APPENDIX D
ENERGY INFORMATION ADMINISTRATION
2001 REPORTS OF ENERGY CONSUMPTION AND EXPENDITURES

Table CE1-7c. Total Energy Consumption in U.S. Households by Four Most Populated States, 2001

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.2	0.9	1.5	1.5	
	Million Households					
Total U.S. Households	107.0	7.1	12.3	7.7	6.3	NE
Number of Households, Fuels Used (more than one may apply):						
Electricity[1]	107.0	7.1	12.3	7.7	6.3	NE
Natural Gas	66.9	5.4	10.5	4.9	1.3	4.1
Fuel Oil	8.7	2.2	Q	Q	Q	19.0
Kerosene	2.9	0.2	0.3	Q	Q	24.6
LPG	9.4	0.5	0.7	0.3	0.4	24.0
Wood	14.5	0.7	2.3	1.1	0.5	17.3
	Quadrillion Btu					
Total Btu Consumption, Fuels Used:						
Electricity						
Primary	11.63	0.43	0.75	1.17	0.98	4.6
Site	3.89	0.14	0.25	0.39	0.33	4.6
Natural Gas	4.84	0.39	0.49	0.28	0.03	9.4
Fuel Oil	0.71	0.16	Q	Q	Q	21.9
Kerosene	0.05	(*)	0.01	Q	Q	32.1
LPG	0.38	0.01	0.02	0.01	(*)	27.9
Wood	0.37	0.06	0.04	0.01	(*)	21.8
Total (excludes primary electricity and wood)	9.86	0.70	0.77	0.68	0.37	3.1
	Physical Units					
Physical Units of Total Consumption, Fuels Used:						
Electricity (billion kWh)	1,140	42	73	115	97	4.6
Natural Gas (billion cf)	4,708	378	475	271	33	9.4
Fuel Oil (million gallons)	5,105	1,123	Q	Q	Q	21.9
Kerosene (million gallons)	348	29	41	Q	Q	32.1
LPG (million gallons)	4,121	93	231	96	40	27.9
Wood (million cords)	18.7	2.8	1.8	0.6	0.2	21.8
	Million Btu per Household[2]					
Total Btu Consumption per Household, Fuels Used:						
Electricity						
Primary	108.7	60.9	60.7	152.4	155.6	4.6
Site	36.4	20.4	20.3	51.0	52.0	4.6
Natural Gas	72.4	71.4	46.3	57.0	26.3	6.6
Fuel Oil	81.7	70.9	Q	Q	Q	5.2
Kerosene	16.1	22.3	20.4	Q	Q	31.7
LPG	40.2	16.9	30.7	30.7	9.8	20.0
Wood	25.9	80.5	15.3	11.1	8.9	15.9
Total (excludes primary electricity and wood)	92.2	99.0	62.3	88.5	58.1	3.1

See footnotes at end of table.

Table CE1-7c. Total Energy Consumption in U.S. Households by Four Most Populated States, 2001 (Continued)

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.2	0.9	1.5	1.5	
	Physical Units per Household[2]					
Physical Units of Total Consumption per Household, Fuels Used:						
Electricity (kWh)	10,656	5,974	5,948	14,937	15,250	4.6
Natural Gas (thousand cf)	70	69	45	55	26	6.6
Fuel Oil (gallons)	589	511	Q	Q	Q	5.2
Kerosene (gallons)	119	165	151	Q	Q	31.7
LPG (gallons)	440	185	336	336	108	20.0
Wood (cords)	1.3	4.0	0.8	0.6	0.4	15.9
	Million Households					
Number of Households, Where the End Use Is:						
Space Heating[3]	105.3	7.0	11.8	7.7	6.2	0.7
Electric Air-Conditioning[4]	80.8	4.7	5.2	7.4	6.1	2.6
Water Heating[5]	106.7	7.0	12.2	7.6	6.3	NE
Refrigerators	106.8	7.1	12.3	7.7	6.3	NE
Appliances	107.0	7.1	12.3	7.7	6.3	NE
	Quadrillion Btu[a]					
Total Btu Consumption, Where the End Use Is:						
Space Heating	4.62	0.41	0.27	0.20	0.03	6.7
Electric Air-Conditioning	0.62	0.01	0.02	0.11	0.10	8.1
Water Heating	1.68	0.13	0.20	0.12	0.06	3.6
Refrigerators	0.53	0.03	0.04	0.05	0.04	4.0
Other Appliances and Lighting	2.40	0.13	0.24	0.20	0.14	3.2
	Million Btu per Household[2,a]					
Total Btu Consumption per Household, Where the End Use Is:						
Space Heating	43.9	58.5	22.6	25.9	5.0	6.8
Electric Air-Conditioning	7.7	2.4	3.3	14.8	16.6	6.5
Water Heating	15.8	18.1	16.2	15.9	9.6	3.5
Refrigerators	5.0	3.7	3.5	6.7	6.3	3.9
Other Appliances and Lighting	22.5	18.4	19.7	25.9	21.4	3.2

