

Update on Proposed Unitary AC And HP Tier Levels



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CEE High Efficiency Commercial Air- Conditioning (HECAC) Initiative launched in 1993.

Goal:

- To encourage the proper installation and widespread use of high-efficiency air conditioners and heat pumps in commercial buildings.

Program Components:

- Unitary AC and HP Specification
- HVAC Quality Installation Guidelines (March 2001)

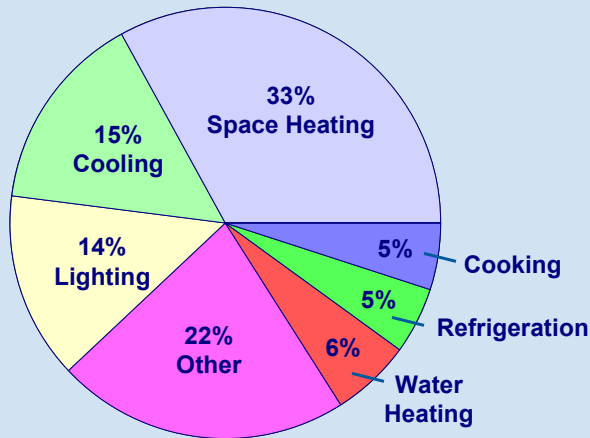
Participation:

- Today, 32 CEE Members are promoting the HECAC Initiative.



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HVAC is the highest energy consuming end use in typical commercial facilities.

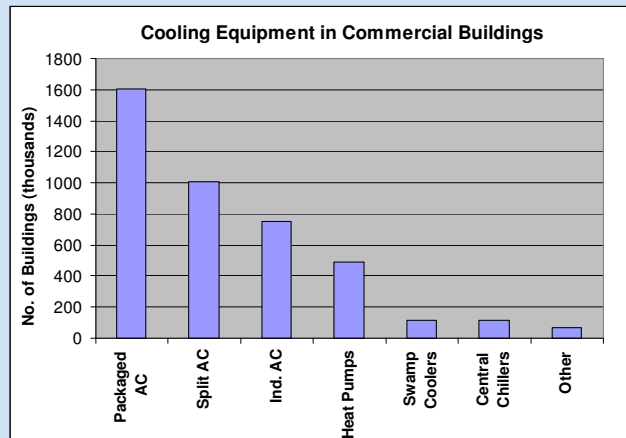


Source: Energy Information Administration CBECS 1999 Data



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Dominant heating and cooling equipment in commercial facilities are unitary.

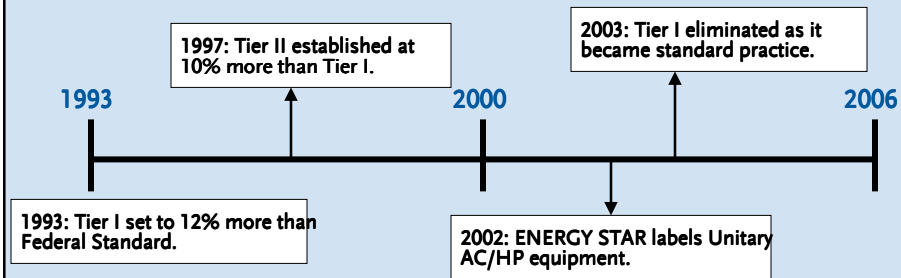


Source: Energy Information Administration CBECS 2003 Data



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CEE Unitary AC and HP tiers have evolved since Initiative launch.



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EPACT 2005 identifies Unitary AC and HP standards similar to CEE Tier II.

For units < 65,000 Btu/h

- Split and Packaged Systems:
 - 13 SEER (Seasonal Energy Efficiency Ratio)
 - 7.7 HSPF (Heating Seasonal Performance Factor)
- Effective on January 23, 2008

For units \geq 65,000 Btu/h

- Unitary AC levels similar to current CEE Tier II
- Effective on January 1, 2010



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Comparison of Unitary AC and HP efficiency levels.

Category (Btu/h)	Unitary AC (EER Values)				Unitary HP (EER and COP@47°F)			
	Current ASHRAE	ENERGY STAR	CEE Tier 2	2010 Federal	Current ASHRAE	ENERGY STAR	CEE Tier 2	2010 Federal
≥65,000 and <135,000	10.3/10.1	11	11	11.2/11	11/10.8 3.3	10.1 3.2	11 3.4	11/10.8 3.3
≥135,000 and <240,000	9.7/9.5	10.8	10.8	11/10.8	10.6/10.4 3.2	9.3 3.1	10.8 3.3	10.6/10.4 3.2
≥240,000 and <760,000	9.5/9.3	N/A	10	10/9.8	9.5/9.3 3.2	N/A	10 3.3	9.5/9.3 3.2
≥760,000	9.2/9.0	N/A	N/A	9.7/9.5	N/A	N/A	N/A	9.5/9.3 3.2



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Proposed Unitary AC Specification

Category (Btu/h)		UNITARY AC EQUIPMENT		
		CEE Tier I (Current Tier II)	CEE Tier II	CEE Tier III
< 65,000	Split	13 SEER 11.6 EER	14 SEER 12 EER	15 SEER 12.5 EER
	Packaged	13 SEER 11.3 EER	14 SEER 11.6 EER	15 SEER 12 EER
≥65,000 and <135,000		11.0 EER 11.4 IPLV	11.5 EER 11.9 IPLV	12.0 EER 12.4 IPLV
≥135,000 and <240,000		10.8 EER 11.2 IPLV	11.5 EER 11.9 IPLV	12.0 EER 12.4 IPLV
≥240,000 and <760,000		10.0 EER 10.4 IPLV	10.0 EER 12.0 IPLV	10.5 EER 12.0 IPLV
≥760,000		9.7 EER 10.1 IPLV	9.7 EER 11.0 IPLV	10.2 EER 11.0 IPLV



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Proposed Unitary HP Specification

Category (Btu/h)		UNITARY HP EQUIPMENT		
		CEE Tier I (Current Tier)	CEE Tier II	CEE Tier III
< 65,000	Split	8.0 HSPF	8.5 HSPF	9.0 HSPF
	Packaged	7.5 HSPF	8.0 HSPF	8.5 HSPF
≥65,000 and <135,000		3.4 COP 2.4 COP	N/A	N/A
≥135,000		3.3 COP 2.2 COP	N/A	N/A



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Industry provided feedback for committee consideration.

- Align small commercial equipment with CEE residential levels.
- Establish two EER values, similar to ASHRAE to distinguish between an electrical or gas heating section type.
- Work with industry to identify ways to use Integrated Partial Load Value (IPLV) for large unitary equipment (>740,000 Btu/h).



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Committee will focus on finalizing the specification by the end of 2006.

1	Distribute preliminary specification to industry	April 6, 2006
2	Deadline for feedback from industry.	May 25, 2006
3	Draft final specification considering all comments/feedback from committee and industry	Sept. 2006
4	Present to CEE Board for approval as a voluntary national specification	Oct/Nov 2006



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