

COP26 Product Efficiency Call to Action

Doubling the energy efficiency of key products globally by 2030

12 NOVEMBER 2020



Super-efficient Equipment and Appliances Deployment Initiative (SEAD)

What is the Super-efficient Equipment and Appliances Deployment initiative?

- Founded in 2009 under the Clean Energy Ministerial and IPEEC
- Since 2016, the UK, European Commission and India have taken over as co-leads
- IEA has taken over operating duties in summer 2019

SEAD supports appliance energy efficiency policies and programmes for the 18 member countries. Through its activities, SEAD aims to:

Increase partner participation and engagement

Highlight the benefits and urgency of product efficiency

Increase awareness among manufacturers

Ahead of COP, we want to focus our action on four key product categories:
1) electric motors, 2) air conditioners, 3) refrigerators and 4) lighting.

We will track and monitor progress on these products through SEAD.

SEAD Members and Partners



Lawrence Berkeley
National Laboratory



COP26 Product Efficiency Call to Action

COP26 Product Efficiency Call to Action – Objectives



Double the efficiency of key products sold globally by 2030 - motors, air conditioners, refrigerators, lighting



Support the delivery of crucial **national climate change targets**



Provide consumers and businesses with more efficient products that are **affordable and cost-effective** to own and operate



Stimulate **innovation** and provide businesses with **export opportunities**

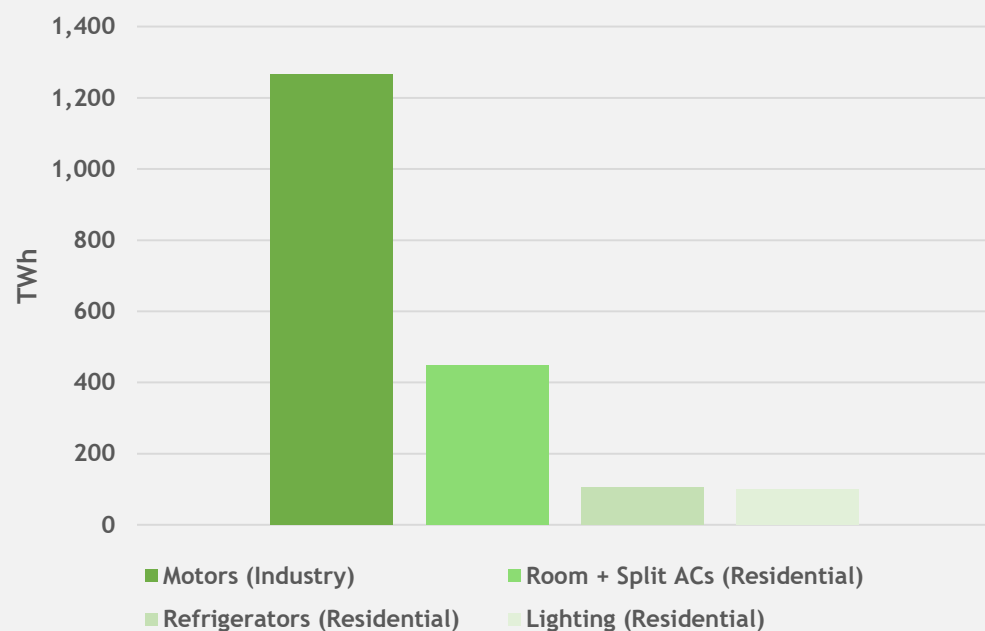


Promote a dual course of action making products both **energy efficient and climate friendly** by reducing the use of refrigerants in cooling appliances



Huge energy savings potential from product efficiency, especially industrial motors

Electricity consumption savings potential (TWh) in 2030 globally by product



Savings potential is equivalent to:



More than USD 230 billion in bill savings in 2030



640 avoided coal-fired power plants in 2030



Electricity savings in 2030 equivalent to the current consumption of India, France and Mexico combined

Assumptions: Motors savings potentials are based on differences between the Stated Policies Scenario (STEPS) and the Sustainable Development Scenario (SDS), savings for the other products are based on a separate model with aligned scenarios.

Consumer bill savings are based on current electricity prices in countries where savings accrue. The average coal-fired power plant is assumed to generate 3 TWh per year.