[1] The RECS cannot be used to accurately estimate the number of households that do not use electricity.

[2] The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

[3] Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

[4] The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

[5] Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

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

(*) = Value rounds to zero in the units displayed.

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.

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

Table CE1-7e. Total Energy Expenditures in U.S. Households by Four Most Populated States, 2001

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.2	0.9	1.6	1.5	
	Million Households					
Total U.S. Households	107.0	7.1	12.3	7.7	6.3	NE
Number of Households, Fuels Used (more than one may apply):						
Electricity[1]	107.0	7.1	12.3	7.7	6.3	NE
Natural Gas	66.9	5.4	10.5	4.9	1.3	4.1
Fuel Oil	8.7	2.2	Q	Q	Q	19.9
Kerosene	2.9	0.2	0.3	Q	Q	25.5
LPG	9.4	0.5	0.7	0.3	0.4	24.0
Wood	14.5	0.7	2.3	1.1	0.5	17.3
	Billion Dollars					
Total Expenditures, Fuels Used:						
Electricity	100.34	6.16	8.86	9.97	8.63	4.5
Natural Gas	46.98	4.51	5.09	2.43	0.51	7.8
Fuel Oil	6.31	1.36	Q	Q	Q	23.0
Kerosene	0.52	0.04	0.06	Q	Q	35.4
LPG	5.60	0.16	0.38	0.13	0.09	25.0
Total	159.74	12.23	14.42	12.53	9.23	3.6
	Dollars per Household[2]					
Total Expenditures per Household, Fuels Used:						
Electricity	938	870	719	1,300	1,364	4.5
Natural Gas	702	829	483	497	386	5.9
Fuel Oil	737	624	Q	Q	Q	5.8
Kerosene	178	222	222	Q	Q	30.8
LPG	605	321	549	447	262	15.5
Total	1,493	1,727	1,168	1,634	1,458	3.6
	Dollars per Million Btu[2]					
Average Price of Btu Consumption, Fuels Used:						
Electricity	25.80	42.67	35.37	25.50	26.21	2.3
Natural Gas	9.70	11.61	10.42	8.72	14.70	4.0
Fuel Oil	8.91	8.72	Q	Q	Q	1.3
Kerosene	11.09	9.96	10.85	Q	Q	5.6
LPG	14.87	19.07	17.88	14.57	24.23	7.7
Total	16.19	17.44	18.76	18.47	25.11	1.8

See footnotes at end of table.

Table CE1-7e. Total Energy Expenditures in U.S. Households by Four Most Populated States, 2001 (Continued)

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.2	0.9	1.6	1.5	
	Price per Physical Unit[2]					
Average Price of Physical Units of Consumption, Fuels Used:						
Electricity (cents per kWh)	8.8	14.6	12.1	8.7	8.9	2.3
Natural Gas (dollars per thousand cf)	9.98	11.95	10.72	8.98	15.13	4.0
Fuel Oil (dollars per gallon)	1.24	1.21	Q	Q	Q	1.3
Kerosene (dollars per gallon)	1.50	1.35	1.46	Q	Q	5.6
LPG (dollars per gallon)	1.36	1.74	1.63	1.33	2.21	7.7
	Million Households					
Number of Households, Where the End Use Is:						
Space Heating[3]	105.3	7.0	11.8	7.7	6.2	NE
Electric Air-Conditioning[4]	80.8	4.7	5.2	7.4	6.1	2.6
Water Heating[5]	106.7	7.0	12.2	7.6	6.3	NE
Refrigerators	106.8	7.1	12.3	7.7	6.3	NE
Appliances	107.0	7.1	12.3	7.7	6.3	NE
	Billion Dollars[a]					
Total Expenditures, Where the End Use Is:						
Space Heating	50.53	4.57	3.24	2.32	0.64	6.7
Electric Air-Conditioning	15.94	0.51	0.64	2.83	2.64	8.3
Water Heating	21.61	1.51	2.32	1.49	1.39	3.5
Refrigerators	14.38	1.18	1.53	1.31	1.05	4.1
Other Appliances and Lighting	57.28	4.46	6.69	4.58	3.51	3.5
	Dollars per Household[2,a]					
Total Expenditures per Household, Where the End Use Is:						
Space Heating	480	658	274	302	103	6.8
Electric Air-Conditioning	197	109	125	384	436	6.8
Water Heating	203	214	190	196	220	3.4
Refrigerators	135	167	125	171	166	4.0
Other Appliances and Lighting	535	630	542	597	554	3.5

