## **Residential Energy Consumption Surveys**

# 2001 Consumption and Expenditures Tables

# **Electric Air-Conditioning Expenditures Tables**

(20 pages, 82 kb)

Contents	Pages
CF2 1a Flactria Air Conditioning Energy Evpanditures in LLC Households by Climate Zone 2001	2
CE3-1e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Climate Zone, 2001	2
CE3-2e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Year of Construction, 2001	2
CE3-3e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Household Income, 2001	2
CE3-4e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Type of Housing Unit, 2001	2
CE3-7e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Four Most Populated States, 2001	2
CE3-8e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Urban/Rural Location, 2001	2
CE3-9e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Northeast Census Region, 2001	2
CE3-10e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Midwest Census Region, 2001	2
CE3-11e. Electric Air-Conditioning Energy Expenditures in U.S. Households by South Census Region, 2001	2
CE3-12e. Electric Air-Conditioning Energy Expenditures in U.S. Households by West Census Region, 2001	2

These data are from the 2001 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects energy-related data for occupied primary housing units. RECS was first conducted in 1978; the twelfth and most recent survey was conducted in 2001. In the 2001 RECS, data were collected from a sample of 4,822 households in housing units statistically selected to represent the 107.0 million housing units in the United States. The RECS data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

Data provided here are in the public domain and may be reproduced without permission. Appropriate credit would be appreciated. A suggested citation is "U.S. Department of Energy, Energy Information Administration, "A Look at Residential Energy Consumption in 2001."

#### **Electronic Products and Services**

Users can view and download selected pages or entire reports, search for information, download data and analysis applications, and find out about new information products and services.

**Contacts:** Stephanie J. Battles, Survey Manager (stephanie.battles@eia.doe.gov)

World Wide Web: http://www.eia.doe.gov/emeu/consumption

Table CE3-1e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Climate Zone, 2001

	iate 201						
				Climate Zone <sup>1</sup>			
			Fewer than 2,0	000 CDD and		2,000 CDD	
	Total	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD	or More and Fewer than 4,000 HDD	RSE
RSE Column Factor:	0.5 1.6	1.6	1.0	0.9	1.5	1.0	Row Factors
			М	illion Households	3		
Total U.S. Households  No/Don't Use Air-Conditioning  Electric Air-Conditioning <sup>2</sup> Central Air-Conditioning <sup>3</sup> Room/Wall Air-Conditioning	26.2 80.8 57.5	9.2 4.0 5.3 3.1 2.2	28.6 8.1 20.5 12.9 7.6	24.0 4.2 19.9 12.7 7.2	21.0 7.6 13.4 10.5 2.9	24.1 2.3 21.8 18.2 3.6	8.1 11.3 8.2 9.2 11.3
•				Billion Dollarsa			
Electric Air-Conditioning Expenditures Total Central Air-Conditioning	13.81	0.45 0.34	2.19 1.72	2.85 2.14	2.68 2.39	7.78 7.22	9.7 10.2
Room/Wall Air-Conditioning	2.13	0.12	0.47 <b>Doll</b> a	0.70 ars per Househol	0.29 <b>d</b> <sup>4,a</sup>	0.56	13.4
Electric Air-Conditioning Expenditures per Household Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	240	86 108 54	107 133 62	143 168 98	200 228 100	357 397 156	4.7 4.4 7.2
			2001 Cooling De	gree-Days (CDD)	per Household <sup>4</sup>		
2001 Cooling Degree-Days per							
Household Total U.S. Households	883 1,578 1,701	665 603 712 732 681	777 639 832 848 804	1,147 860 1,207 1,221 1,181	1,236 738 1,520 1,561 1,368	2,852 2,752 2,863 2,887 2,742	3.8 8.2 3.0 3.2 3.4
			Cooled Square	Footage (CSF) pe	er Household <sup>4</sup>		
Cooled Square Footage per Household							
Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	2,032	1,867 2,405 1,090	1,863 2,336 1,058	1,697 2,101 981	1,732 1,989 790	1,579 1,729 811	4.1 4.1 6.2

Table CE3-1e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Climate Zone, 2001 (Continued)

		•					
				Climate Zone <sup>1</sup>			
			2,000 CDD				
	Total	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD	or More and Fewer than 4,000 HDD	RSE
RSE Column Factor:	0.5	1.6	1.0	0.9	1.5	1.0	Row Factors
	'	Air-	Conditioning Inte	ensity <sup>4,a</sup> [Cents÷	(CDD×(CSF÷1000)	)}]	
Air-Conditioning Intensity Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	7.26 6.96 7.42	6.48 6.13 7.33	6.89 6.73 7.25	6.99 6.57 8.48	7.61 7.33 9.23	7.90 7.94 7.04	3.2 3.3 6.5

<sup>&</sup>lt;sup>1</sup> One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

<sup>&</sup>lt;sup>2</sup> The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (2.1 million).