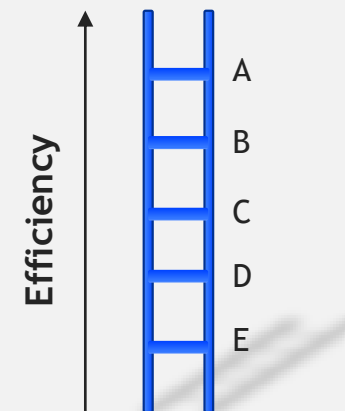
Source: IEA-Provisional estimates subject to change

Performance ladder as a basis to set energy efficiency criteria

Ladder steps can be used to define performance requirements, e.g. for:

- Minimum energy performance standards (MEPS)
- Label thresholds for both categorical labels and endorsement labels
- Requirements for rebates (such as obligation programmes)
- Requirements to appear on energy technology lists in general
- Future aspirational targets

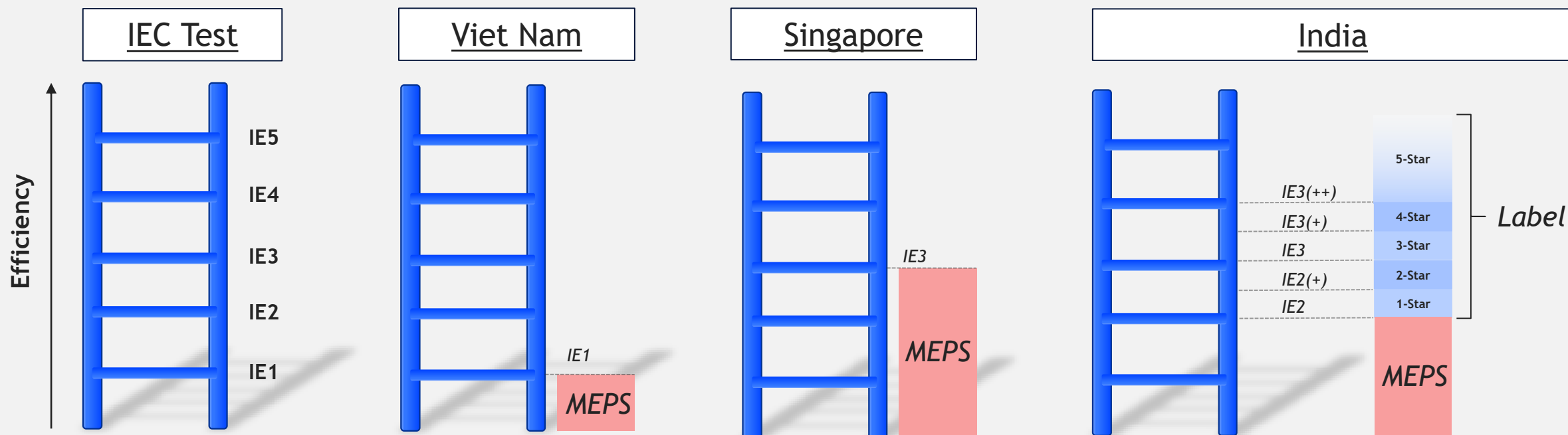
Ideally, steps are used by different policy tools in a coordinated way, and revised over time.



Key steps for developing an energy efficiency ladder:

1. Agree on testing procedures to measure energy efficiency
2. Define efficiency thresholds (tiers or steps on the ladder), plus other requirements
3. Map existing requirements
4. Set the target steps to climb the ladder