[1] The RECS cannot be used to accurately estimate the number of households that do not use electricity.

[2] The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

[3] Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

[4] The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

[5] Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

[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.

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.

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

APPENDIX E
ENERGY INFORMATION ADMINISTRATION
1993 REPORTS OF ENERGY CONSUMPTION AND EXPENDITURES

ENERGY PREVIEW

Energy Preview:

Household Energy Consumption and Expenditures 1993

Preliminary Estimates

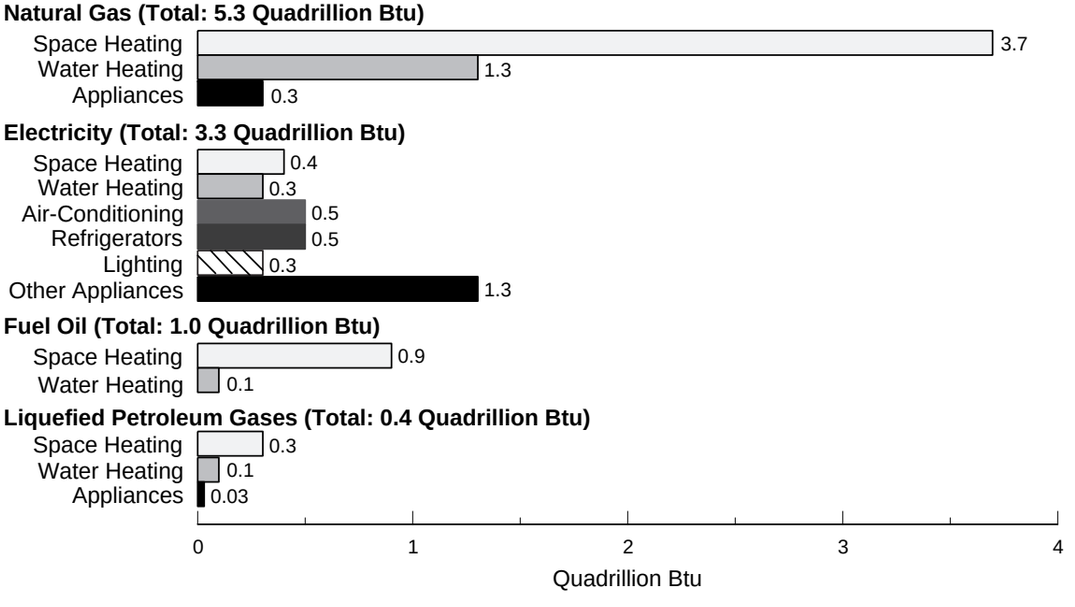
The preliminary estimates of household energy consumption and expenditures in this Energy Preview are taken from the 1993 Residential Energy Consumption Survey (RECS), a national multistage probability sample survey that the Energy Information Administration (EIA) conducts every 3 years. The RECS gathers data primarily by means of personal interviews with householders and a mail survey of those households' energy suppliers. The 1993 RECS sample included more than 7 thousand households and increased the subsample of new homes by a factor of nearly three over the 1990 RECS subsample to better assess changes in consumption behavior and the effects of climate, energy conservation efforts, and energy prices on residential energy consumption.

