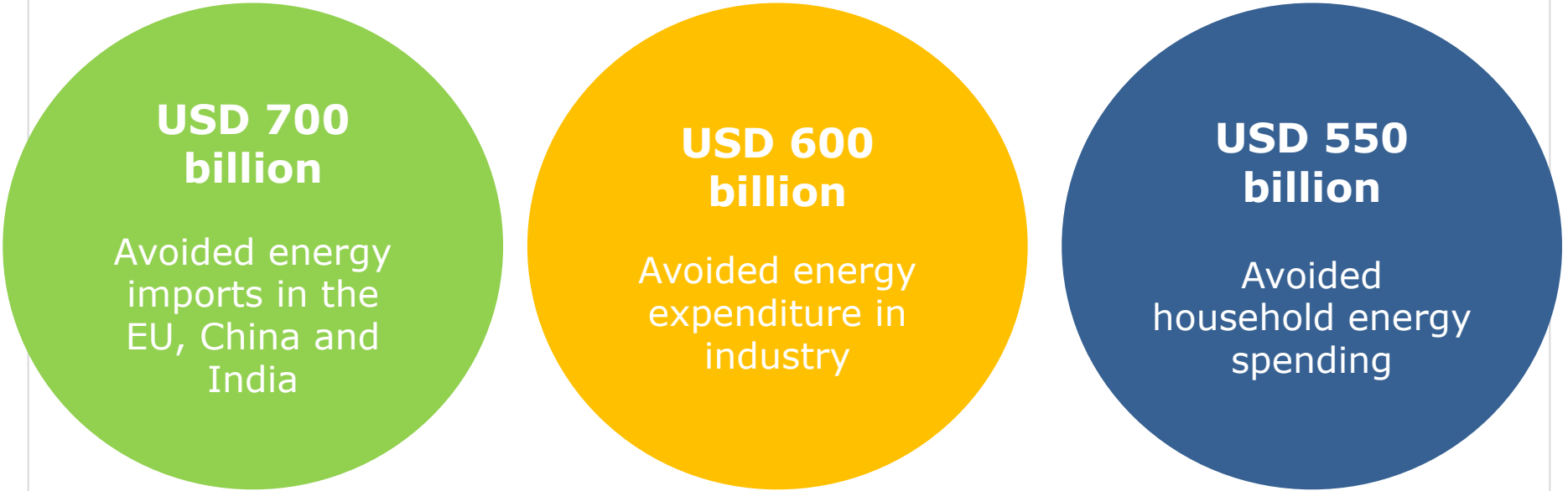
Improving energy efficiency and decarbonisation offer a number of economic, social and environmental benefits beyond energy savings and emissions reductions.

By 2030, the economy could grow by 40% using less energy than today



Energy efficiency is an early priority for action in the IEA Net Zero pathway. Without it energy demand could by 30% higher by 2030

Efficiency brings benefits to all levels of the economy



The world can double its efficiency in the next two decades using technologies that are already cost-effective
One dollar invested in energy efficiency will payback three times in energy saved over the lifetime of the equipment.

Policy Packages for Energy Efficiency

In all sectors the greatest efficiency gains are achieved by a package of policies that combine three main types of mechanisms: Regulation, information and incentives. Careful design and implementation will deliver efficiency's full potential to enhance energy security, create jobs, increase living standards, cut energy bills and reduce emissions.

Targets

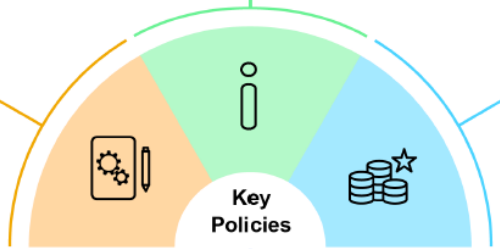
Policies are more effective when they are set in the context of clear strategies and targets.

Essential elements

Regulation is essential to exclude the worst performing equipment and practices from the market, to drive average efficiency levels up, and to set rules for measurement of performance.