Example: Motors - All countries employ the same ladder

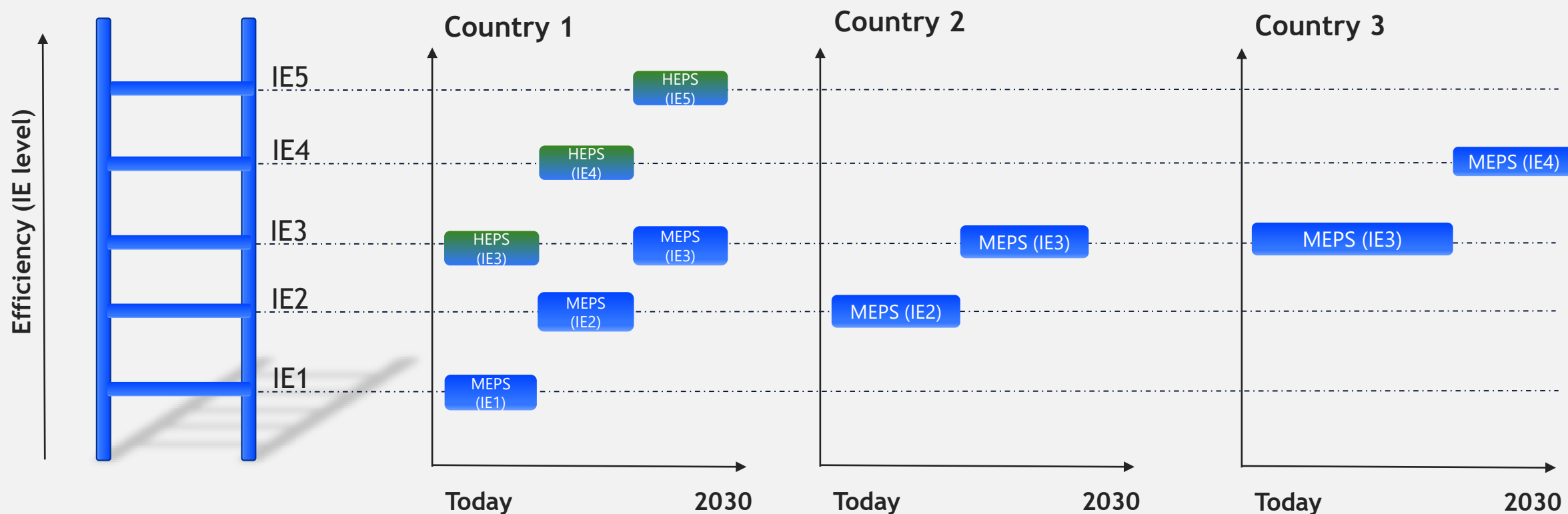


All countries can use the same ladder for their policy thresholds.

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

Whilst, India currently uses half (IE) tiers for its 5-star energy labelling of new electric motors.