The scope of the 1993 RECS was further broadened to encompass a number of new items, reflecting EIA's efforts to better understand the factors that affect the amount of energy consumed for various end uses (Figure 1). The expanded survey included an entire sequence of questions concerning indoor light usage. The survey also sought to collect more data concerning hot water usage by asking respondents about their use of washing machines and dishwashers, as well as about the number of showers or baths taken each week. EIA now has first-time estimates of electricity used for lighting (940 kilowatthours per year), electric clothes dryers (875 kilowatthours per year), electric ranges and ovens (458 kilowatthours per year), and dishwashers (299 kilowatthours per year).

Average total energy consumption per household was 103.6 million Btu in 1993 (Table 1), compared with 98.1 million Btu in 1990. The increase reflects primarily greater energy use for space heating during the winter (which was colder than that of 1990) and for appliances, but other uses contributed as well.

A companion report published in June 1995, *Housing Characteristics 1993*, contains information on the physical characteristics of the housing units, appliances used, occupants, types of fuels, and other characteristics related to energy use. Preliminary consumption and expenditure tables are available now from the National Energy Information Center (telephone: 202–586–8800; fax: 202–586–0727; Internet E–mail: infoctr@eia.doe.gov). Final data will be published in EIA's *Household Energy Consumption and Expenditures 1993*, planned for September 1995.

Figure 1. Household End Uses of Major Energy Sources, 1993
(Quadrillion Btu)



Note: A fifth major energy source, kerosene, accounts for 0.05 quadrillion Btu of end-use consumption; 0.001 quadrillion Btu of that total is used for water heating, the rest for space heating.

Source: Energy Information Administration, Forms EIA–457A through H, 1993 Residential Energy Consumption Survey.

Table 1. Household Energy Consumption and Expenditures, Preliminary Estimates, 1993

Housing Characteristic	Number of Households (millions)	Total Consumption (quadrillion Btu)	Total Expenditures (billion dollars)	Average Consumption per Household (million Btu)	Average Expenditure per Household (dollars)
Use of Major Fuel(s)	**96.6**	**10.01**	**123.91**	**103.6**	**1,282**
Electricity	96.6	3.28	81.08	34.0	840
Site	—	3.28	—	—	—
Primary	—	9.91	—	—	—
Natural Gas	58.7	5.27	32.04	89.9	546
Fuel Oil	10.8	1.02	6.61	94.7	612
Liquefied Petroleum Gas	8.1	0.38	3.81	46.8	470
Kerosene	3.6	0.05	0.37	12.8	103
Climate Zone					
Less than 2,000 CDD[a] and More than 7,000 HDD[a]	8.7	1.08	10.90	124.0	1,254
5,500 to 7,000 HDD	26.5	3.42	35.93	129.2	1,356
4,000 to 5,499 HDD	22.5	2.43	30.51	108.3	1,359
Less than 4,000 HDD	17.8	1.40	19.70	78.5	1,107
2,000 CDD or more and Less than 4,000 HDD	21.2	1.68	26.87	79.0	1,267
Year of Construction					
1939 or before	20.4	2.63	26.97	129.4	1,325
1940 to 1949	6.9	0.77	8.56	111.8	1,240
1950 to 1959	13.1	1.49	18.12	114.1	1,387
1960 to 1969	15.0	1.55	18.89	102.9	1,257
1970 to 1979	18.1	1.59	22.18	87.9	1,222
1980 to 1984	8.5	0.68	10.55	80.3	1,247
1985 to 1987	5.5	0.47	7.05	85.2	1,284
1988 to 1990	4.7	0.43	6.23	90.4	1,322
1991 to 1993[b]	4.5	0.40	5.36	88.9	1,200
Heated Floorspace (square feet)					
Fewer than 1,000	29.3	1.96	25.65	66.7	875
1,000 to 1,999	40.2	4.05	51.68	100.7	1,286
2,000 to 2,999	17.8	2.44	28.93	136.6	1,622
3,000 or more	9.3	1.57	17.66	168.8	1,901
Census Region and Division					
Northeast	**19.5**	**2.38**	**29.72**	**122.4**	**1,526**
New England	5.1	0.62	7.77	123.1	1,532
Middle Atlantic	14.4	1.76	21.95	122.1	1,523
Midwest	**23.3**	**3.13**	**31.12**	**134.3**	**1,336**
East North Central	16.4	2.27	22.21	138.8	1,358
West North Central	6.9	0.86	8.91	123.8	1,282
South	**33.5**	**2.95**	**43.67**	**87.9**	**1,304**
South Atlantic	17.4	1.35	22.37	77.8	1,288
East South Central	6.0	0.57	7.20	94.9	1,200
West South Central	10.1	1.02	14.09	101.1	1,391
West	**20.4**	**1.55**	**19.41**	**76.0**	**953**
Mountain	5.4	0.53	5.49	98.1	1,025
Pacific	15.0	1.02	13.91	68.2	928
Most Populous States					
California	11.1	0.73	10.50	65.2	944
Florida	5.6	0.29	6.58	52.1	1,180
New York	6.8	0.82	10.73	121.2	1,577
Texas	6.4	0.61	8.70	94.7	1,349

