Household Energy Use in California
A closer look at residential energy consumption

All data from EIA’s 2009 Residential Energy Consumption Survey
www.eia.gov/consumption/residential/

- California households use 62 million Btu of energy per home, 31% less than the U.S. average. The lower than average site consumption results in households spending 30% less for energy than the U.S. average.
- Average site electricity consumption in California homes is among the lowest in the nation, as the mild climate in much of the state leads to less reliance on electricity for air conditioning and heating.
- Spending on electricity by California households is closer to the national average due to higher prices in the state.

ALL ENERGY average per household (excl. transportation)

<table>
<thead>
<tr>
<th>Site Consumption</th>
<th>US</th>
<th>PAC</th>
<th>CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>million Btu</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>US</th>
<th>PAC</th>
<th>CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>dollars</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ELECTRICITY ONLY average per household

<table>
<thead>
<tr>
<th>Site Consumption</th>
<th>US</th>
<th>PAC</th>
<th>CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>kilowatthours</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>US</th>
<th>PAC</th>
<th>CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>dollars</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONSUMPTION BY END USE

Since California has a milder climate than other areas of the United States, space heating and air conditioning make up a relatively small portion of energy use. In California homes, heating and cooling combined account for 31% of total energy use.

MAIN HEATING FUEL USED

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>PAC</th>
<th>CA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COOLING EQUIPMENT USED</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Compared to the U.S. average, a greater share of California residents use natural gas for heating (59%). Due to the mild climate, 14% of California homes are not heated.

More than 40% of California households do not use air conditioning, but those that do predominantly rely on central air conditioning for cooling.
More highlights from RECS on housing characteristics and energy-related features per household...

US = United States | PAC = Pacific | CA = California

### Housing Types
- **Mobile Homes**
- **Apartments**
- **Single-Family Homes**

### Year of Construction
- **1990-2009**
- **1970-1989**
- **1950-1969**
- **Before 1950**

### Average Square Footage
- **US**: 1,971
- **PAC**: 1,605
- **CA**: 1,583

### Number of Televisions
- 0%
- 20%
- 40%
- 60%
- 80%
- 100%

### Have a DVR
- 0%
- 20%
- 40%
- 60%
- 80%
- 100%

### Have a Programmable Thermostat
- 0%
- 20%
- 40%
- 60%
- 80%
- 100%

### Have a Separate Freezer
- 0%
- 20%
- 40%
- 60%
- 80%
- 100%

### Have a Double/Triple Pane Windows
- 0%
- 20%
- 40%
- 60%
- 80%
- 100%

### Car is Parked Within 20 FT of Electrical Outlet
- 0%
- 20%
- 40%
- 60%
- 80%
- 100%

### Type of Clothes Washer
- **Top Loading**
- **Front Loading**

### No. of Refrigerators
- 0%
- 20%
- 40%
- 60%
- 80%
- 100%

### About the Residential Energy Consumption Survey (RECS) Program

The RECS gathers energy characteristics through personal interviews from a nationwide sample of homes, and cost and consumption from energy suppliers.

The 2009 RECS is the thirteenth edition of the survey, which was first conducted in 1978.

Resulting products include:
- Home energy characteristics
- Average consumption & cost
- Detailed energy end-use statistics
- Reports highlighting key findings
- Microdata file for in-depth analysis

www.eia.gov/consumption/residential/
Household Energy Use in Florida
A closer look at residential energy consumption

- Electricity accounts for 90% of the energy consumed by Florida households, and annual electricity expenditures are 40% more than the U.S. average. Florida is second only to Texas in total retail sales of electricity to the residential sector.
- Because Florida residents use space heating equipment much less than those in other states, site energy consumption for Florida homes (56 million Btu per household) is among the lowest in the country.
- Florida homes are typically newer and smaller than homes in other states.

**ALL ENERGY average per household (excl. transportation)**

**SITE CONSUMPTION**

<table>
<thead>
<tr>
<th></th>
<th>Site Consumption</th>
<th>Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>million Btu</td>
<td>dollars</td>
</tr>
<tr>
<td>US</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SoAtl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ELECTRICITY ONLY average per household**

<table>
<thead>
<tr>
<th></th>
<th>Site Consumption</th>
<th>Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kilowatthours</td>
<td>dollars</td>
</tr>
<tr>
<td>US</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SoAtl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CONSUMPTION BY END USE**

- More than a quarter (27%) of the energy consumed in Florida homes is for air conditioning, which is more than four times the national average. Half of energy consumed by Florida households is for appliances, electronics, and lighting.

**MAIN HEATING FUEL USED**

- Despite the warm climate, most Florida households still use some heating equipment during the winter, most of whom (81%) use electric furnaces or heat pumps.

**COOLING EQUIPMENT USED**

- Eighty-six percent of Florida homes use a central air-conditioning system, similar to other warm weather states like Arizona (87%) and Texas (85%).

**EIA**

All data from EIA’s 2009 Residential Energy Consumption Survey
www.eia.gov/consumption/residential/
More highlights from RECS on housing characteristics and energy-related features per household...