Information helps people make more efficient choices in what they buy and how they use energy.

Incentives make efficient options more attractive and speed up the upgrade and replacement of appliances, buildings and vehicles. They also encourage the use of new technologies and practices.



Implementation is as important as policy design.

- Ensuring that the **resources** are in place to put policies into action.
- Address **vital elements** such as capacity building, enforcement, monitoring.
- It is important to continually assess **policies and programmes** so as to keep up to date with technology developments.

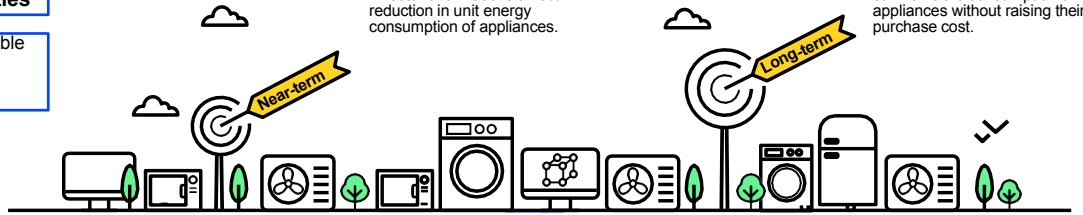
Appliance Energy Efficiency Policy Package

Immediate opportunities

In most markets, it is possible to buy appliances that are twice as efficient as those typically purchased.

The **Net Zero** Scenario milestone for 2030 is a 25% reduction in unit energy consumption of appliances.

Long-term appliance policies can halve the consumption of appliances without raising their purchase cost.



REGULATION

- **Minimum Energy Performance Standards** exclude the least efficient products from the market; they should be in line with international best practice, while reflecting good understanding of local circumstances; and be regularly updated. Regulations are essential for moving the market towards the best available technology in line with achieving net zero targets.
- **Regulation** can ensure that new appliances are "demand response ready" in order to offer flexibility to the end-user and the overall system and reduce peak demand.

