

# Guide Energy Auditing Questionnaire

## **LIGHTING TYPES**

1. Type of light (Fluorescent, Incandescent, Mercury vapor, Sodium, Metal halide & (other) .....

Lighting Type	% of occupied area

2. Schedule of operation .....
3. Wattage of lamps .....
4. Number of lighting fixtures .....
5. Availability of daylight sensors .....
6. Availability of occupancy sensors .....

## **BUILDING ENVELOPE**

1. Picture of the building .....
2. Geographical location.....
3. Type of building.....
4. Number of floors.....
5. Number of floors below ground.....
6. Gross floor area .....
7. Conditioned area (heated only).....
8. Conditioned area (cooled only).....
9. Conditioned area (heated & cooling).....
10. Year of construction.....
11. Wall construction materials.....
12. Roof construction materials.....
13. Type of window glass.....
14. Insulations both roof & walls.....
15. Maintenance operation.....
16. Check for leakages.....

Construction Code	R-Value	Glass shading Coefficient	Area

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## **BUILDING UTILITIES**

1. Types of energy sources in the building.....
2. Name of energy providers.....
3. Number of meter(s) for each source.....
4. At least one year bill for each source.....

## **BUILDING SCHEDULE**

Days	M	T	W	Th	F	Sat	Sun	Hol
Hours Open								
Hours Close								
Peak # of occupants								
Avg. # of occupants								

## **PRELIMINARY ENERGY ALLOCATION TO END USES**

(More than 5% energy use) (Nameplate will help)

End Use	Primary	Secondary
Heating		
Cooling		
Domestic Water Heating		
Kitchen Cooking Equipment		
Laundry Equipment		
Other Processing Equipment		

## **HVAC SYSTEM**

**Important:** Copy of the nameplate of the components of the HVAC system should be collected.

1. Type(s) of HVAC system in the building and age.....  
(Single zone, multi zone, dual duct, variable air volume, reheat, fan coil units, unit ventilators, packaged terminal air conditioner, Chillers etc)
2. Space Cooling set-point .....
3. Space Heating set-point .....
4. Availability of economizer and type.....
5. Availability of ERV and type.....
6. Type of fan motor, efficiency & capacity.....
7. Availability of VFD for fan motor.....

## Guide Energy Auditing Questionnaire

8. Type of pump motor, efficiency & capacity.....
9. Maintenance schedule of the system.....
10. Have the cooled water and hot water temperature been reset? .....
11. Type and state of HVAC controls.....

### **HVAC Operation Schedule:**

Chiller.....  
Boiler.....  
AHUs.....

### **Shutdown of:**

AHUs by Time Schedule.....  
Exhaust fan by Time Schedule.....

#### **Chillers**

By Time schedule.....  
By Outside Air Temperature.....

#### **Boilers**

By Time schedule.....  
By Outside Air Temperature.....

### **Are the following control systems present in the facilities?**

Optimum Start Control:.....  
Automatic Shutdown:.....  
Setback Controls:.....  
What is the design CFM of the  
facility?.....  
What is the approximate outdoor air  
percentage?.....