

Table HC9.7 Air-Conditioning Usage Indicators by Climate Zone, 2005
Million U.S. Housing Units

Air-Conditioning Usage Indicators	Housing Units (millions)	Climate Zone ¹				
		Less than 2,000 CDD and --				2,000 CDD or More and Less than 4,000 HDD
		Greater than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Less than 4,000 HDD	
Total	111.1	10.9	26.1	27.3	24.0	22.8
Do Not Have Cooling Equipment	17.8	3.2	4.7	3.6	5.5	0.9
Have Cooling Equipment	93.3	7.7	21.4	23.7	18.5	21.9
Use Cooling Equipment.....	91.4	7.6	21.0	23.4	17.9	21.7
Have Equipment But Do Not Use it.....	1.9	Q	0.4	0.4	0.6	0.3
Type of Air-Conditioning Equipment^{2, 3}						
Central System	65.9	4.8	12.3	15.1	14.9	18.7
Without a Heat Pump.....	53.5	4.7	11.5	11.6	12.3	13.6
With a Heat Pump.....	12.3	Q	0.9	3.5	2.7	5.2
Window/Wall Units	28.9	3.1	9.3	8.8	4.0	3.7
1 Unit.....	14.5	2.1	5.0	3.6	2.4	1.4
2 Units.....	9.1	0.7	2.9	3.3	1.0	1.2
3 or More Units.....	5.4	0.3	1.5	1.9	0.6	1.1
Central Air-Conditioning Usage						
Air-Conditioned Floorspace (Square Feet)						
None.....	45.2	6.2	13.7	12.2	9.0	4.1
1 to 499.....	3.9	Q	0.7	0.6	1.2	1.2
500 to 999.....	15.0	0.7	2.6	2.8	4.3	4.7
1,000 to 1,499.....	15.6	0.8	2.7	3.3	4.0	4.8
1,500 to 1,999.....	11.1	0.7	2.2	2.4	2.1	3.8
2,000 to 2,499.....	7.0	0.8	1.2	1.9	1.3	1.8
2,500 to 2,999.....	5.2	0.5	1.1	1.4	1.0	1.2
3,000 or 3,499.....	2.7	0.3	0.7	0.9	0.4	0.4
3,500 to 3,999.....	1.8	0.3	0.4	0.6	0.3	Q
4,000 or More.....	3.5	0.4	0.9	1.1	0.5	0.6
Number of Rooms Cooled by Central Air-Conditioning in Summer 2005						
None.....	1.4	Q	0.3	Q	0.6	0.2
1.....	0.7	N	Q	Q	Q	Q
2.....	2.1	Q	0.5	0.4	0.5	0.5
3.....	7.5	0.4	1.4	1.3	2.0	2.4
4.....	7.9	0.4	1.2	1.8	1.9	2.6
5 or More.....	46.3	3.7	8.9	11.2	9.9	12.7
Proportion of Rooms Air-Conditioned						
None.....	1.4	Q	0.3	Q	0.6	0.2
Some, But Not all of the Rooms.....	8.4	0.7	1.8	1.6	2.4	1.9
All of the Rooms.....	56.1	4.0	10.2	13.2	12.0	16.6
Frequency of Central Air-Conditioner Use						
Never.....	1.4	Q	0.3	Q	0.6	0.2
Only a Few Times When Needed.....	11.4	1.7	3.1	2.3	3.5	0.9
Quite a Bit.....	12.6	1.6	3.3	2.8	2.9	2.0
All Summer.....	40.5	1.4	5.6	9.8	8.0	15.6