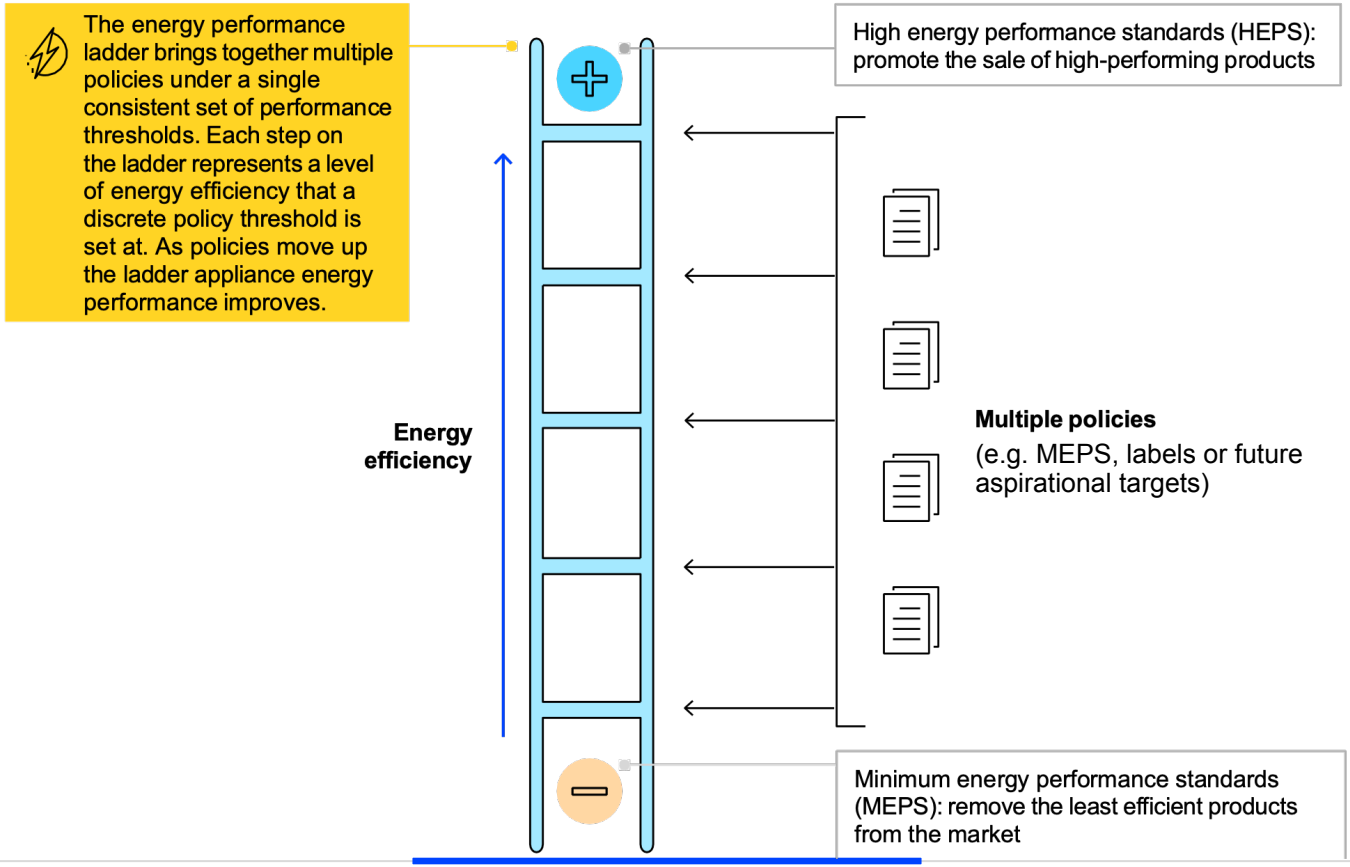
INFORMATION

- **Labels** inform consumers, identifying the most efficient appliances and encouraging purchases based on life time costs.
- **High Efficiency Performance Specifications** identify the best performing products and are often used as the basis for labels and incentives.
- **Consumer information campaigns**, help people make informed decisions. These are most effective when based on behavioural insights and targeted strategies.
- **Smart meters** enable feedback and targeted guidance to consumers about their energy use and how they can make savings.