<sup>&</sup>lt;sup>3</sup> The 2001 RECS reported 800,000 households having both central air-conditioning and room/wall air-conditioners, with 600,000 households using both central air-conditioning and 200,000 households using only room/wall air-conditioners. These room/wall air-conditioners are not included in the count of 23.3 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

<sup>&</sup>lt;sup>4</sup> Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

<sup>&</sup>lt;sup>a</sup> The row factor in this section is underestimated because it contains no error for estimating the end-use.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Table CE3-2e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Year of Construction, 2001

				Year of Co	nstruction			
	Total	1990 to 2001 <sup>1</sup>	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.9	1.1	1.1	1.1	1.0	0.8	RSE Row Factors
				Million Hous	seholds			
Total U.S. Households	107.0	15.5	18.2	18.8	13.8	14.2	26.6	4.2
No/Don't Use Air-Conditioning	26.2	2.1	2.5	4.6	3.6	4.0	9.5	8.7
Electric Air-Conditioning <sup>2</sup>	80.8	13.4	15.8	14.2	10.1	10.2	17.1	4.7
Central Air-Conditioning <sup>3</sup>	57.5	12.6	13.7	11.0	7.1	6.6	6.4	5.9
Room/Wall Air-Conditioning	23.3	0.8	2.1	3.1	3.1	3.5	10.8	8.7
-				Billion Do	llars <sup>a</sup>			
Electric Air-Conditioning Expenditures								
Total	15.94	3.33	3.56	3.17	1.84	1.75	2.30	7.2
Central Air-Conditioning	13.81	3.26	3.41	2.94	1.52	1.38	1.30	8.3
Room/Wall Air-Conditioning	2.13	0.07	0.15	0.23	0.31	0.37	1.00	11.6
-	Dollars per Household <sup>4,a</sup>							
Electric Air-Conditioning Expenditures per Household								
Electric Air-Conditioning	197	249	225	224	181	172	134	5.4
Central Air-Conditioning	240 91	259 84	248 73	266 74	215 103	208 105	204 93	5.9
Room/Wall Air-Conditioning	91	84	/3	74	103	105	93	8.0
-		20	001 Cooling I	Degree-Days	(CDD) per Ho	ousehold <sup>4</sup>		
2001 Cooling Degree-Days per Household								
Total U.S. Households	1,407	1,455	1,648	1,586	1,376	1,352	1,135	3.4
No/Don't Use Air-Conditioning	883	583	1,032	841	932	971	874	8.2
Electric Air-Conditioning	1,578	1,590	1,744	1,826	1,536	1,502	1,279	3.5
Central Air-Conditioning	1,701	1,608	1,838	1,957	1,606	1,544	1,412	4.1
Room/Wall Air-Conditioning	1,274	1,299	1,114	1,367	1,373	1,422	1,200	6.2
-			Cooled Squa	re Footage (0	CSF) per Hou	sehold <sup>4</sup>		
Cooled Square Footage per Household								
Electric Air-Conditioning	1,724	2,297	1,785	1,562	1,616	1,667	1,454	3.7
		0.070			4.040	0.040	0.400	1
Central Air-Conditioning Room/Wall Air-Conditioning	2,032 967	2,376	1,937	1,804	1,912 929	2,012	2,106	3.8

Table CE3-2e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Year of Construction, 2001 (Continued)

		•	•					
		Year of Construction						
	Total	1990 to 2001 <sup>1</sup>	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.9	1.1	1.1	1.1	1.0	0.8	RSE Row Factors
-	Air-Conditioning Intensity <sup>4,a</sup> [Cents÷{CDD×(CSF÷1000)}]							
Air-Conditioning Intensity Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	7.26 6.96 7.42	6.81 6.77 6.47	7.24 6.97 8.48	7.84 7.55 7.53	7.30 6.99 8.08	6.88 6.69 7.27	7.22 6.87 7.25	3.5 3.6 7.7

<sup>1</sup> New construction for 2001 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

The number of households, where the end use is electric air-conditioning, does not include households that did not use their equipment (2.1 million).

