





# **COP26 Product Efficiency Call to Action**

Latin America Workshop

Kevin Lane, 11 February 2021



# Super-efficient Equipment and Appliances Deployment Initiative (SEAD)

### **SEAD SUPER-EFFICIENT** EQUIPMENT & APPLIANCE DEPLOYMENT

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

## What is the SEAD Initiative?

- Founded in 2009 under the Clean Energy Ministerial and IPEEC
- Co-lead by the UK, European Commission and India since 2016
- IEA has taken over operating duties in summer 2019

#### SEAD supports appliance energy efficiency policies and programmes for the 18 member countries by:

Increasing partner participation and engagement

Highlighting the benefits and urgency of product efficiency

Increasing 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
- 4) Lighting









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

## **SEAD Members and Partners**





National Laboratory

# SEAD IEC

# **COP26 Product Efficiency Call to Action**

Doubling the energy efficiency of key products globally by 2030







## **COP26 Product Efficiency Call to Action — Objectives**

As COP Presidents, the UK wants to drive international action on product energy efficiency policy. Ahead of COP26, the UK and IEA have launched a **call to action** to strengthen the **Super-efficient Equipment and Appliance Deployment (SEAD) Initiative** to support countries in achieving raised ambition **more quickly, easily and at a lower cost**. The objectives of the call to action are to:



Set countries on a trajectory to double the efficiency of key products sold globally by 2030 – electric 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



## Savings potential from product efficiency

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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

#### Huge energy savings potential from product efficiency, especially industrial motors

## Performance ladder as a basis to set energy efficiency levels SEAD C

#### 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

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

Costa Rica (IE1) and Brazil (IE3) use different levels for Minimum Energy Performance Standards (MEPS).

Whilst, Argentina currently uses IE tiers for its 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.

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## **Example: Lighting – Setting future requirements**



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

The efficacy levels shown above are indicative.

## Mapping performance levels

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#### Model regulations, GTS

<b>⊜</b> GEFF ≣		. Parts					PRODUCT CATALOGUE	EBRD GEFF VENDORS	Q			
CATEGORY		TEC Browse	HNC products th	LOGY C	ATALOGUE	try. Re	ad more					
Windows & Deors Insulation Boilers	pors ~		nary	Secondary	ndary Rated Cooling Capacity ≤ 4.5 kW < Rate Cooling Capacity ≤ 9.5 kW		4.5 kW < Rated Cooling Capacity ≤ 9.5 kW	9.5 kW < Rated Cooling Capacity ≤ 16.0 kW	Outdoor Temperature Bin Hours			
Heat pumps	Č [			0A	5.70		4.90	4.30			1	
Power & Cogeneration			1A		5.40		4.70	4.20				
Cooling Motors & Pumps Pracess Technologies	- - -	Grc (1	Clima (Tem Bin	ite Group perature Hours)	Grade	c	Rated Cooling Capacity ≤ 4.5 kW	4.5 kW < Rated C Capacity ≤ 9.5	ooling kW	9.5 kW Capa	/ < Rated Cooling acity ≤ 16.0 kW	
Transport	~		Group 1 (ISO 16358-1:	roup 1	High Efficiency		$8.00 \le CSPF$	7.60 ≤ CSPF 7		$7.10 \le CSPF$		
Domestic Appliances	~			16358-1:	Intermediate	7	.10 ≤ CSPF < 8.00	6.40 ≤ CSPF < 7	.60	5.80	≤ CSPF < 7.10	
Technology Catalogu	e ider	Grc	2	2013)	Low Efficiency	6	.10 ≤ CSPF < 7.10	5.10 ≤ CSPF < 6	i.40	4.50 ≤ CSPF < 5.80		
The EBRD has la	aunch		0A		High Efficiency		7.40 ≤ CSPF	7.00 ≤ CSPF		6.60 ≤ CSPF		
<ul> <li>The Technology</li> </ul>	Cata			Vodel	Intermediate	6	$6.60 \le \text{CSPF} < 7.40$	6.00 ≤ CSPF < 7	.00	5.50	≤ CSPF < 6.60	
The new tool w	ill sup		Regulation)		Low Efficiency	5	.70 ≤ CSPF < 6.60	4.90 ≤ CSPF < 6.00		4.30 ≤ CSPF < 5.50		
countries		Grc		1A	High Efficiency		7.00 ≤ CSPF	6.60 ≤ CSPF		6.20 ≤ CSPF		
			(Model		Intermediate	6	.20 ≤ CSPF < 7.00	5.70 ≤ CSPF < 6.60		5.20 ≤ CSPF < 6.20		
			Reg	ulation)	Low Efficiency	5	.40 ≤ CSPF < 6.20	4.70 ≤ CSPF < 5	70 ≤ CSPF < 5.70		4.20 ≤ CSPF < 5.20	
	l		2A		High Efficiency		$7.30 \leq CSPF$	6.90 ≤ CSPF		6.50 ≤ CSPF		
			(Model Regulation)		Intermediate	6	.50 ≤ CSPF < 7.30	5.90 ≤ CSPF < 6.90		5.40 ≤ CSPF < 6.50		
					Low Efficiency	5	.60 ≤ CSPF < 6.50	4.80 ≤ CSPF < 5.90		4.30	≤ CSPF < 5.40	
				3A	High Efficiency		7.00 ≤ CSPF	6.60 ≤ CSPF		6	5.20 ≤ CSPF	
			(1	(Model	Intermediate	6	.20 ≤ CSPF < 7.00	5.70 ≤ CSPF < 6	6.60	5.20	≤ CSPF < 6.20	
			Regulation)		Low Efficiency	5	.40 ≤ CSPF < 6.20	4.70 ≤ CSPF < 4	.70	4.20	≤ CSPF < 5.20	

#### **Cooling Plans, Roadmaps**



## **Example: Residential ACs – Setting future requirements**

Current Future Future - Indicative (Brazil, IDRS) (Brazil, CEE) (Brazil, IDRS) 12 10 Beyond efficiency, additional criteria may be Efficiency Efficiency 8 added to performance requirements, for А example: 6 Energy • Low GWP refrigerant Ban specific technology (e.g. Window Units) B 2 MEPS n 2020

Brazil has recently specified a new seasonal test procedure, and set future requirements

The 2030 efficiency levels shown above are indicative.

## Latin America — Current status of MEPS

		Domestic	Industrial	Domestic	
Countries	ACs	Refrigerators	Motors	Lighting	
Argentina					
Bahamas					
Barbados					
Plurinational State Of Bolivia					
Brazil					
Chile					
Cuba					
Dominican Republic					
Ecuador					
El Salvador					
Guatemala					
Jamaica					
Mexico					
Nicaragua					
Paraguay					
Peru					
Saint Lucia					Adopted
Uruguay					
Bolivarian Republic Of Venezuela					Under Development

Future MEPS standards offer opportunity for alignment, as well as labelling requirements

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#### **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

- Country commitment to further raise ambition
- Set future policy pathway to deliver increased efficiency





## Partners:



## SEAD SUPER-EFFICIENT EQUIPMENT & APPLIANCE DEPLOYMENT

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL





Asia-Pacific Economic Cooperation







IN PARTNERSHIP WITH ITALY