

Worksheet #1:

Characteristics, Energy Sources and Equipment *(Mall Establishments)*

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 establishment listed above.

<p>Box 1. Gross/Total Square Footage of Establishment</p> <div style="border: 1px solid black; width: 200px; height: 30px; margin: 10px auto;"></div> <p>(Both finished and unfinished, including basements, hallways, lobbies, stairways, and elevator shafts.)</p>	<p>Box 2. Number of Employees</p> <div style="border: 1px solid black; width: 200px; height: 30px; margin: 10px auto;"></div> <p>(The number of employees that work in the establishment during its <i>main shift</i>, the shift when most employees are in the establishment. Include volunteers; do not include employees who always work outside of the establishment.)</p>	<p>Box 3. Heating Energy Sources</p> <p>Which energy sources, if any, were used for heating during 2007? Check all that apply:</p> <p><input type="checkbox"/> Electricity <input type="checkbox"/> Natural Gas <input type="checkbox"/> Fuel Oil/Diesel/Kerosene <input type="checkbox"/> Bottled Gas/LPG/Propane <input type="checkbox"/> District Steam <input type="checkbox"/> District Hot Water <input type="checkbox"/> Other (specify)</p> <div style="border: 1px solid black; width: 200px; height: 20px; margin: 5px auto;"></div> <p>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 establishment most of the time.)</p>
<p>Box 4. Heating Equipment</p> <p>Check all that apply:</p> <p><input type="checkbox"/> Furnaces that heat air directly <input type="checkbox"/> Packaged central units (roof mounted) <input type="checkbox"/> Boilers inside the establishment to produce steam or hot water <input type="checkbox"/> District steam or hot water piped into the establishment from outside the <i>mall building</i> <input type="checkbox"/> Heat pumps for heating <input type="checkbox"/> Individual space heaters <input type="checkbox"/> Some other type</p>	<p>Box 5. Type of Heat Pump Used for Heating (if applicable)</p> <p>Check all that apply:</p> <p>Heat Pump System:</p> <p><input type="checkbox"/> Packaged unit <input type="checkbox"/> Residential type split system <input type="checkbox"/> Individual room heat pump</p> <p>Source Type:</p> <p><input type="checkbox"/> Air source <input type="checkbox"/> Ground source or ground water <input type="checkbox"/> Water loop</p>	<p>Box 6. Air Conditioning Energy Sources</p> <p>Which energy sources, if any, were used for air conditioning during 2007?</p> <p>Check all that apply:</p> <p><input type="checkbox"/> Electricity <input type="checkbox"/> Natural Gas <input type="checkbox"/> District Chilled Water <input type="checkbox"/> Other (specify)</p> <div style="border: 1px solid black; width: 200px; height: 20px; margin: 5px auto;"></div> <p>Go to Box 7 on the back of this worksheet →</p>

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 establishment that chill water for air conditioning
- District chilled water piped into the establishment from outside the *mall building*
- Heat pumps for cooling
- Individual room air conditioners other than heat pumps
- "Swamp coolers" or evaporative coolers
- Some other type

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)

Box 13. Office Equipment

Check all that apply and indicate number used in the building during 2007:

- | | Number: |
|--|----------------------|
| <input type="checkbox"/> Computers | <input type="text"/> |
| <input type="checkbox"/> Laptop computers | <input type="text"/> |
| <input type="checkbox"/> Dedicated servers | <input type="text"/> |
| <input type="checkbox"/> Printers | <input type="text"/> |
| <input type="checkbox"/> Photocopiers | <input type="text"/> |
| <input type="checkbox"/> Cash registers | <input type="text"/> |

Box 14. Lighting Equipment

Was any of the square footage in this building lit by the following during 2007?

Check all that apply:

- Fluorescent lighting other than compact fluorescent light bulbs
- Compact fluorescent bulbs
- Incandescent bulbs, other than halogen bulbs
- Halogen bulbs
- High intensity discharge (HID) lights, such as high pressure sodium, metal halide, or mercury vapor
- LED (light emitting diode) lights
- Other (specify)