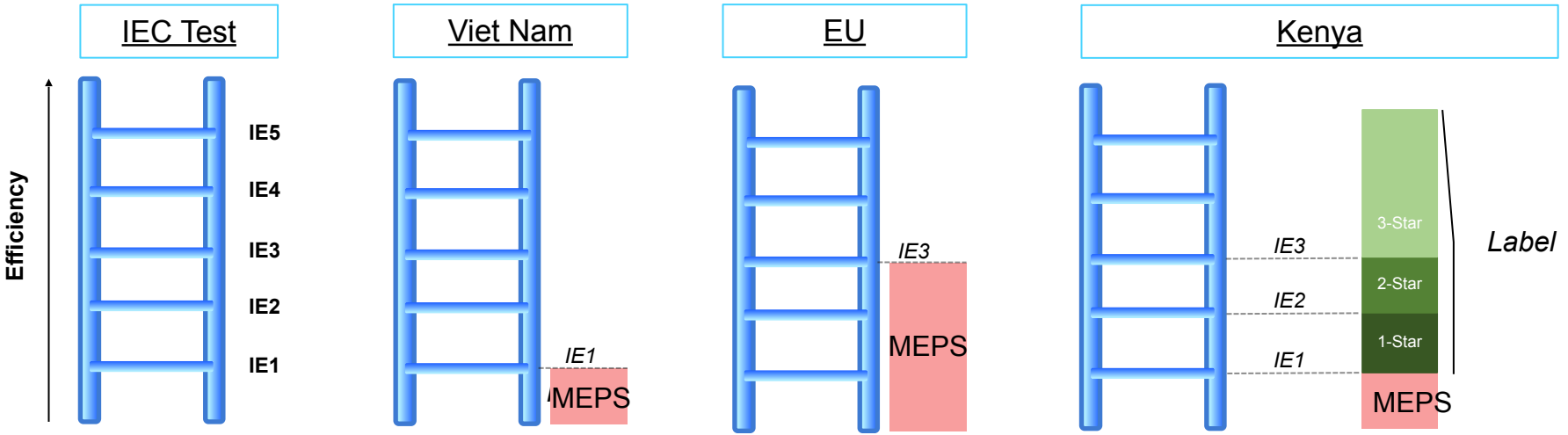
INCENTIVES

- **Rebates, grants and other financial offers** motivate consumers to buy highly efficient appliances.
- **Finance or taxation benefits** encourage manufacturers to produce appliances that are more efficient.
- **Well-designed procurement processes** can increase market share of highly efficient appliances and drive innovation.
- **Dynamic electricity pricing** helps incentivise flexible demand.

Performance Ladder Approach



Example: Motors – All countries employ the same ladder



All countries can use the same ladder for their policy thresholds.

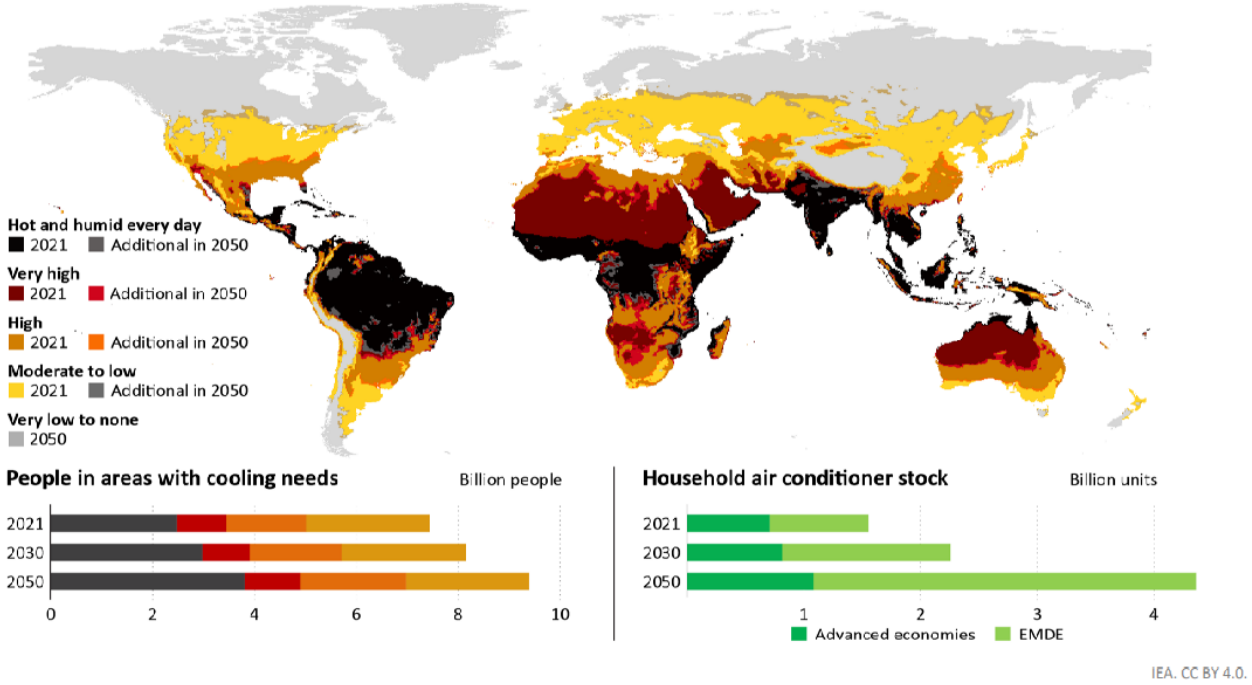
Viet Nam (IE1) and the EU (IE3) use different levels for Minimum Energy Performance Standards (MEPS).