Example: Motors - Setting future requirements

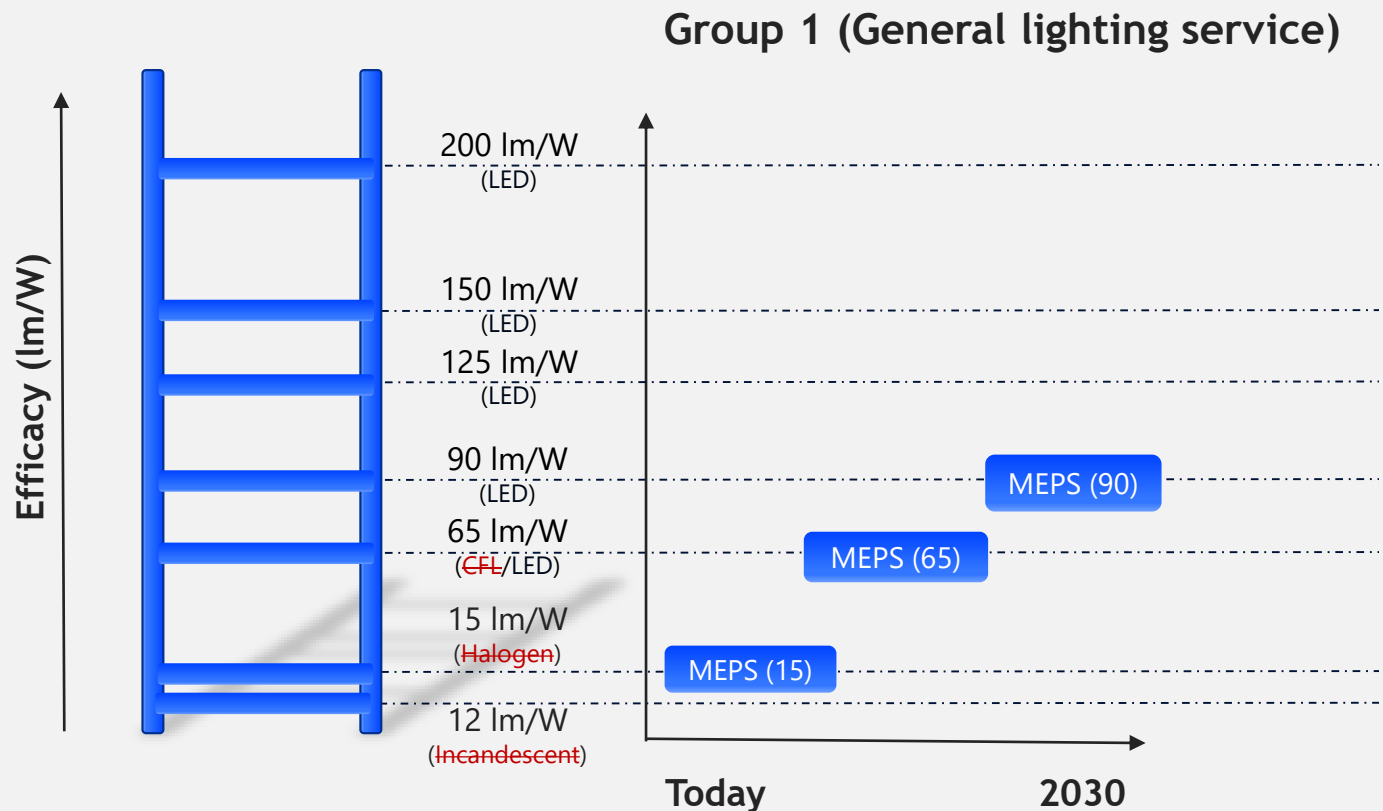


Countries and regions can set different future levels, implementing them at different times.

Identifying future HEPS levels will allow voluntary supporting policy to develop markets for higher efficiency, which can also be future MEPS levels.

The efficiency levels shown above are indicative.

Example: Lighting - Setting future requirements



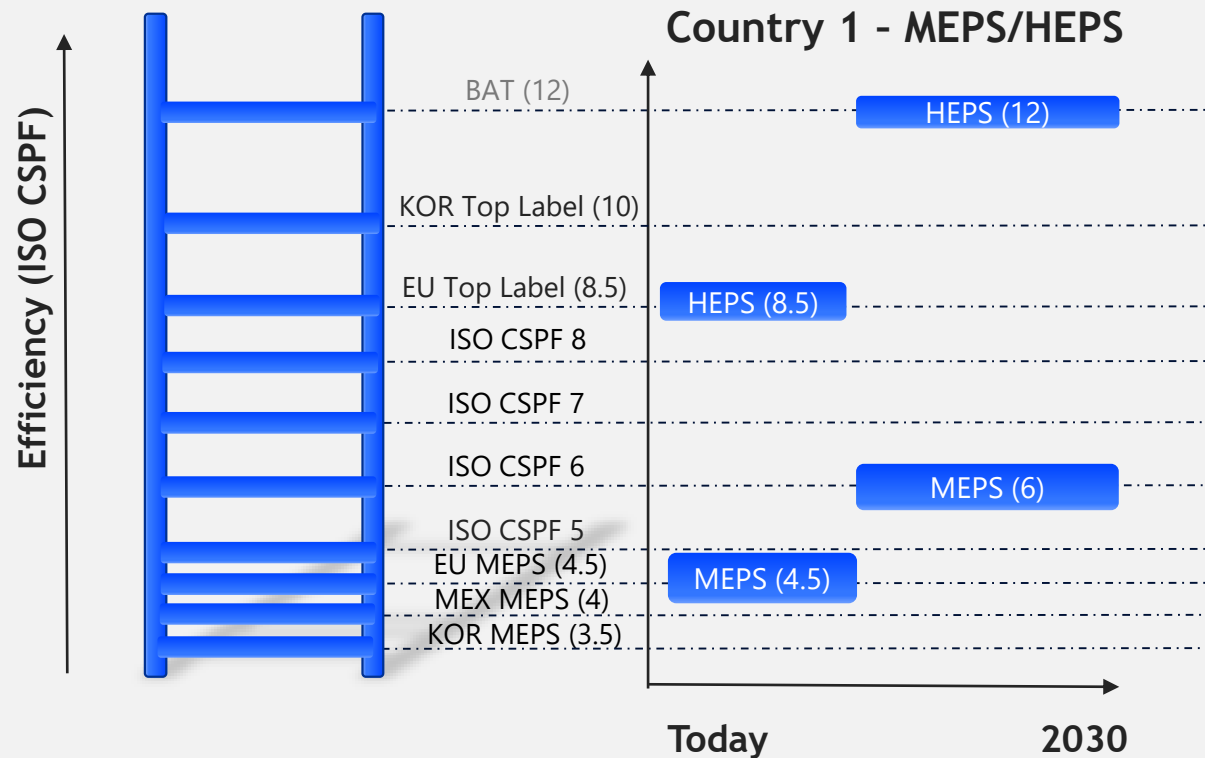
Beyond efficiency, additional criteria may be added to performance requirements, for example:

- Lifetime
- Lumen maintenance
- Start up time
- Colour rendering
- Mercury content
- Dust environment
- High/low temperature environment

Ideally targets are technology neutral, however efficacy specification can be linked to technology.