<sup>&</sup>lt;sup>3</sup> The 2001 RECS reported 800,000 households having both central air-conditioning and room/wall air-conditioners, with 600,000 households using both central air-conditioning and 200,000 households using only room/wall air-conditioners are not included in the count of 23.3 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

A Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.
 The row factor in this section is underestimated because it contains no error for estimating the end-use.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Table CE3-3e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Household Income, 2001

		T						$\overline{}$
			2001 House	hold Income			Eli- gible for	
	Total	Less than \$10,000	\$10,000 to \$29,999	\$30,000 to \$49,999	\$50,000 or More	Below Poverty Line	Fed- eral Assist- ance <sup>1</sup>	
RSE Column Factor:	0.6	1.7	1.0	1.0	0.8	1.4	0.9	RSE Row Factors
			I	Million H	ouseholds			
Total U.S. Households	107.0 26.2 80.8 57.5 23.3	11.0 4.2 6.9 3.2 3.7	30.6 8.8 21.7 13.7 8.0	27.1 6.1 21.0 15.2 5.8	38.3 7.1 31.2 25.3 5.9	15.0 5.9 9.1 4.5 4.7	33.8 11.3 22.6 12.4 10.1	3.3 6.9 3.9 5.5 5.9
-				Billion	Dollarsa			
Electric Air-Conditioning Expenditures Total Central Air-Conditioning Room/Wall Air-Conditioning	15.94 13.81 2.13	0.88 0.56 0.33	3.22 2.53 0.69	3.82 3.33 0.49	8.02 7.40 0.62	1.32 0.88 0.44	3.31 2.41 0.91	5.9 7.0 8.0
-				Dollars per	Household	4,a		
Electric Air-Conditioning Expenditures per Household Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	197 240 91	129 175 89	148 184 86	182 219 86	257 292 106	145 197 95	147 194 90	4.1 4.6 5.9
<u> </u>		2	001 Cooling	J Degree-Da	ıys (CDD) p	er Household <sup>4</sup>		
2001 Cooling Degree-Days per Household Total U.S. Households	1,407 883 1,578	1,423 974 1,696	1,444 994 1,627	1,396 896 1,542 1,687	1,381 682 1,541 1,638	1,435 1,029 1,696	1,372 972 1,572	3.1 5.2 3.1
Central Air-Conditioning Room/Wall Air-Conditioning	1,701 1,274	1,920 1,502	1,779 1,366	1,157	1,121	1,915 1,486	1,741 1,365	3.6 4.4
-			Cooled Squ	uare Footag	je (CSF) pe	r Household <sup>4</sup>		
Cooled Square Footage per Household Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	1,724 2,032 967	967 1,289 689	1,203 1,404 857	1,585 1,778 1,074	2,349 2,618 1,185	1,017 1,317 730	1,164 1,448 813	2.9 3.4 4.8

Table CE3-3e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Household Income, 2001 (Continued)

			•					
	Total	2001 Household Income					Eli- gible for	
		Less than \$10,000	\$10,000 to \$29,999	\$30,000 to \$49,999	\$50,000 or More	Below Poverty Line	Fed- eral Assist- ance <sup>1</sup>	
RSE Column Factor:	0.6	1.7	1.0	1.0	0.8	1.4	0.9	RSE Row Factors
-		Air-C	onditioning	Intensity <sup>4,3</sup>	[Cents÷{	CDD×(CSF÷1000	)}]	
Air-Conditioning Intensity Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	7.26 6.96 7.42	7.84 7.06 8.59	7.56 7.37 7.34	7.45 7.28 6.88	7.11 6.81 8.01	8.39 7.81 8.74	8.03 7.68 8.07	2.9 3.2 6.4

Below 150 percent of poverty line or 60 percent of median State income.

<sup>&</sup>lt;sup>2</sup> The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (2.1 million).

The 2001 RECS reported 800,000 households having both central air-conditioning and room/wall air-conditioners, with 600,000 households using both central air-conditioning and 200,000 households using only room/wall air-conditioners are not included in the count of 23.3 million households using room/wall air-conditioning.

Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

The row factor in this section is underestimated because it contains no error for estimating the end-use.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Table CE3-4e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Type of Housing Unit, 2001

			Type of Ho	ousing Unit		
			Apartments in	Buildings With		
	Total	Single-Family	Two to Four Units	Five or More Units	Mobile Homes	
RSE Column Factor:	0.5	0.5	1.5	1.4	1.8	RSE Row Factors
		·	Million Housel	nolds		
Total U.S. Households	107.0 26.2 80.8 57.5 23.3	73.7 16.1 57.6 43.6 13.9	9.5 3.2 6.3 3.2 3.1	17.0 5.2 11.8 7.1 4.7	6.8 1.7 5.1 3.5 1.6	4.4 8.4 4.9 6.7 7.7
	20.0	10.0	Billion Dolla		1.0	1
Electric Air-Conditioning Expenditures Total Central Air-Conditioning Room/Wall Air-Conditioning	15.94 13.81 2.13	12.70 11.29 1.41	0.85 0.59 0.26	1.51 1.20 0.30	0.88 0.72 0.16	8.0 9.2 10.5
-			Dollars per Hous	enoia <sup>v,a</sup>		
Electric Air-Conditioning Expenditures per Household Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	197 240 91	221 259 101	135 185 84	128 169 65	171 205 98	5.7 6.2 6.6
- -		2001 Cool	ing Degree-Days (C	DD) per Household	3	1
2001 Cooling Degree-Days per Household Total U.S. Households	1,407 883	1,421 919	1,282 825	1,389 751	1,485 1,059	4.2 7.4
Electric Air-Conditioning  Central Air-Conditioning  Room/Wall Air-Conditioning	1,578 1,701 1,274	1,561 1,646 1,295	1,511 1,952 1,058	1,673 1,957 1,240	1,623 1,627 1,613	4.3 5.0 5.4
-		Cooled	Square Footage (CS	F) per Household <sup>3</sup>		
Cooled Square Footage per Household Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	1,724 2,032 967	2,061 2,348 1,161	1,029 1,181 874	787 924 578	958 1,128 591	3.3 3.4 4.6

Table CE3-4e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Type of Housing Unit, 2001 (Continued)

		Type of Housing Unit					
			Apartments in	Buildings With			
	Total	Single-Family	Two to Four Units	Five or More Units	Mobile Homes		
RSE Column Factor:	0.5	0.5	1.5	1.4	1.8	RSE Row Factors	
-		Air-Conditioni	ng Intensity <sup>3,a</sup> [Cer	nts÷{CDD×(CSF÷10	00)}]		
Air-Conditioning Intensity Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	7.26 6.96 7.42	6.86 6.70 6.73	8.70 8.02 9.13	9.73 9.37 9.07	11.02 11.19 10.25	3.2 3.2 6.8	

<sup>1</sup> The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (2.1 million).

<sup>&</sup>lt;sup>2</sup> The 2001 RECS reported 800,000 households having both central air-conditioning and room/wall air-conditioners, with 600,000 households using both central air-conditioning and 200,000 households using only room/wall air-conditioners. These room/wall air-conditioners are not included in the count of 23.3 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

3 Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

a The row factor in this section is underestimated because it contains no error for estimating the end-use.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Table CE3-7e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Four Most Populated States, 2001

			Four Most Pop	oulated States				
	Total U.S.	New York	California	Texas	Florida			
RSE Column Factor:	0.4	0.9	1.5	1.5	1.3	RSE Row Factors		
			Million Househo	olds				
Total U.S. Households  No/Don't Use Air-Conditioning  Electric Air-Conditioning <sup>1</sup> Central Air-Conditioning <sup>2</sup>	107.0 26.2 80.8 57.5	7.1 2.4 4.7 1.3 3.4	12.3 7.2 5.2 3.9 1.2	12.3 7.2 5.2 3.9 1.2	6.3 Q 6.1 5.7 0.3	NE 6.3 3.7 8.1		
Room/Wall Air-Conditioning	23.3	3.4	Billion Dollars		0.3	13.5		
Electric Air-Conditioning Expenditures  Total  Central Air-Conditioning  Room/Wall Air-Conditioning	15.94 13.81 2.13	0.51 0.17 0.34	0.64 0.59 0.05	0.64 0.59 0.05	2.64 2.59 0.05	9.1 11.2 17.4		
_	Dollars per Household <sup>3,a</sup>							
Electric Air-Conditioning Expenditures per Household Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	197 240 91	109 134 100	125 150 41	125 150 41	436 454 146	6.7 8.8 11.5		
-		2001 Cooli	ng Degree-Days (CD	DD) per Household <sup>3</sup>				
2001 Cooling Degree-Days per Household Total U.S. Households	1,407 883 1,578 1,701 1,274	988 946 1,009 749 1,106	860 627 1,183 1,276 881	860 627 1,183 1,276 881	3,452 Q 3,434 3,398 4,022	5.0 4.9 5.0 7.2 8.4		
_	Cooled Square Footage (CSF) per Household <sup>3</sup>							
Cooled Square Footage per Household Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	1,724 2,032 967	1,149 1,852 886	1,374 1,640 512	1,374 1,640 512	1,682 1,732 Q	6.7 9.0 6.5		