Whilst, Kenya currently uses (IE) tiers for its 3-star energy labelling of new electric motors.

The benefit of this limited set of performance levels used globally is that manufacturers only have to test once and can design products to meet the limited set of performance levels. This reduces the cost of efficient products and can make policy setting more straightforward.

There is a rising population with growing cooling needs

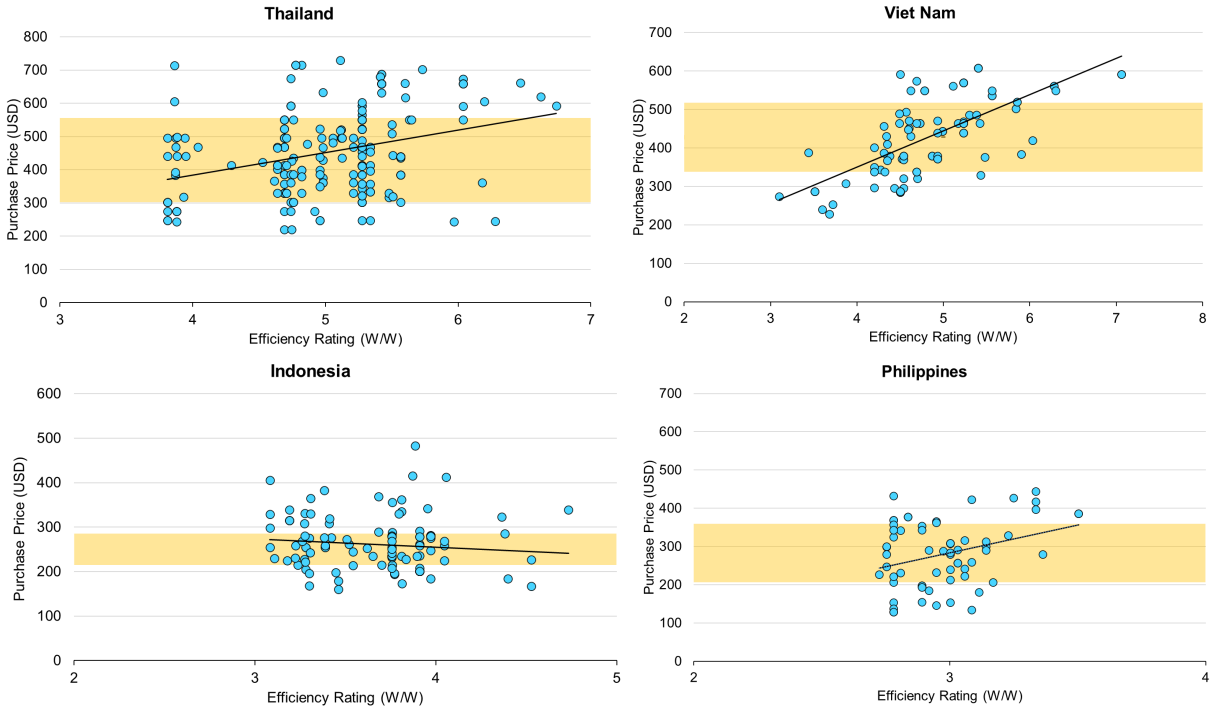
Space cooling needs and household AC stock in the STEPS, 2021-2050



The number of people living in areas with cooling needs expands by 25% to 2050, a key driver in rising energy needs for cooling

