

**NR 734: School Building Energy Efficiency**  
**WI K-12 Energy Education Program (KEEP)**  
**Action Plan**

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***Action Plan Summary:***

The purpose of my plan is to compliment the on-going efforts in the Green Bay Public School District to reduced energy cost even further. My plan will be focusing on the Technology and Engineering Department at Preble High School. Within our department, we as a staff will be looking at ways to reduce the daily misuse of energy. This energy could be defined as wasted electricity or heating issues.

***Introduction to the Audience:***

Preble High School is a school that has an enrollment around 2300 students. Of those students, the Technology and Engineering Department educate about 725 students a day. The staff is made of 5 ½ full time instructors. The department consist of seven applied labs with three of them the size of 3500 to 4000 square feet, and the rest of the labs being the size of 1500 to 2000 sqft. There are also two computer labs that are the size of 2000 sqft.

Ten years ago Preble High School had a major renovation to the building. During that remodeling phase the Technology and Engineering Department had several things added to the classrooms and applied labs to make them more energy efficient. These changes were in the areas of lighting, heating, and the ventilation systems.

***Statement of Problem:***

The first area that I would like to address is the lighting usage in the three larger applied labs. Before the remodeling stage we had several light switches to control the different rows of lights. The majority of the lights in the lab could be turned off if the students were in the classroom portion of the lab. Now, two light switches control the whole room, which means three quarters of the lights are on for no reason.

The second area that we could improve in is turning off the computers at night. Our district automatically shuts down the computers at 6 pm., but this doesn't work for the monitors. Students have to do a better job along with the staff on shutting off all of the computers right after school or when they are done using them. Our computer rooms for CAD and Graphic classes have a master switch in each room to shut down all the computers. This was installed through the remodeling process. The only problem with this system is no one uses it.

The last area deals with heat loss. Heat is escaping through overhead doors seals and ventilation systems without dampers. All three of these areas could really reduce the wastefulness of electricity and natural gas.

***Project Goals and Objectives:***

The main goal of this action plan is to conserve misused energy by the students and staff in the T&E Department.

This will be done by:

- Controlling the amount of classroom lighting.
- Reworking the lights and switches in the three applied labs.
- Utilizing the master switch to shut down all computers.
- Installing dampers to ventilation systems.
- Installing door seals to all outside doors.

***Methods and Timeline:***

I will meet with my department during the month of January to implement the process of saving energy. We need to make changes in our daily routine in order to reduce energy consumption in the T&E Department. During the months of February and March, we will be reevaluating this action plan to see if we are meeting the criteria on what we have control over (turning off lights, computers, and etc.).

The installation of the damper and modification to the lighting would be completed by June of 08'.

***Evaluation Criteria and Process:***

Once a month we will meet to discuss what staff members did to conserve energy in their room.

***Budget:***

There is no existing budget to support this plan, however most of the work would be done in house with our own district employees. If an outside firm would do the work, this is what it would approximately cost.

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|--|------------|-----------|
| - Ventilation damper installation                |            |           |
| - Damper @ \$175.00                              |            | \$175.00  |
| 2 hrs - Labor to install @ \$45.00 per/hr.       |            | \$ 90.00  |
| - Lighting change in three applied labs          |            |           |
| 5 – 10’ conduit @ \$5.00 ea                      |            | \$ 75.00  |
| 4 hrs – Labor to install @ \$45.00 per/hr.       |            | \$540.00  |
| 3 – Electrical Switches @ \$3.00 ea              |            | \$ 27.00  |
| - Heating loss in three applied labs             |            |           |
| Overhead Door Weather Striping @ \$50.00 ea      |            | \$150.00  |
| - 1 1/2 hrs - Labor to install @ \$30.00 per/hr. |            | \$135.00  |
|  | Total Cost | \$1192.00 |