Energy Section

Step 2 -- Green & Healthy Schools Assessment

Reducing energy use, encouraging energy-saving behavior and purchasing energy efficient appliances saves natural resources and can save your school money. Regular maintenance of heating, ventilation and air conditioning systems will improve performance and may prevent a minor repair cost from becoming a major expense. It also helps to maintain indoor air quality and reduce allergy and asthma triggers. This section will help you identify current energy management practices in your school and start you thinking about ways to modify these practices to make your school more environmentally friendly and sustainable. Sustainable practices are those that meet the needs of the present without compromising the ability of future generations to meet their needs.

School Name: _____ **Date:** _____

Conducted By:

Please include administrators, teachers, school staff, students and parents involved in this assessment.

Name:	**Title and/or Grade Level:**
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

School Population:

Students: _____ Staff: _____

A. Have each classroom complete the Classroom Energy Assessment (see accompanying PDF document on the Green & Healthy School website).

B. General Information

1. What are the main sources of energy for your school? To find this out, contact your electricity provider. You can also try the following EPA web site to find out your region's energy sources: www.epa.gov/cleanenergy/energy-and-you/how-clean.html.

☐	Coal	_____%	☐	Natural Gas/Propane	_____%
☐	Nuclear	_____%	☐	Oil	_____%
☐	Hydroelectric	_____%	☐	Wind Power	_____%
☐	Solar	_____%	☐	Geothermal	_____%
☐	Wood	_____%	☐	Other _____	_____%

2. Does your school have any renewable energy systems?
   - ☐ Solar Photovoltaic
   - ☐ Wind
   - ☐ Geothermal
   - ☐ Solar Thermal
   - ☐ Other _____
   - ☐ Other _____

3. What facilities, other than the school building, use electricity on school grounds?
   - ☐ Athletic fields
   - ☐ Pool
   - ☐ Storage sheds
   - ☐ Outdoor lighting
   - ☐ Other _____

4. Using your school's energy bills, how much did your school pay for energy for one month? For one year?

	Monthly	Yearly
Propane/Natural Gas/Oil	_____	_____
Electricity	_____	_____
Other	_____	_____

C. Building Information

1. When was the school building built?
   - ☐ Prior to 1950
   - ☐ Between 1950 and 1975
   - ☐ Between 1975 and 1990
   - ☐ After 1990

2. Have any additions been added to the original school building?
   ☐ Yes ☐ No

   If so, what additions were added and when?

3. What changes have been made since the school was built and when?

☐ New windows	_____	☐ New roof	_____
☐ New carpeting/flooring	_____	☐ Lighting upgrades	_____
☐ Heating, Ventilation and Air Conditioning (HVAC)	_____	☐ Variable Frequency Ventilation Motor Controls	_____
☐ Remodeling of rooms	_____	☐ Other	_____

4. How old is your heating, ventilation and air conditioning (HVAC) equipment?

5. Does your school follow a schedule for servicing HVAC equipment?
   ☐ Yes ☐ No

6. How often are furnace and ventilation filters cleaned or replaced?

7. What material is the exterior of the building made of?
   ☐ Brick ☐ Wood
   ☐ Concrete ☐ Other _____

8. Windows:

Side of Building:	North	South	East	West
Number of Windows				
# Cracked/Broken				
# Windows that leak air/water				
# Single paned / # Double paned				
# Windows that can be opened				
# Windows with coverings (blinds, curtains, etc.)				

9. Does the building have insulation in the walls and ceiling?
   ☐ Yes ☐ No

   If yes, what type(s) of insulation does your building have?

10. If your school has central air conditioning, is the outside unit in direct sunlight during most of the day?
    ☐ Yes ☐ No

11. Are there trees located closely around the building to provide shade during sunny days?
    ☐ Yes ☐ No

12. Are trees placed on the north and west sides of the school to provide a wind break?
    ☐ Yes ☐ No

D. Temperature

1. How is the temperature in your building controlled?
   ☐ Whole school is set at same temperature
   ☐ Individual thermostats for each room or group of rooms

2. Who sets the thermostats?
   ☐ Individual teacher controls the thermostat
   ☐ Thermostat is set by administration/maintenance staff

3. Does your school use programmable thermostats?
   ☐ Yes ☐ No

4. Can the school's HVAC be controlled remotely, allowing the heating and cooling system to be turned off when the building is not occupied?
   ☐ Yes ☐ No

5. Does your school (or school district) have standards or guidelines for thermostat temperature settings?
   ☐ Yes ☐ No

   If yes, what are the thermostat temperature settings for the following?