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At Home Behavior						
Home Used for Business						
Yes.....	6.4	0.7	1.0	1.5	1.4	1.8
No.....	59.5	4.0	11.3	13.6	13.5	16.9
Someone Home All Day						
Yes.....	32.7	1.8	6.4	7.2	7.7	9.6
No.....	33.1	2.9	5.9	7.9	7.2	9.2
Housing Unit Characteristics Affecting Usage in Centrally Air-Conditioned Housing Units						
Large Tree(s) that Shade the Home						
Yes.....	31.6	2.6	5.8	7.9	7.1	8.2
No.....	34.3	2.1	6.6	7.1	7.9	10.6
Adequacy of Insulation						
Well Insulated.....	29.5	2.6	5.7	7.2	6.7	7.4
Adequately Insulated.....	27.9	1.8	5.3	5.8	6.5	8.6
Poorly Insulated.....	7.3	0.4	1.2	2.0	1.5	2.3
No Insulation.....	0.3	N	Q	Q	Q	Q
Don't Know.....	0.9	Q	Q	Q	Q	0.3
Home Is Too Drafty During the Winter						
Never.....	42.6	3.1	7.3	9.0	9.6	13.6
Some of the Time.....	16.3	1.2	3.5	4.1	3.9	3.4
Most of the Time.....	2.5	Q	0.6	0.6	0.6	0.6
All of the Time.....	2.2	Q	0.5	0.8	0.5	0.4
Don't Know.....	2.2	Q	0.4	0.5	0.3	0.8
Unusually High Ceilings						
Yes.....	20.3	1.5	3.7	4.0	4.9	6.2
No.....	41.9	3.1	8.3	10.4	9.0	11.1
Not Asked (Mobile Homes).....	3.7	Q	0.4	0.7	1.0	1.4
Cathedral Ceilings (In Housing Units with High Ceilings)						
Yes.....	13.5	1.2	2.5	2.5	3.2	4.2
No.....	6.7	0.4	1.2	1.5	1.7	2.0
Type of Glass in Windows						
Single-pane Glass.....	27.4	1.3	3.1	4.4	7.1	11.5
Double-pane Glass						
Without Low-e Coating.....	31.5	2.4	7.4	8.9	6.8	6.0
With Low-e Coating.....	5.8	1.0	1.6	1.4	1.0	1.0
Triple-pane Glass						
Without Low-e Coating.....	0.8	Q	Q	Q	Q	Q
With Low-e Coating.....	Q	Q	Q	N	Q	Q
Proportion of Windows Replaced						
All.....	11.5	0.7	3.3	3.4	2.3	1.7
Some.....	11.1	1.2	2.4	2.7	2.2	2.6
None.....	40.9	2.8	6.3	8.3	10.1	13.5

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Thermostats						
Thermostat Available During Summer						
Yes.....	63.9	4.7	11.8	14.6	14.6	18.3
No.....	1.9	Q	0.6	0.5	0.4	0.5
Do Not Use Central Air-Conditioning.....	45.2	6.2	13.7	12.2	9.0	4.1
Use a Programmable Thermostat						
Yes.....	25.0	2.2	5.5	4.9	6.6	5.8
No.....	38.9	2.5	6.3	9.7	8.0	12.4
Use of Programmable Thermostats						
Adjusts Temperature During Day						
Yes.....	15.1	1.3	3.4	2.9	4.0	3.6
No.....	9.9	0.9	2.2	2.0	2.6	2.2
Adjusts Temperature at Night						
Yes.....	15.4	1.4	3.4	3.0	4.0	3.7
No.....	9.6	0.8	2.1	2.0	2.6	2.1
Do Not Use Central Air-Conditioning.....	45.2	6.2	13.7	12.2	9.0	4.1
Summer 2005 Temperature Settings						
Higher Temperature Settings						
Daytime When No One is Home						
Yes.....	0.5	N	Q	Q	Q	Q
No.....	50.8	2.9	8.5	12.1	10.2	17.1
Unknown.....	14.5	1.8	3.7	2.9	4.7	1.4
Do Not Use Central Air-Conditioning.....	45.2	6.2	13.7	12.2	9.0	4.1
At Night During Sleeping Hours						
Yes.....	7.3	0.3	1.2	1.5	1.4	2.9
No.....	44.3	2.6	7.5	10.8	9.0	14.4
Unknown.....	14.2	1.8	3.7	2.8	4.6	1.4
Do Not Use Central Air-Conditioning.....	45.2	6.2	13.7	12.2	9.0	4.1
Daytime Setting When Someone is Home						
Air Conditioner Turned On.....	52.0	3.0	8.7	12.3	10.6	17.4
69 Degrees or Less.....	4.8	0.3	1.0	1.7	1.1	0.6
70 Degrees.....	7.2	0.5	1.3	2.1	1.6	1.8
71 to 73 Degrees.....	8.8	0.5	2.0	2.2	2.0	2.1
74 to 76 Degrees.....	16.5	1.3	2.5	3.9	3.2	5.6
77 to 79 Degrees.....	11.1	0.4	1.6	1.8	2.1	5.2
80 Degrees or More.....	3.7	Q	0.4	0.7	0.5	2.1
Don't Know/No Answer.....	1.1	Q	Q	0.3	0.3	Q
Do Not Use Central Air Conditioning.....	45.2	6.2	13.7	12.2	9.0	4.1
Daytime Setting When No One is at Home						
Air Conditioner Turned On.....	49.5	2.7	8.2	12.1	9.5	17.0
69 Degrees or Less.....	3.6	Q	0.8	1.2	0.8	0.6
70 Degrees.....	5.2	0.3	1.0	1.7	1.1	1.1
71 to 73 Degrees.....	6.0	0.3	1.1	1.8	1.4	1.4
74 to 76 Degrees.....	13.8	1.2	2.4	3.6	2.6	4.0
77 to 79 Degrees.....	10.7	0.6	1.7	2.1	1.7	4.7
80 Degrees or More.....	10.2	0.3	1.2	1.6	2.0	5.2
Don't Know/No Answer.....	1.6	Q	0.3	0.3	0.6	Q
Air-Conditioner Turned Off.....	2.0	Q	0.4	Q	0.8	0.4
Do Not Use Central Air Conditioning.....	45.2	6.2	13.7	12.2	9.0	4.1

