

HVAC CEE Advanced Tier Analysis

Erica Schroeder, CEE
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Current Specifications for HVAC

Level	SEER	EER	HSPF
ENERGY STAR	14	11.5	8.2
CEE Tier 1	14	12	8.5
CEE Tier 2	15	12.5	8.5
CEE Advanced Tier	???	???	???

Is a new CEE Advanced Tier appropriate?



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AC Model Availability at Tier 2

Approximately 19,700 AC units currently qualify for CEE Tier 2

- OEMs \approx 15,000
- 3rd party coils \approx 4,700

This represents 18% of all ENERGY STAR AC units

- OEMs \approx 19%
- 3rd party coils \approx 14%



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New Furnace Issue

Do higher SEER and/or HSPF systems require a new furnace?

- At least 23% of all Tier 2 AC OEMs
- At least 3% of all E* AC OEMs



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CEE Tier 2 AC Model Characteristics

Average SEER \approx 15.5

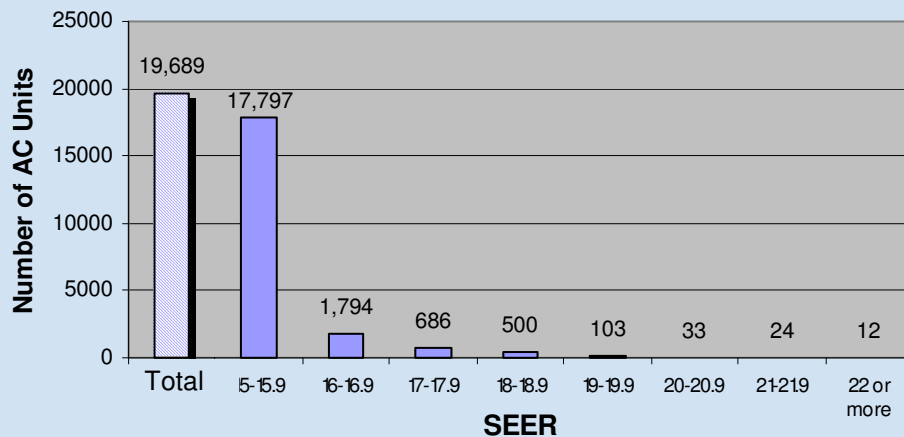
Maximum SEER = 23

- At least 12.5 EER



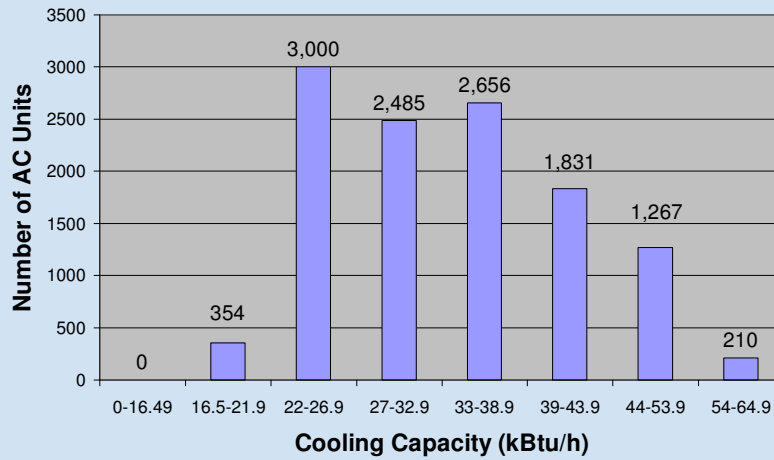
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Tier 2 AC Availability at ≥ 15 SEER



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Tier 2 AC Availability By Capacity