US = United States | SoAtl = South Atlantic | FL = Florida

- **HAVE DOUBLE/TRIPLE PANE WINDOWS**
  - Yes: US, FL
  - No: SoAtl

- **YEAR OF CONSTRUCTION**
  - 1990-2009: US
  - 1970-1989: SoAtl
  - 1950-1969: FL
  - Before 1950: US

- **AVERAGE SQUARE FOOTAGE**
  - US: 1,971
  - SoAtl: 1,944
  - FL: 1,668

- **NO. OF TELEVISIONS**
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5+

- **HAVE A DVR**
  - Yes: US, FL
  - No: SoAtl

- **NO. OF REFRIGERATORS**
  - 1
  - 2+

- **HAVE A SEPARATE FREEZER**
  - Yes: US, FL
  - No: SoAtl

- **TYPE OF CLOTHES WASHER**
  - Top Loading: US, FL
  - Front Loading: SoAtl

- **CAR IS PARKED WITHIN 20 FT OF ELECTRICAL OUTLET**
  - No Car: US
  - Yes: SoAtl, FL

---

**About the Residential Energy Consumption Survey (RECS) Program**

The RECS gathers energy characteristics through personal interviews from a nationwide sample of homes, and cost and consumption from energy suppliers.

The 2009 RECS is the thirteenth edition of the survey, which was first conducted in 1978.

Resulting products include:
- Home energy characteristics
- Average consumption & cost
- Detailed energy end-use statistics
- Reports highlighting key findings
- Microdata file for in-depth analysis

www.eia.gov/consumption/residential/
Household Energy Use in Massachusetts
A closer look at residential energy consumption

All data from EIA’s 2009 Residential Energy Consumption Survey
www.eia.gov/consumption/residential/

- Massachusetts households use 109 million Btu of energy per home, 22% more than the U.S. average.
- The higher than average site consumption results in households spending 22% more for energy than the U.S. average.
- Less reliance on electricity for heating, as well as cool summers, keeps average site electricity consumption in the state low relative to other parts of the U.S. However, spending on electricity is closer to the national average due to higher prices in New England.

---

**ALL ENERGY average per household (excl. transportation)**

<table>
<thead>
<tr>
<th>Site Consumption million Btu</th>
<th>Expenditures dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>NE</td>
</tr>
<tr>
<td>80</td>
<td>110</td>
</tr>
<tr>
<td>60</td>
<td>90</td>
</tr>
<tr>
<td>40</td>
<td>70</td>
</tr>
<tr>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>0</td>
<td>30</td>
</tr>
</tbody>
</table>

**ELECTRICITY ONLY average per household**

<table>
<thead>
<tr>
<th>Site Consumption kilowatthours</th>
<th>Expenditures dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>NE</td>
</tr>
<tr>
<td>0</td>
<td>2,000</td>
</tr>
<tr>
<td>2,000</td>
<td>4,000</td>
</tr>
<tr>
<td>4,000</td>
<td>6,000</td>
</tr>
<tr>
<td>6,000</td>
<td>8,000</td>
</tr>
<tr>
<td>8,000</td>
<td>10,000</td>
</tr>
</tbody>
</table>

---

**CONSUMPTION BY END USE**

Since the weather in Massachusetts and New England is cooler than other areas of the United States, space heating makes up a greater portion of energy use in homes (59%) compared to the U.S. average, and air conditioning makes up only 1% of energy use.

---

**MAIN HEATING FUEL USED**

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>US</th>
<th>NE</th>
<th>MA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other/None</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Fuel Oil</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Electricity</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Compared to the U.S. average, a greater proportion of Massachusetts residents use fuel oil (31%) and a much smaller proportion of residents use electricity (10%).

**COOLING EQUIPMENT USED**

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>US</th>
<th>NE</th>
<th>MA</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Window/wall units only</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Central air conditioning</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

More than 20% of Massachusetts households do not use air conditioning, and those that do still predominantly rely on individual window/wall units for cooling.
More highlights from RECS on housing characteristics and energy-related features per household...

US = United States | NE = New England | MA = Massachusetts

<table>
<thead>
<tr>
<th>HOUSING TYPES</th>
<th>YEAR OF CONSTRUCTION</th>
<th>AVERAGE SQUARE FOOTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mobile Homes</td>
<td>1990-2009</td>
</tr>
<tr>
<td></td>
<td>Apartments</td>
<td>Before 1950</td>
</tr>
<tr>
<td></td>
<td>Single-Family Homes</td>
<td>1950-1969</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1970-1989</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1990-2009</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Before 1950</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NO. OF TELEVISIONS</th>
<th>HAVE A DVR</th>
<th>NO. OF REFRIGERATORS</th>
<th>HAVE A SEPARATE FREEZER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US</td>
<td>MA</td>
<td>US</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>40%</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>60%</td>
<td>80%</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>80%</td>
<td>100%</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAVE DOUBLE/TRIPLET PANE WINDOWS</th>
<th>HAVE A PROGRAMMABLE THERMOSTAT</th>
<th>CAR IS PARKED WITHIN 20 FT OF ELECTRICAL OUTLET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

About the Residential Energy Consumption Survey (RECS) Program

The RECS gathers energy characteristics through personal interviews from a nationwide sample of homes, and cost and consumption from energy suppliers.