	Heating Season	Cooling Season
Building Occupied	_____	_____
Building Unoccupied	_____	_____

E. Lighting

1. What type of lighting is used inside/outside of the school?

	Compact Fluorescent Light (CFL) bulbs	Incandescent Light bulbs	Fluorescent Light bulbs	High Intensity Discharge (HID) Light bulbs	Other (please specify)
Inside the School					
Classrooms					
Office					
Restrooms					
Cafeteria					
Auditorium					
Gym					
Locker Rooms					
Hallways					
Library					
Other					
Outside the School					
Stadium					
Concessions					
Parking Lots					
Building Ext.					

2. Are exit and emergency lights periodically inspected by school staff?
   ☐ Yes ☐ No

3. Are lights controlled by motion and/or photo sensors? If so, what type and where?

Rooms	Sensors – Type (Motion/Photo/None*)
Classrooms	
Office	
Restrooms	
Cafeteria	
Auditorium	
Gym	
Locker Rooms	
Hallways	
Outdoors	

*Photo sensors automatically turn lights on/off depending on the amount of natural light in the room.
*Motion sensors automatically turn lights on/off based on movement in the room.

4. Is natural lighting or skylighting (also referred to as "daylighting") used as an alternative to artificial lighting? If so, where?

Rooms	Natural lighting only	Primarily natural lighting with artificial lighting as needed	Natural and artificial lighting both used sometimes	Artificial lighting only
Classrooms				
Office				
Restrooms				
Cafeteria				
Auditorium				
Gym				
Locker Rooms				
Hallways				

5. Does your school have a plan for properly disposing of light bulbs, such as compact fluorescents that contain mercury?
   ☐ Yes ☐ No

6. Does your school use VendingMisers® or timers to control vending machine lighting and compressor use so the machine can use less power when it is not in use?
   ☐ Yes ☐ No

F. Appliances/Machines

1. Which energy-using appliances does your school have?
   ☐ Copiers
   ☐ Printers/Scanners
   ☐ Fax machines
   ☐ Computers
   ☐ Televisions
   ☐ DVD/VHS players
   ☐ SMART Boards™
   ☐ Refrigerators
   ☐ Ice makers
   ☐ Dishwashers
   ☐ Stoves
   ☐ Ovens
   ☐ Clothes washers/dryers
   ☐ Others _____

2. Which of these appliances/machines are turned off every night?
   ☐ Copiers
   ☐ Printers/Scanners
   ☐ Fax machines
   ☐ Others _____
   ☐ Televisions
   ☐ DVD/VHS players
   ☐ SMART Boards™

3. Are the coils on your school's refrigerators and coolers cleaned on a regular basis?
   ☐ Yes ☐ No

How often are they cleaned? _____

G. Curriculum and Community

1. Does your school include energy as part of the curriculum? If so, which subjects or courses are covered and at what grade levels are they offered?

2. Has your school staff recently participated in any energy professional development programs or workshops (i.e., KEEP: Wisconsin's K-12 Energy Education Program or workshops offered by your local energy provider)?
   ☐ Yes ☐ No

3. Does your school participate in energy projects that benefit the community?
   ☐ Yes ☐ No

   If yes, what are they?

4. Where is the closest power plant to your school located, and what type of power plant is it (i.e., hydro, wind, geothermal, coal, bio-energy, etc.)?

5. Has your school/class ever taken a tour of your local power plant?
   ☐ Yes ☐ No

6. Does your school have an energy plan for students and staff that emphasizes energy conservation and efficiency?
   ☐ Yes ☐ No

7. Are students and staff encouraged to conserve energy?
   ☐ Yes ☐ No

8. Does your school website and/or other media outlets, such as newsletters, emphasize your conservation goals or programs?
   ☐ Yes ☐ No

H. Renewable Energy

1. Does your school have any renewable energy systems?
   - ☐ Solar Photovoltaic
   - ☐ Wind
   - ☐ Geothermal
   - ☐ Solar Thermal
   - ☐ Other _____

2. Is renewable energy being taught in any of the classrooms?
   - ☐ Yes ☐ No

I. Action Plan

Based on the information you found out from this assessment, what recommendations do you have for the school to reduce its energy use? Use the chart on page 9 to brainstorm and organize your ideas for action.

Energy Assessment: Ideas for Action

Based on the information you gathered from the Energy Assessment, what action ideas do you have to reduce energy use and increase energy-saving behaviors at your school? Use this sheet to record your ideas.

Section	General Ideas	Classroom Connections/ Lesson Plan Ideas	Community Involvement/ Activity Ideas	Outside Sources (organizations, community members, professionals)
A. Classroom Energy Assessment (separate PDF document)				
B. General Information				
C. Building Information				
D. Temperature				
E. Lighting				
F. Appliances/ Machines				
G. Curriculum and Community				
H. Renewable Energy				