[a]CDD=Cooling Degree-Days. HDD=Heating Degree-Days. CDD and HDD are, respectively, measures of how hot and cold a location is over a period, compared with a base temperature (here, 65˚ F). Climate zones are defined by long-term weather conditions that affect heating and cooling loads in buildings. High HDD values imply generally colder areas, while high CDD values imply generally warmer areas.

[b]1993 data do not include all new construction for the year.

— = Not applicable.

Source: Energy Information Administration, Forms EIA–457A through H, 1993 Residential Energy Consumption Survey.

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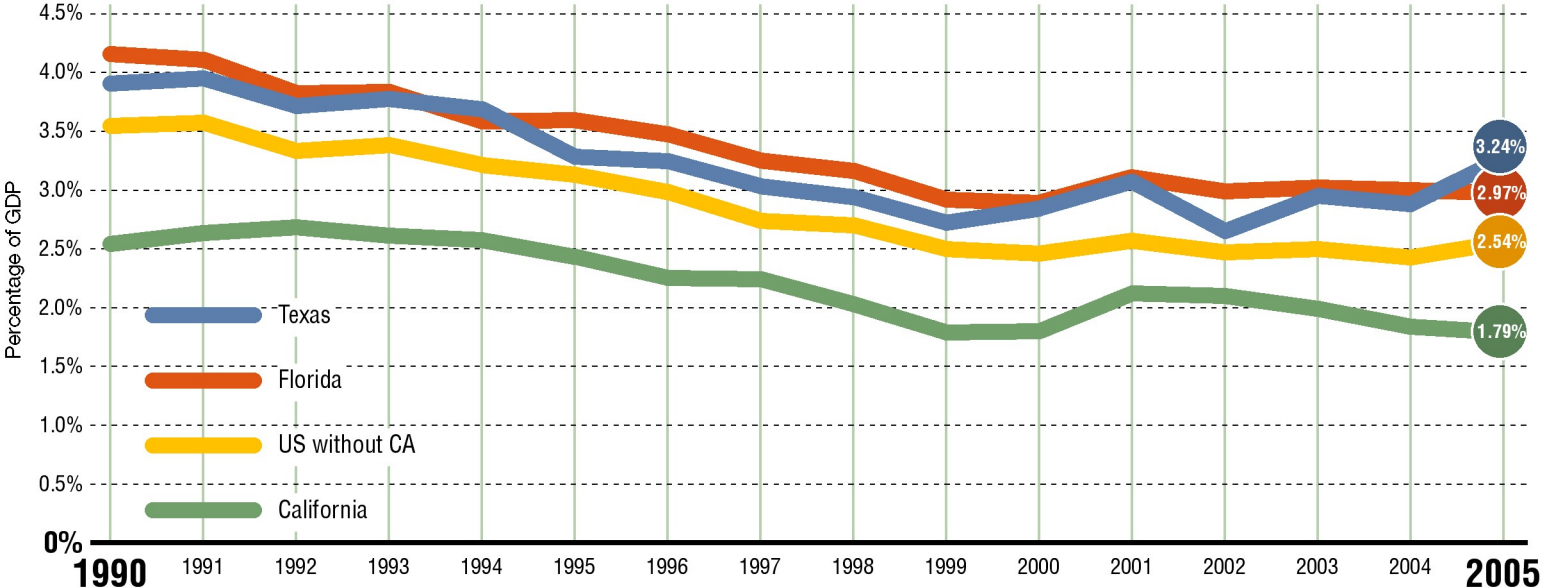
APPENDIX F
ENERGY INFORMATION ADMINISTRATION
CA, FL AND TX STATEWIDE ELECTRICITY BILL AS A FRACTION OF GDP