The 2009 RECS is the thirteenth edition of the survey, which was first conducted in 1978.

Resulting products include:

- Home energy characteristics
- Average consumption & cost
- Detailed energy end-use statistics
- Reports highlighting key findings
- Microdata file for in-depth analysis

www.eia.gov/consumption/residential/
Household Energy Use in Texas
A closer look at residential energy consumption

- Texas households consume an average of 77 million Btu per year, about 14% less than the U.S. average.
- Average electricity consumption per Texas home is 26% higher than the national average, but similar to the amount used in neighboring states.
- The average annual electricity cost per Texas household is $1,801, among the highest in the nation, although similar to other warm weather states like Florida.
- Texas homes are typically newer, yet smaller in size, than homes in other parts of the country.

### ALL ENERGY average per household (excl. transportation)

<table>
<thead>
<tr>
<th>Site Consumption (million Btu)</th>
<th>Expenditures (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>WSC</td>
</tr>
<tr>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>$3,000</td>
<td>$2,500</td>
</tr>
<tr>
<td>$2,500</td>
<td>$2,000</td>
</tr>
<tr>
<td>$2,000</td>
<td>$1,500</td>
</tr>
<tr>
<td>$1,500</td>
<td>$1,000</td>
</tr>
<tr>
<td>$1,000</td>
<td>$500</td>
</tr>
<tr>
<td>$500</td>
<td>$0</td>
</tr>
<tr>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

### ELECTRICITY ONLY average per household

<table>
<thead>
<tr>
<th>Site Consumption (kilowatthours)</th>
<th>Expenditures (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>WSC</td>
</tr>
<tr>
<td>16,000</td>
<td>16,000</td>
</tr>
<tr>
<td>$2,000</td>
<td>$1,500</td>
</tr>
<tr>
<td>$1,500</td>
<td>$1,000</td>
</tr>
<tr>
<td>$1,000</td>
<td>$500</td>
</tr>
<tr>
<td>$500</td>
<td>$0</td>
</tr>
</tbody>
</table>

### CONSUMPTION BY END USE

Compared to other areas of the United States, the warmer weather in Texas and its neighboring states means that air conditioning accounts for a greater portion of home energy use (18%), while space heating accounts for a much smaller portion (22%).

### MAIN HEATING FUEL USED

- US: 35% Natural Gas, 41% Electricity, 19% Propane, 6% Other/None
- WSC: 40% Natural Gas, 25% Electricity, 19% Propane, 16% Other/None
- TX: 41% Natural Gas, 19% Electricity, 19% Propane, 18% Other/None

### COOLING EQUIPMENT USED

- US: 80% None, 20% Central air conditioning
- WSC: 80% None, 20% Central air conditioning
- TX: 80% None, 20% Central air conditioning

Despite warmer weather than most other states, almost all Texas homes are heated. About half of Texas residents heat with electricity, a greater proportion than the U.S. average.

Almost all Texas residents use air conditioning equipment, with over 80% using central air conditioners.
More highlights from RECS on housing characteristics and energy-related features per household...

US = United States | WSC = West South Central | TX = Texas

**HOUSING TYPES**

<table>
<thead>
<tr>
<th>Housing Type</th>
<th>US</th>
<th>WSC</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Homes</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Apartments</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Single-Family Homes</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>NO. OF TELEVISIONS</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Have a DVR</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>NO. OF REFRIGERATORS</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Have a separate freezer</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**YEAR OF CONSTRUCTION**

<table>
<thead>
<tr>
<th>Year of Construction</th>
<th>US</th>
<th>WSC</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-2009</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>1970-1989</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>1950-1969</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Before 1950</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
</table>

**AVERAGE SQUARE FOOTAGE**

<table>
<thead>
<tr>
<th>Location</th>
<th>Average Square Footage</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>1,971</td>
</tr>
<tr>
<td>WSC</td>
<td>1,717</td>
</tr>
<tr>
<td>TX</td>
<td>1,757</td>
</tr>
</tbody>
</table>

**HAVE DOUBLE/TRIPLE PANE WINDOWS**

<table>
<thead>
<tr>
<th>Region</th>
<th>US</th>
<th>WSC</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**TYPE OF CLOTHES WASHER**

<table>
<thead>
<tr>
<th>Region</th>
<th>US</th>
<th>WSC</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Loading</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Front Loading</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>None</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**CAR IS PARKED WITHIN 20 FT OF ELECTRICAL OUTLET**

<table>
<thead>
<tr>
<th>Region</th>
<th>US</th>
<th>WSC</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Car</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

About the Residential Energy Consumption Survey (RECS) Program

The RECS gathers energy characteristics through personal interviews from a nationwide sample of homes, and cost and consumption from energy suppliers.

The 2009 RECS is the thirteenth edition of the survey, which was first conducted in 1978.

Resulting products include:
- Home energy characteristics
- Average consumption & cost
- Detailed energy end-use statistics
- Reports highlighting key findings
- Microdata file for in-depth analysis

www.eia.gov/consumption/residential/