

Annex

Table 1: Current and Proposed MEPS for Split-type Air-conditioners

Type	Cooling capacity	Current MEPS	Proposed MEPS
Single-Split (inverter)	Up to 17.6kW	$\text{COP}_{\text{weighted}} \geq 4.04$	$\text{COP}_{\text{weighted}} \geq 4.86$
Single-Split (non-inverter)		$\text{COP}_{100\%} \geq 4.04$	$\text{COP}_{100\%} \geq 4.86$
Multi-Split (inverter)		$\text{COP}_{\text{weighted}} \geq 4.04$	$\text{COP}_{\text{weighted}} \geq 5.50$
Multi-Split (non-inverter)		$\text{COP}_{100\%} \geq 4.04$	$\text{COP}_{100\%} \geq 5.50$








- $\text{COP}_{\text{weighted}} = 0.4 \times \text{COP}_{100\%} + 0.6 \times \text{COP}_{50\%}$

Table 2: Current and Proposed MEPS for Refrigerators

Type of Refrigerators	Adjusted Volume (L)	Current MEPS	Proposed MEPS
Without freezer	Up to 900L	$AEC \leq [(368 + 0.892 \times V_{adj\ tot}) \times 0.461]$	$AEC \leq [(368 + 0.892 \times V_{adj\ tot}) \times 0.332]$
With freezer		$AEC \leq [(465 + 1.378 \times V_{adj\ tot}) \times 0.427]$	$AEC \leq [(465 + 1.378 \times V_{adj\ tot}) \times 0.312]$
With freezer and through-the-door ice dispenser		$AEC \leq [(585 + 1.378 \times V_{adj\ tot}) \times 0.409]$	$AEC \leq [(585 + 1.378 \times V_{adj\ tot}) \times 0.298]$

- $V_{adj\ tot}$ is defined as the sum of the adjusted volumes of the refrigerator compartments.
- 'Through-the-door ice dispenser' means an automatic ice maker coupled with a device that delivers ice on demand externally through a door.
- Annual Energy Consumption (AEC)

Table 3a: Revised Energy Label & Tick-Rating System for Lamps

Tick Ratings	Current Tick-Rating System			Revised Tick-Rating System	
	Energy Label	Incandescent, CFLi, LEDi Bulbs	CFLni, LEDni, T8 LFL/LED	Energy Label	All regulated lamp types
		Power consumption (P) in Watt	Rated Lamp Efficacy, η (lm/W) = ϕ/P		Rated Lamp Efficacy, η (lm/W) = ϕ/P
4-Tick					$\eta \geq 160$
3-Tick		$P \leq 0.17 \times (0.88\sqrt{\phi} + 0.049\phi)$	$\eta \geq 135$		$135 \leq \eta < 160$
2-Tick		$0.17 \times (0.88\sqrt{\phi} + 0.049\phi) < P \leq 0.24\sqrt{\phi} + 0.0103\phi$	$110 \leq \eta < 135$		$110 \leq \eta < 135$
1-Tick		$0.24\sqrt{\phi} + 0.0103\phi < P \leq 0.8 \times (0.88\sqrt{\phi} + 0.049\phi)$	$\eta < 110$		$\eta < 110$

- where $\eta = \phi/P$
- where P is the **rated** lamp power
- ϕ is the **rated** light output in lumen
- For covered CFLi, $P = P_{\text{covered CFLi}} \times 0.95$

Table 3b: Current and Proposed MEPS Lamps

Type of Lamps	Current MEPS	Revised MEPS	Others
Incandescent, CFLi, LEDi	$P_{\text{max}} = 0.24\sqrt{\phi} + 0.0103\phi$	$\eta_{\text{min.}} = 100 \text{ lm/W}$	IEC 62612:2018 test standard for LED Lamps IEC 60969:2016 test standard for CFLi
CFLni, LEDni, T8/T5 LED (500-1500mm)	N.A		
T8/T5 LFL (500-1500mm)	N.A	$\eta_{\text{min.}} = 75 \text{ lm/W}$	

- where $\eta = \phi/P$
- where P is the **rated** lamp power
- ϕ is the **rated** light output in lumen
- For covered CFLi, $P = P_{\text{covered CFLi}} \times 0.95$

Table 4: Proposed MEPS for TVs

Type	Proposed MEPS	Others
TV with resolution less than 33,177,600 pixels [non-8K TV]	$0.30 \times (20 + 4.3224 \times A) \geq P > 0.16 \times (20 + 4.3224 \times A)$	Passive standby power limits of 0.50W
TV with resolution of 33,177,600 pixels [8K TV]	$0.42 \times (20 + 4.3224 \times A) \geq P > 0.30 \times (20 + 4.3224 \times A)$	IEC 62087-3:2015 test standard

- “A” refers to screen area as expressed in square decimeters

Table 5: Introduction of MELS and MEPS for portable air-conditioner

Tick			1-Tick	2-Tick
Energy efficiency rating/ MEPS		MEPS	Low	Fair
Single-phase portable air conditioners having a single exhaust duct 12kW or lower	Proposed	$\text{COP}_{100\%} \geq 3.0$	$3.0 \leq \text{COP}_{100\%} < 3.25$	$\text{COP}_{100\%} \geq 3.25$