Table CE3-7e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Four Most Populated States, 2001 (Continued)

	Four Most Populated States							
	Total U.S.	New York	California	Texas	Florida			
RSE Column Factor:	0.4	0.9	1.5	1.5	1.3	RSE Row Factors		
-		Air-Conditioni	ng Intensity <sup>3,a</sup> [Cen	ts÷{CDD×(CSF÷10	00)}]			
Air-Conditioning Intensity Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	7.26 6.96 7.42	9.39 9.64 10.17	7.67 7.19 9.05	7.67 7.19 9.05	7.55 7.71 4.12	4.7 6.0 7.7		

The number of households, where the end use is electric air-conditioning, does not include households that did not use their equipment (2.1 million).

The 2001 RECS reported 800,000 households having both central air-conditioning and room/wall air-conditioners, with 600,000 households using both central air-conditioning and 200,000 households using only room/wall air-conditioners. These room/wall air-conditioners are not included in the count of 23.3 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

<sup>&</sup>lt;sup>a</sup> The row factor in this section is underestimated because it contains no error for estimating the end-use.

NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.

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

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Table CE3-8e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Urban/Rural Location, 2001

			Urban/Rura	al Location <sup>1</sup>		
	Total	City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	0.8	1.3	1.2	1.3	RSE Row Factors
			Million Househ	nolds		
Total U.S. Households  No/Don't Use Air-Conditioning  Electric Air-Conditioning <sup>2</sup> Central Air-Conditioning <sup>3</sup> Room/Wall Air-Conditioning	107.0 26.2 80.8 57.5 23.3	49.9 14.3 35.6 23.6 12.0	18.0 4.6 13.4 8.6 4.8	21.2 2.7 18.6 15.8 2.7	17.9 4.6 13.3 9.4 3.9	4.2 7.8 4.3 5.1 7.4
- -			Billion Dolla	rs <sup>a</sup>		
Electric Air-Conditioning Expenditures  Total  Central Air-Conditioning  Room/Wall Air-Conditioning	15.94 13.81 2.13	6.83 5.71 1.12	2.15 1.72 0.43	4.53 4.29 0.24	2.44 2.09 0.35	6.1 6.5 9.1
-			Dollars per House	ehold <sup>4,a</sup>		
Electric Air-Conditioning Expenditures per Household Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	197 240 91	192 242 94	160 199 90	244 271 88	184 223 89	4.2 4.3 6.1
_		2001 Cooli	ng Degree-Days (C	DD) per Household	4	
2001 Cooling Degree-Days per Household Total U.S. Households	1,407 883 1,578 1,701 1,274	1,482 908 1,713 1,890 1,364	1,234 852 1,366 1,494 1,134	1,489 800 1,588 1,648 1,240	1,277 885 1,413 1,504 1,195	3.2 6.9 3.3 3.6 4.8
-		Cooled S	quare Footage (CS	F) per Household <sup>4</sup>		
Cooled Square Footage per Household Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	1,724 2,032 967	1,480 1,771 905	1,671 2,027 1,026	2,144 2,335 1,027	1,847 2,182 1,043	3.3 3.5 5.5

Table CE3-8e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Urban/Rural Location, 2001 (Continued)

		Urban/Rural Location <sup>1</sup>						
	Total	City	Town	Suburbs	Rural			
RSE Column Factor:	0.6	0.8	1.3	1.2	1.3	RSE Row Factors		
-	Air-Conditioning Intensity <sup>4,a</sup> [Cents÷{CDD×(CSF÷1000)}]							
Air-Conditioning Intensity Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	7.26 6.96 7.42	7.57 7.22 7.58	7.02 6.57 7.75	7.17 7.04 6.87	7.05 6.81 7.17	2.6 2.6 6.0		

Based on the household respondent's description rather than the Federal Government definition.

The number of households, where the end use is electric air-conditioning, does not include households that did not use their equipment (2.1 million).