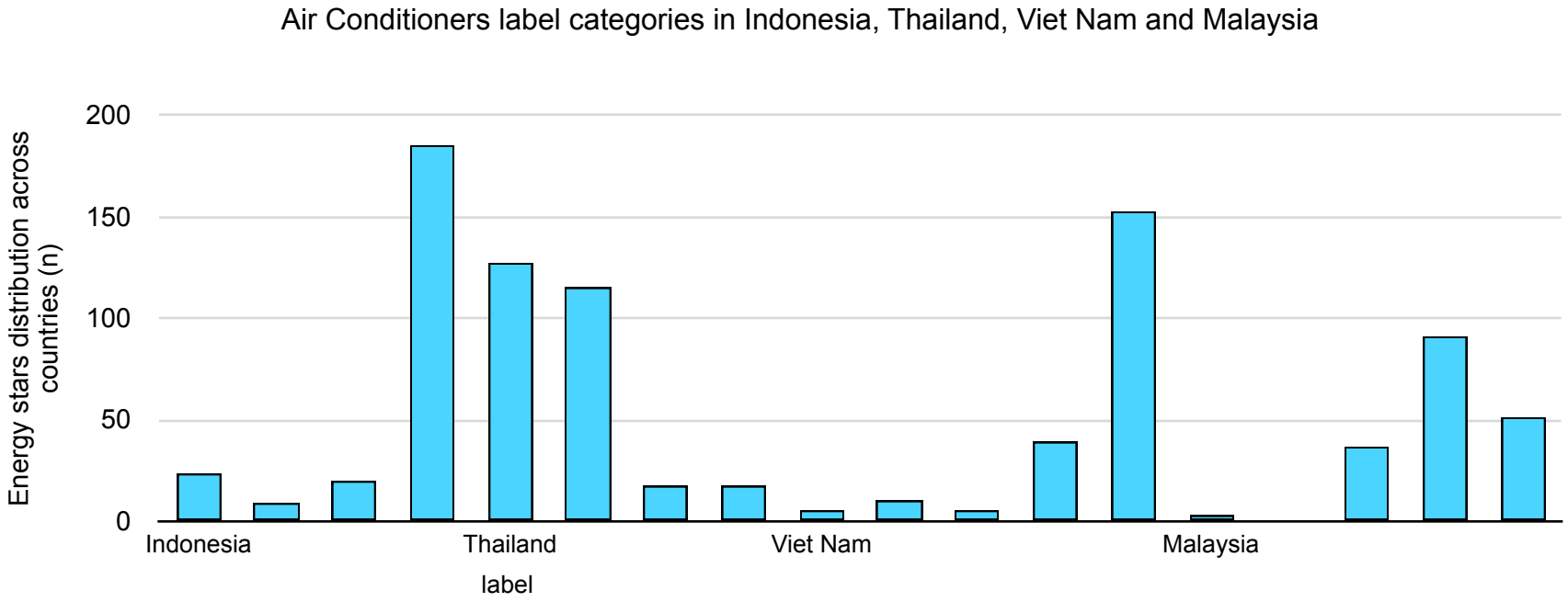
The power of data and analysis

Purchase Price and Efficiency in Thailand, Viet Nam, Indonesia and the Philippines



Market data shows that in Thailand, Viet Nam and Philippines consumers are able to purchase efficient air conditioners at the same price as low efficiency models.

Air conditioner label categories



In Indonesia, Malaysia, and Viet Nam most air conditioners have a high star rating, showing an opportunity to rescale labels and increase MEPS. In Thailand most products have low energy stars labels, showing an opportunity to push manufacturers to produce more efficient products

Key Takeaways

- **The current energy crisis is putting a spotlight on the importance of energy efficiency.**

- **Energy Efficiency policy is key to a successful energy transition** and can have multiple benefits by lowering energy consumption and carbon emissions, cutting energy bills, creating new, good quality skilled jobs, reducing government spending on subsidies, and supporting access to modern energy services.

- **A policy package** approach, which combines regulations, information, and incentives, can provide a holistic framework for an effective energy efficiency policy.

- **We need to convince Presidents and Ministers of Finance to resource energy efficiency** policy implementation to achieve these benefits by providing the evidence and tracking out comes.

- **The IEA would like to work with you to identify the data needs and support the analysis and messaging specifically for Africa so that all citizens benefit from energy efficiency.**