

# Worksheet #1:

## Characteristics, Energy Sources and Equipment (Mall Buildings)

**Commercial Buildings Energy Consumption Survey**  
Sponsored by the U.S Energy Information Administration  
Conducted by NORC

The following are *some* of the topics that will be discussed in the upcoming interview. Having this worksheet completed and available will facilitate and shorten the interview.

Thinking of calendar year 2007, please provide the following for the strip mall building listed above.

### Box 1. Gross/Total Square Footage of Mall Building

(Both finished and unfinished, including basements, indoor parking levels, hallways, lobbies, stairways, and elevator shafts.)

### Year of Construction of Building

(If there have been major additions, provide the year the largest portion of the mall building was constructed.)

### Box 2. Number of Businesses or Organizations in Mall Building

### Box 3. Heating Energy Sources

Which energy sources, if any, were used for heating during 2007?

Check all that apply:

- Electricity
- Natural Gas
- Fuel Oil/Diesel/Kerosene
- Bottled Gas/LPG/Propane
- District Steam
- District Hot Water
- Other (specify)

Which of these was the **main** energy source for heating? (Please circle the energy source used to heat most of the square footage in the mall building most of the time.)

### Box 4. Heating Equipment

Check all that apply:

- Furnaces that heat air directly
- Packaged central units (roof mounted)
- Boilers inside the building to produce steam or hot water
- District steam or hot water piped into the building from outside the building
- Heat pumps for heating
- Individual space heaters
- Some other type

If more than one, circle the one that heated the most square footage in the mall building.

### Box 5. Type of Heat Pump Used for Heating (if applicable)

Check all that apply:

#### Heat Pump System:

- Packaged unit
- Residential type split system
- Individual room heat pump

#### Source Type:

- Air source
- Ground source or ground water
- Water loop

### Box 6. Air Conditioning Energy Sources

Which energy sources, if any, were used for air conditioning during 2007?

Check all that apply:

- Electricity
- Natural Gas
- District Chilled Water
- Other (specify)

**Go to Box 7 on the back of this worksheet →**

**Box 7. Cooling Equipment**

Check all that apply:

- Residential-type central air conditioners, other than heat pumps
- Packaged air conditioning units, other than heat pumps
- Central chillers inside the building that chill water for air conditioning
- District chilled water piped into the building from outside the building
- Heat pumps for cooling
- Individual room air conditioners other than heat pumps
- "Swamp coolers" or evaporative coolers
- Some other type

If more than one, circle the one that cooled the most square footage in the building.

**Box 8. Type of Heat Pump Used for Cooling (if applicable)**

Check all that apply:

**Heat Pump System:**

- Packaged unit
- Residential type split system
- Individual room heat pump

**Source Type:**

- Air source
- Ground source or ground water
- Water loop

**Box 9. Ventilation and Distribution Equipment for Heating and Cooling**

Indicate all that apply:

- B—heating and cooling
- H—heating only
- C—cooling only

- No mechanical ventilation (outside air) equipment
- Central air-handling unit(s) with outside air system and constant air volume (CAV) control
- Central air-handling unit(s) with outside air system and variable air volume (VAV) control
- Packaged unit(s) with outside air damper
- Through-the-wall packaged units
- Dedicated 100% outside air system
- Hot water/steam radiators
- Fan-coil units
- Stand-alone exhaust fan (relief blower)
- Ceiling fan(s)

**Box 10. Water Heating Energy Sources**

Which energy sources, if any, were used for water heating during 2007?

Check all that apply:

- Electricity
- Natural Gas
- Fuel Oil/Diesel/Kerosene
- Bottled Gas/LPG/Propane
- Other (specify)

**Box 11. Cooking Energy Sources**

Which energy sources, if any, were used for cooking during 2007?

Check all that apply:

- Electricity
- Natural Gas
- Fuel Oil/Diesel/Kerosene
- Bottled Gas/LPG/Propane
- Other (specify)

**Box 12. Sources for On-Site Electricity Generation**

Which energy sources, if any, were used for on-site electricity generation during 2007?

Check all that apply:

- Natural Gas
- Fuel Oil/ Diesel/ Kerosene
- Bottled Gas/ LPG/Propane
- Wood
- Coal
- Solar
- Other (specify)