The 2001 RECS reported 800,000 households having both central air-conditioning and room/wall air-conditioners, with 600,000 households using both central air-conditioning and 200,000 households using only room/wall air-conditioners. These room/wall air-conditioners are not included in the count of 23.3 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

<sup>&</sup>lt;sup>4</sup> Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

<sup>a</sup> The row factor in this section is underestimated because it contains no error for estimating the end-use.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Table CE3-9e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Northeast Census Region, 2001

			Northeast Census Regio	on			
			Census Division				
	Total U.S.	Total	Middle Atlantic	New England			
RSE Column Factor:	0.6	0.9	1.1	1.7	RSE Row Factors		
		Mill	ion Households				
Total U.S. Households	107.0	20.3	14.8	5.4	NE		
No/Don't Use Air-Conditioning	26.2	6.0	3.8	2.3	8.0		
Electric Air-Conditioning <sup>1</sup>	80.8	14.2	11.1	3.2	3.4		
Central Air-Conditioning <sup>2</sup>	57.5	5.7	4.9	0.8	8.9		
Room/Wall Air-Conditioning	23.3	8.5	6.1	2.4	5.6		
_	Billion Dollarsa						
Electric Air-Conditioning Expenditures							
Total	15.94	1.58	1.29	0.29	7.1		
Central Air-Conditioning	13.81	0.87	0.73	0.13	11.4		
Room/Wall Air-Conditioning	2.13	0.71	0.56	0.15	6.6		
_	Dollars per Household <sup>3,a</sup>						
Electric Air-Conditioning Expenditures per							
Household Electric Air-Conditioning	197	111	117	92	5.6		
Central Air-Conditioning	240	153	149	176	6.2		
Room/Wall Air-Conditioning	91	84	91	65	4.1		
_	2001 Cooling Degree-Days (CDD) per Household <sup>3</sup>						
- 2004 Cooling Degree Dave per Household							
2001 Cooling Degree-Days per Household Total U.S. Households	1,407	888	947	726	2.4		
No/Don't Use Air-Conditioning	883	820	916	659	5.0		
Electric Air-Conditioning	1,578	917	958	773	1.7		
Central Air-Conditioning	1,701	835	842	789	2.8		
Room/Wall Air-Conditioning	1,274	971	1,050	768	2.2		
_		Cooled Square F	ootage (CSF) per Ho	usehold <sup>3</sup>	_		
Cooled Square Footage per Household							
Electric Air-Conditioning	1,724	1,505	1,497	1,533	5.5		
Central Air-Conditioning	2,032	2,306	2,207	2,944	6.2		
Room/Wall Air-Conditioning	967	971	928	1,081	3.9		

Table CE3-9e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Northeast Census Region, 2001 (Continued)

		Northeast Census Region			
			Census	Division	
	Total U.S.	Total	Middle Atlantic	New England	
RSE Column Factor:	0.6	0.9	1.1	1.7	RSE Row Factors
_	Air-C	onditioning Intens	ity <sup>3,a</sup> [Cents÷{CDD:	×(CSF÷1000)}]	
Air-Conditioning Intensity Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	7.26 6.96 7.42	8.06 7.92 8.88	8.15 8.01 9.35	7.74 7.58 7.80	3.1 4.5 4.1

<sup>1</sup> The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (2.1 million).

<sup>&</sup>lt;sup>2</sup> The 2001 RECS reported 800,000 households having both central air-conditioning and room/wall air-conditioners, with 600,000 households using both central air-conditioning and 200,000 households using only room/wall air-conditioners are not included in the count of 3 Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applies to all occurrences of central air-conditioning, as applicable.
 <sup>a</sup> The row factor in this section is underestimated because it contains no error for estimating the end-use.

NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 2001 Residential Energy Consumption Survey.

Table CE3-10e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Midwest Census Region, 2001