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Tier 2 AC Manufacturers

- 33 OEM brands, all major manufacturers
- 6 evaporator coil brands



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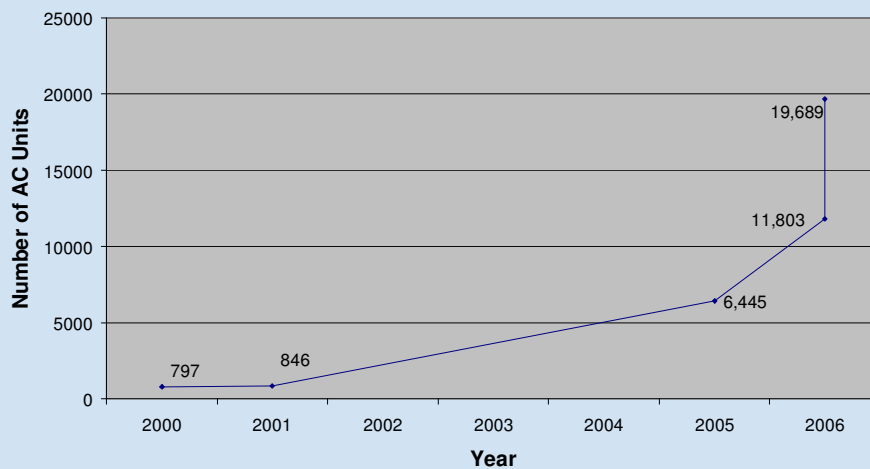
2006 Tier 2 Rebates – SMUD (CA)

	Tier 2 ↓	15	15	Proposed Advanced Tier ↓	16	17
SEER		15	15		16	17
EER		12.5	13		13	13
# Rebates		431	272		55	15
% Total Rebates		100%	63%		13%	3%



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Tier 2 AC Availability Over Time



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HP Model Availability at Tier 2

2,022 HP units currently qualify for CEE Tier 2

- OEMs = 1,944
- 3rd party Coils = 78

This represents 7% of all ENERGY STAR HP units

- OEMs \approx 7%
- 3rd party coils \approx 3%



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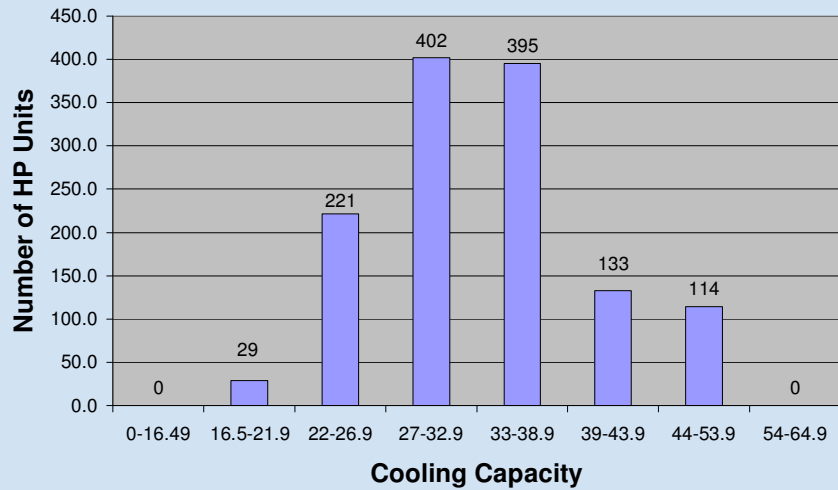
CEE Tier 2 HP Model Characteristics

ENERGY STAR only (w/o EER limit)	OEM	Coil
Average SEER	14.2	14.2
Average HSPF	8.3	7.9
Maximum SEER	14.9	14.5
Maximum HSPF	8.5	8.5

TIER 1 only (w/o EER limit)	OEM	Coil
Average SEER	14.2	14.4
Average HSPF	8.6	8.0
Maximum SEER	14.9	14.5
Maximum HSPF	9.7	9.7

TIER 2 and above (no limits)	OEM	Coil
Average SEER	15.5	16.2
Average HSPF	8.8	8.6
Maximum SEER	21	19
Maximum HSPF	11	8.95