7: Statewide Electricity Bill as a Fraction of GDP

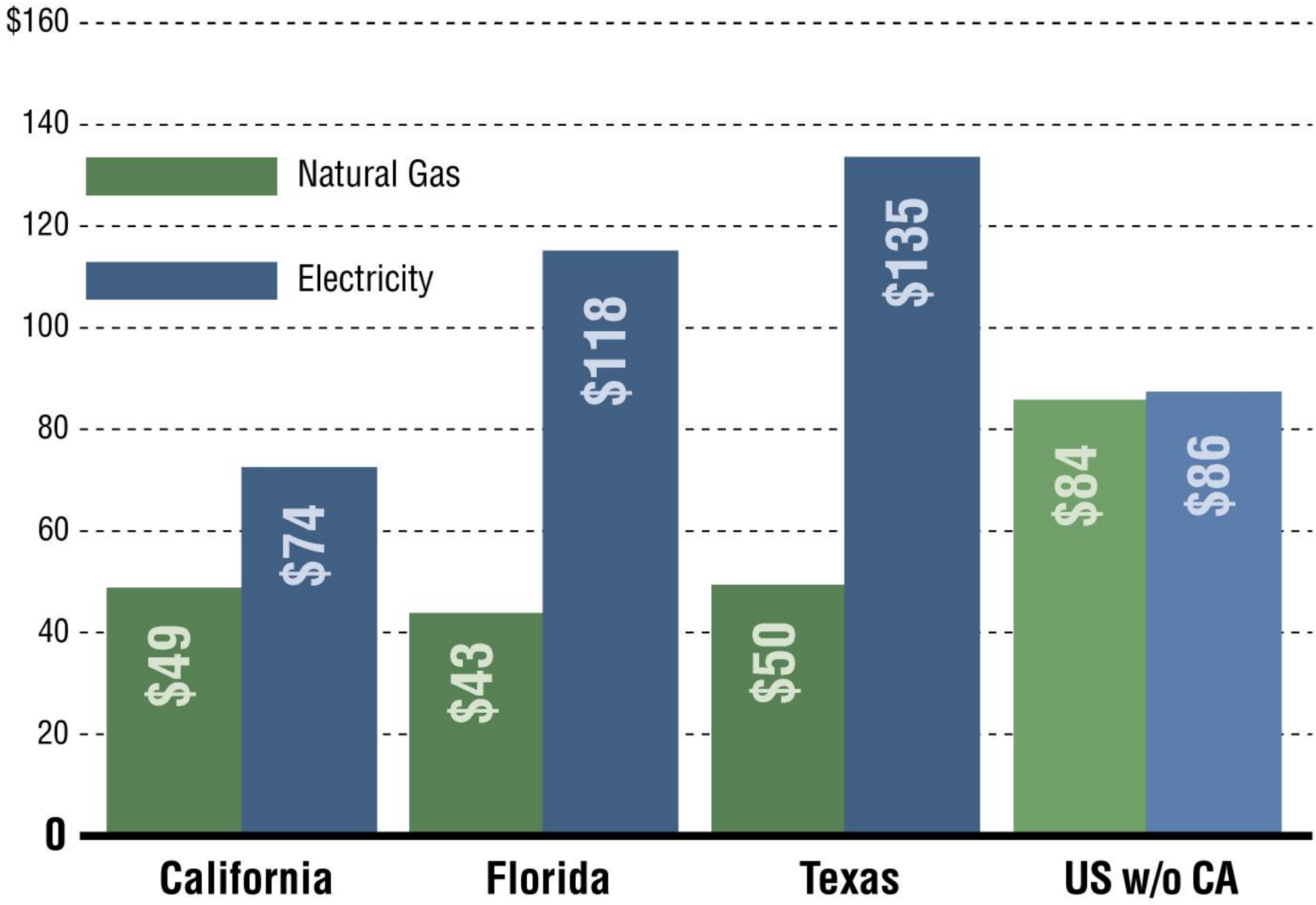


Source: Energy Information Agency, U.S. Department of Energy; Bureau of Economic Analysis, U.S. Department of Commerce

APPENDIX G
ENERGY INFORMATION ADMINISTRATION
CA, FL AND TX AVERAGE MONTHLY ELECTRICITY AND GAS BILLS

8: Average Monthly Residential Gas & Electrical Bills

2005



Source: Energy Information Agency, U.S. Department of Energy