		N	Midwest Census Region			
			Census	Division		
	Total U.S.	Total	East North Central	West North Central		
RSE Column Factor:	0.6	0.9	1.1	1.6	RSE Row Factors	
		Millio	on Households			
Total U.S. Households  No/Don't Use Air-Conditioning  Electric Air-Conditioning <sup>1</sup> Central Air-Conditioning <sup>2</sup> Room/Wall Air-Conditioning	26.2 80.8 57.5	24.5 4.3 20.2 14.3 5.8	17.1 3.7 13.4 9.5 3.9	7.4 0.7 6.7 4.8 1.9	NE 10.9 2.3 3.8 7.1	
	Billion Dollars <sup>a</sup>					
Electric Air-Conditioning Expenditures Total Central Air-Conditioning Room/Wall Air-Conditioning	13.81	2.49 2.08 0.41 <b>Dollars</b>	1.58 1.33 0.25 per Household <sup>3,a</sup>	0.91 0.76 0.16	5.1 6.4 9.1	
Electric Air-Conditioning Expenditures per						
Household  Electric Air-Conditioning  Central Air-Conditioning  Room/Wall Air-Conditioning	240	123 145 70	117 140 64	135 157 82	4.6 4.5 6.5	
	2	2001 Cooling Degre	e-Days (CDD) per H	lousehold <sup>3</sup>		
2001 Cooling Degree-Days per Household Total U.S. Households No/Don't Use Air-Conditioning Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	883 1,578 1,701	921 792 949 967 906 Cooled Square Fo	856 781 877 883 861 otage (CSF) per Ho	1,071 851 1,093 1,131 997 <b>usehold</b> <sup>3</sup>	3.5 3.7 3.7 3.8 4.4	
Cooled Square Footage per Household						
Electric Air-Conditioning  Central Air-Conditioning  Room/Wall Air-Conditioning	2,032	2,021 2,378 1,146	2,031 2,438 1,045	2,003 2,261 1,354	3.1 3.1 6.5	

### Table CE3-10e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Midwest Census Region, 2001 (Continued)

		Midwest Census Region				
			Census	Division		
	Total U.S.	Total	East North Central	West North Central	-	
RSE Column Factor:	0.6	0.9	1.1	1.6	RSE Row Factors	
_	Air-Conditioning Intensity <sup>3,a</sup> [Cents÷{CDD×(CSF÷1000)}]					
Air-Conditioning Intensity Electric Air-Conditioning	7.26 6.96 7.42	6.44 6.32 6.72	6.60 6.49 7.09	6.19 6.13 6.07	2.8 2.8 7.8	

<sup>1</sup> The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (2.1 million).

<sup>&</sup>lt;sup>2</sup> The 2001 RECS reported 800,000 households having both central air-conditioning and room/wall air-conditioners, with 600,000 households using both central air-conditioning and 200,000 households using only room/wall air-conditioners are not included in the count of 23.3 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

3 Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

a The row factor in this section is underestimated because it contains no error for estimating the end-use.

NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 2001 Residential Energy Consumption

Survey.

Table CE3-11e. Electric Air-Conditioning Energy Expenditures in U.S. Households by South Census Region, 2001

			Sou	th Census Region		
				Census Division		
	Total U.S.	Total	South Atlantic	East South Central	West south Central	
RSE Column Factor:	0.5	0.8	1.2	1.3	1.4	RSE Row Factors
			Million	Households		
Total U.S. Households	107.0 26.2 80.8 57.5 23.3	38.9 2.1 36.9 30.4 6.4	20.3 1.3 19.0 16.1 2.9	6.8 0.4 6.4 5.0 1.3	11.8 0.4 11.5 9.2 2.2	NE 16.1 1.6 2.8 9.0
_			Billio	on Dollars <sup>a</sup>		
Electric Air-Conditioning Expenditures Total Central Air-Conditioning Room/Wall Air-Conditioning	15.94 13.81 2.13	10.37 9.49 0.88	5.15 4.82 0.32	1.24 1.07 0.17 er Household <sup>3,a</sup>	3.99 3.60 0.39	4.3 4.7 11.7
_			Donars pe	i riouscrioid		
Electric Air-Conditioning Expenditures per Household Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	197 240 91	282 312 137	271 299 111	195 213 128	348 389 176	3.7 3.9 7.7
_		200	01 Cooling Degree-I	Days (CDD) per House	hold <sup>3</sup>	
2001 Cooling Degree-Days per Household						
Total U.S. Households  No/Don't Use Air-Conditioning  Electric Air-Conditioning  Central Air-Conditioning  Room/Wall Air-Conditioning	1,407 883 1,578 1,701 1,274	2,153 1,905 2,167 2,192 2,047	2,071 1,933 2,081 2,135 1,775	1,690 1,573 1,698 1,679 1,769	2,560 2,225 2,570 2,570 2,571	3.6 7.6 3.6 3.6 5.5
-		C	Cooled Square Foot	age (CSF) per Househo	old <sup>3</sup>	
Cooled Square Footage per Household Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	1,724 2,032 967	1,732 1,904 923	1,737 1,896 852	1,891 2,086 1,162	1,636 1,819 872	4.5 4.5 7.5

# Table CE3-11e. Electric Air-Conditioning Energy Expenditures in U.S. Households by South Census Region, 2001 (Continued)

				<u> </u>			
			Sou	th Census Region			
				Census Division			
	Total U.S.	Total	South Atlantic	East South Central	West south Central		
RSE Column Factor:	0.5	0.8	1.2	1.3	1.4	RSE Row Factors	
		Air-Conditioning Intensity <sup>3,a</sup> [Cents÷{CDD×(CSF÷1000)}]					
Air-Conditioning Intensity Electric Air-Conditioning Central Air-Conditioning Room/Wall Air-Conditioning	7.26 6.96 7.42	7.50 7.48 7.25	7.48 7.39 7.37	6.07 6.08 6.22	8.28 8.33 7.86	2.6 2.5 8.0	

<sup>1</sup> The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (2.1 million).