Tier 2 HP Availability By Capacity



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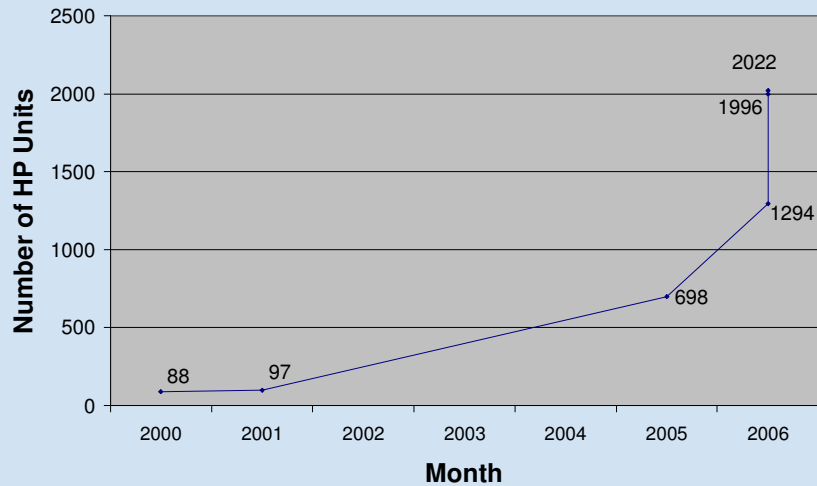
Tier 2 HP Manufacturers

- 23 OEM brands, most major manufacturers
- 2 indoor coil brands



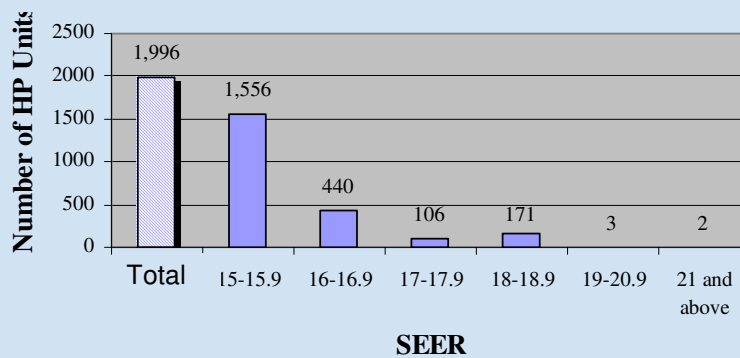
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Tier 2 HP Availability Over Time



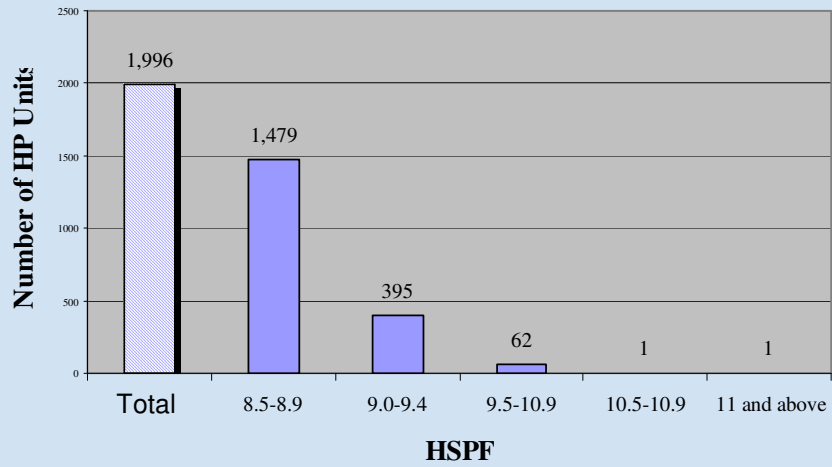
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Tier 2 HP Availability at ≥ 15 SEER



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Tier 2 HP Availability at ≥ 8.5 HSPF



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