The efficacy levels shown above are indicative.

Example: Residential ACs - Setting future requirements



Beyond energy efficiency, additional criteria may included in the specification, for example:

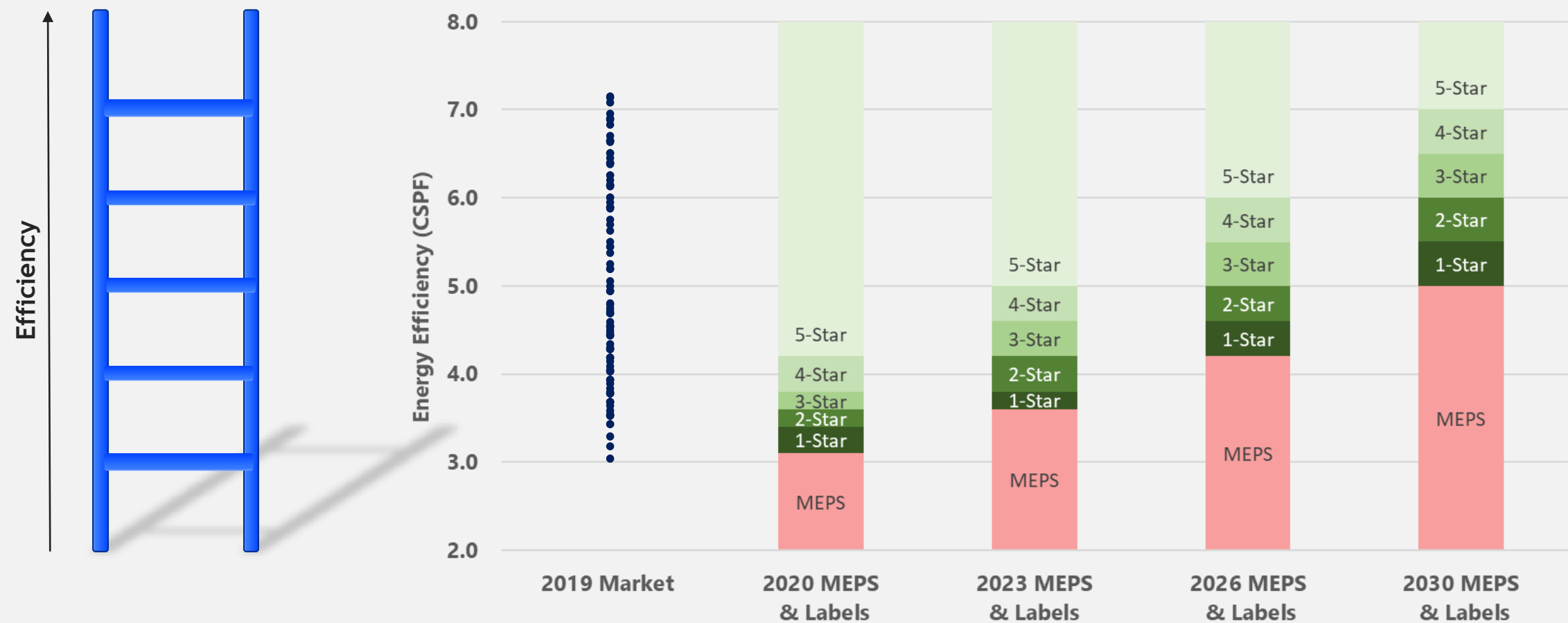
- Refrigerant requirement (low GWP)

Countries and regions can set different future levels (based on their own metrics), implementing them at different times.

AC testing metrics are converging, though differences remain, so not always cross-comparable.

The efficiency levels shown above are indicative.

Example: Residential ACs - Setting future requirements



The future efficiency levels shown above are indicative.

Summary and next steps

Summary of Call to Action

- Targeting four products for improved efficiency to 2030
- Defining future performance tiers, to better enable policy development
- Harmonising future performance regionally/internationally

Next steps

- Continue to raise ambition, and commitment to further raise ambition
- Set future policy pathway to deliver increased efficiency

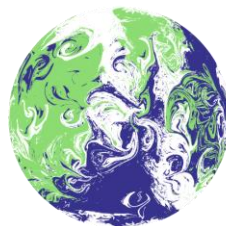


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