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		Less than 2,000 CDD and --					
		Greater than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Less than 4,000 HDD		
Setting During Seeping Hours							
Air Conditioner Turned On	51.0	2.8	8.6	12.2	9.9	17.4	
69 Degrees or Less.....	5.7	0.4	1.2	1.8	1.5	0.9	
70 Degrees.....	7.7	0.4	1.5	2.2	1.6	1.9	
71 to 73 Degrees.....	8.3	0.4	1.7	2.3	1.6	2.4	
74 to 76 Degrees.....	15.5	1.2	2.5	3.6	2.8	5.5	
77 to 79 Degrees.....	9.7	0.4	1.3	1.7	1.6	4.6	
80 Degrees or More.....	4.1	Q	0.5	0.7	0.9	2.0	
Don't Know/No Answer.....	1.3	Q	0.2	0.2	0.5	Q	
Air-Conditioner Turned Off.....	0.8	Q	Q	Q	0.4	Q	
Do Not Use Central Air Conditioning.....	45.2	6.2	13.7	12.2	9.0	4.1	
Dehumidifier Use Each Year							
Use a Humidifier.....	13.3	3.0	5.6	3.4	0.7	0.5	
1 to 3 Months Each Year.....	5.1	1.2	2.3	1.1	Q	Q	
4 to 6 Months Each Year.....	4.4	1.3	2.0	1.0	Q	Q	
7 to 9 Months Each Year.....	0.9	Q	0.4	0.3	Q	Q	
10 to 11 Months.....	Q	N	Q	Q	Q	N	
Turned on All Year Long.....	2.6	0.4	0.9	0.9	0.3	Q	
Do Not Use a Dehumidifier.....	97.8	7.9	20.4	23.9	23.2	22.3	
Window/Wall Air Conditioners							
Frequency Most Used Unit Was Used							
Never.....	0.6	Q	Q	Q	Q	Q	
Only a Few Times When Needed.....	12.1	1.5	4.2	3.8	1.7	0.9	
Quite a Bit.....	7.5	1.0	2.6	2.1	0.9	0.9	
All Summer.....	8.6	0.4	2.4	2.7	1.3	1.7	
Energy Star Wall/Window (Most-Used) Unit							
Yes.....	4.6	0.5	1.5	1.4	0.5	0.7	
No.....	2.7	0.3	0.8	0.7	0.3	0.5	
Don't Know.....	7.0	0.7	2.4	2.2	1.0	0.7	
Unit is More Than 4 Years Old.....	14.6	1.6	4.6	4.4	2.1	1.8	
Use a Swamp Cooler (Asked Only in Arid Areas)							
Yes.....	3.4	0.3	0.8	Q	1.1	0.5	
No.....	41.9	2.2	3.8	3.8	17.7	14.5	
Not Asked.....	65.8	8.5	21.5	22.8	5.3	7.9	

1. One of five climatically distinct areas, determined according to the 30-year average (1971-2000) of the annual heating and cooling degree-days. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

2. In the 2005 RECS 1.5 million housing units reported having both central and window/wall air conditioners.

3. The number of housing units using air-conditioning includes a small, undetermined number of housing units where the fuel for central air-conditioning was some fuel other than electricity; these housing units were treated as if the air-conditioning fuel was electricity.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See Glossary for definition of terms used in these tables.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 2005 Residential Energy Consumption Survey.