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| Worksheet #1:  Characteristics, Energy Sources, and Equipment *(Strip Shopping Centers)* | |  | |
| 2012 Commercial Buildings Energy Consumption Survey  Sponsored by the U.S. Energy Information Administration  Conducted by Westat | |
| The following are *some* of the topics that will be discussed in the upcoming interview. Completing this worksheet and having it available will facilitate and shorten the interview.  Thinking of *calendar year 2012*, please provide the following for the building listed above. | | | |
| Box 1. Gross/Total Square Footage of Building  (Both finished and unfinished, including basements, hallways, lobbies, stairways, elevator shafts, and indoor parking levels.)  **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 Tenant Spaces in Building Including Vacant Spaces** | | Box 3. Heating Energy Sources  Which energy sources, if any, were used for heating during 2012?  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 building most of the time.) |
| **Box 4. Heating Equipment**  Check all that apply:     |  |  | | --- | --- | |  | Furnaces that heat air directly | |  |  | |  | Packaged central units | |  |  | |  | Boilers inside (or directly adjacent | |  | to) 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 (specify) | |  |  | |  |  | | **Box 5. Type of Packaged Heating** (if applicable)  Check all that apply:   |  |  | | --- | --- | | **Type of Packaged Unit(s)** | | |  | | |  | Factory-assembled unitary unit | |  |  | |  | Custom built-up unit | |  |  | | **Heating Component of Packaged** | | | **Unit(s)** | | |  |  | |  | Furnace | |  |  | |  | Heat pump | |  |  | |  | Heating coil | |  |  | |  | Powered induction unit (PIU) | |  |  | |  | Duct reheat | | | **Box 6. Boiler or District Steam/ Hot Water Distribution System** (if applicable)  Check all that apply:   |  |  | | --- | --- | |  | Radiators | |  |  | |  | Fan coil units | |  |  | |  | Induction units | |  |  | |  | Water loop heat pump | |  |  | |  | Central air handler (hydronic/steam | |  | coils) | |  |  | |  | Packaged unit (hydronic/steam coils) | |  |  | |  | Duct reheat (hydronic/steam coils) |   **Go to Box 7** |

**Form EIA-871G** OMB No.: 1905-0145 Expires: 09/30/20xx

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| **Box 7. Type of Heat Pump Used for Heating** (if applicable)  Check all that apply:   |  |  | | --- | --- | | **Heat Pump System** | | |  | | |  | Packaged unit | |  |  | |  | Split system (residential-type) | |  |  | |  | Individual room heat pump | |  | (packaged terminal heat pump) | |  |  | |  | Ductless mini-split system | |  |  | |  | Variable refrigerant flow (VRF) | |  |  | | **Type of Heat Pump** | | |  |  | |  | Air source | |  |  | |  | Ground source or ground water | |  | (geothermal) | |  |  | |  | Dual source (combination of air | |  | source and geothermal) | |  |  | |  | Water loop | | **Box 8. Individual Space Heater** (if applicable)  Check all that apply:   |  |  | | --- | --- | |  | Infrared radiant heater (permanent) | |  |  | |  | Baseboard heater (permanent) | |  |  | |  | Portable space heater | |  |  | |  | Wall heater | |  |  | |  | Individual furnace | |  |  | |  | Unit heater | |  |  | |  | Heating element in packaged | |  | terminal air conditioner (PTAC) | |  |  | | Box 9. Cooling Energy Sources  Which energy sources, if any, were used for cooling during 2012?  Check all that apply:   |  |  | | --- | --- | |  | Electricity | |  |  | |  | Natural Gas | |  |  | |  | District Chilled Water | |  |  | |  | Other (specify) | |  |  | |  |  |   : heating only;erng to |
| Box 10. 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 (or directly | |  | adjacent to) 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 (specify) | |  |  | |  |  | | **Box 11. Type of Packaged Cooling** (if applicable)  Check all that apply:   |  |  | | --- | --- | | **Type of Packaged Unit(s)** | | |  | | |  | Factory-assembled unitary packaged | |  | unit | |  |  | |  | Custom built-up unit | | **Box 12. Type of Chiller**  (if applicable)  Check all that apply:   |  |  | | --- | --- | | **Type of Chiller** | | |  | | |  | Air-cooled | |  |  | |  | Water-cooled | |  |  | |  | Absorption | |  |  | |  | Check if absorption chiller | |  | can operate as a “heater chiller” | |
| **Box 13. Chiller or District Chilled Water Distribution System** (if applicable)  Check all that apply:   |  |  | | --- | --- | |  | Central air handler (hydronic coils) | |  |  | |  | Fan coil units | |  |  | |  | Induction units | |  |  | |  | Water loop heat pump | |  |  | |  | Chilled beam | |  |  | |  | Packaged unit (hydronic coils) | |  |  | |  | Duct reheat | | **Box 14. Type of Heat Pump Used for Cooling** (if applicable)  Check all that apply:   |  |  | | --- | --- | | **Heat Pump System** | | |  | | |  | Packaged unit | |  |  | |  | Split system (residential-type) | |  |  | |  | Individual room heat pump | |  | (packaged terminal heat pump) | |  |  | |  | Ductless mini-split system | |  |  | |  | Variable refrigerant flow (VRF) | |  |  | | **Type of Heat Pump** | | |  |  | |  | Air source | |  |  | |  | Ground source or ground water | |  | (geothermal) | |  |  | |  | Dual source (combination of air | |  | source and geothermal) | |  |  | |  | Water loop |     **Go to Box 15** |

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| **Box 15. Ventilation and Distribution Equipment for Heating and Cooling**  Indicate all that apply:  B—heating and cooling  H—heating only  C—cooling only   |  |  | | --- | --- | |  | Central air handling unit(s) with | |  | constant air volume (CAV) control | |  |  | |  | Central air handling unit(s) with | |  | variable air volume (VAV) control | |  |  | |  | Underfloor air distribution | |  |  | |  | Dedicated outside air system | |  | (DOAS) | |  |  | |  | Demand controlled ventilation | |  |  | |  | None of these types | |  |  |   Does the building use either of the following?   |  |  | | --- | --- | |  | Air-side economizer | |  |  | |  | Water-side economizer | | **Box 16. Water Heating Energy Sources**  Which energy sources, if any, were used for water heating during 2012?   |  |  | | --- | --- | |  | Electricity | |  |  | |  | Natural Gas | |  |  | |  | Fuel Oil/Diesel/Kerosene | |  |  | |  | Bottled Gas/LPG/Propane | |  |  | |  | District Steam | |  |  | |  | District Hot Water | |  |  | |  | Other (specify) | |  |  | |  |  | | **Box 17. Cooking Energy Sources**  Which energy sources, if any, were used for cooking during 2012?   |  |  | | --- | --- | |  | Electricity | |  |  | |  | Natural Gas | |  |  | |  | Fuel Oil/Diesel/Kerosene | |  |  | |  | Bottled Gas/LPG/Propane | |  |  | |  | District Steam | |  |  | |  | District Hot Water | |  |  | |  | Other (specify) | |  |  | |  |  |   : heating only;erng to |
| **Box 18. Sources for On-Site Electricity Generation**  Which energy sources, if any, were used for on-site electricity generation during 2012?  Check all that apply:   |  |  | | --- | --- | |  | Natural Gas | |  |  | |  | Fuel Oil/Diesel/Kerosene | |  |  | |  | Bottled Gas/LPG/Propane | |  |  | |  | Wood | |  |  | |  | Coal | |  |  | |  | Solar | |  |  | |  | Other (specify) | |  |  | |  |  | |  |  |