<sup>&</sup>lt;sup>2</sup> The 2001 RECS reported 800,000 households having both central air-conditioning and room/wall air-conditioners, with 600,000 households using both central air-conditioning and 200,000 households using only room/wall air-conditioners are not included in the count of 23.3 million households using room/wall air-conditioning.

<sup>&</sup>lt;sup>3</sup> Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

<sup>&</sup>lt;sup>a</sup> The row factor in this section is underestimated because it contains no error for estimating the end-use.

NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

<sup>•</sup> See "Glossary" for definition of terms used in this report.

Table CE3-12e. Electric Air-Conditioning Energy Expenditures in U.S. Households by West Census Region, 2001

	,	1					
			West Census Region				
			Census	Division			
	Total U.S.	Total	Mountain	Pacific			
RSE Column Factor:	0.4	1.1	1.9	1.3	RSE Row Factors		
		N	lillion Households				
Total U.S. Households  No/Don't Use Air-Conditioning Electric Air-Conditioning¹  Central Air-Conditioning²  Room/Wall Air-Conditioning	26.2 80.8 57.5	23.3 13.8 9.6 7.1 2.5	6.7 3.5 3.2 2.6 0.6	16.6 10.2 6.3 4.5 1.9	NE 7.6 7.2 8.5 10.1		
	Billion Dollars <sup>a</sup>						
Electric Air-Conditioning Expenditures Total Central Air-Conditioning Room/Wall Air-Conditioning	13.81	1.50 1.37 0.13	0.78 0.75 0.03 ars per Household <sup>3,a</sup>	0.72 0.62 0.09	8.7 8.8 14.3		
Electric Air-Conditioning Expenditures per							
Household  Electric Air-Conditioning  Central Air-Conditioning  Room/Wall Air-Conditioning	240	157 195 50	244 291 54	113 139 49	7.2 7.9 9.6		
	2001 Cooling Degree-Days (CDD) per Household <sup>3</sup>						
2001 Cooling Degree-Days per Household							
Total U.S. Households  No/Don't Use Air-Conditioning  Electric Air-Conditioning  Central Air-Conditioning  Room/Wall Air-Conditioning	883 1,578 1,701	1,125 784 1,615 1,771 1,176	1,917 1,361 2,527 2,821 1,342	804 586 1,155 1,170 1,119	6.2 6.5 7.7 8.1 9.8		
	Cooled Square Footage (CSF) per Household <sup>3</sup>						
Cooled Square Footage per Household Electric Air-Conditioning Central Air-Conditioning	2,032	1,394 1,660 643	1,383 1,568 640	1,399 1,713 644	5.7 6.4 6.7		

### Table CE3-12e. Electric Air-Conditioning Energy Expenditures in U.S. Households by West Census Region, 2001 (Continued)

			West Census Region		
			Census	Division	
	Total U.S.	Total	Mountain	Pacific	
RSE Column Factor:	0.4	1.1	1.9	1.3	RSE Row Factors
		Air-Conditioning Int	ensity <sup>3,a</sup> [Cents÷{CDD	«(CSF÷1000)}]	
Air-Conditioning Intensity					
Electric Air-Conditioning	7.26	6.97	6.98	6.98	4.0
Central Air-Conditioning	6.96	6.62	6.58	6.95	4.2
Room/Wall Air-Conditioning	7.42	6.67	6.27	6.84	10.0

<sup>1</sup> The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (2.1 million).

The 2001 RECS reported 800,000 households having both central air-conditioning and room/wall air-conditioners, with 600,000 households using both central air-conditioning and 200,000 households using only room/wall air-conditioners are not included in the count of 23.3 million households using room/wall air-conditioning.

3 Averages are for those households using and electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

a The row factor in this section is underestimated because it contains no error for estimating the end-use.

NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 2001 Residential Energy Consumption Survey.