

# A School Uses a Different Way to Save Energy: Cogeneration

## New Ideas

Have you ever tried something new? How did you feel about it? Fourth grader Jennifer Smith remembers moving to a new community and walking into her first day in a new school. It was exciting but scary. She didn't know what the other kids would be like. She didn't know if she would fit in. She even worried about what she would wear that first day.

Many times when we set out to do something new, it is scary. Do you remember your first carnival ride or the first time you skied? Most often, the scared feelings we have disappear, and we are glad that we tried a new adventure.

One school in Waverly, New York was hesitant to try a new way of getting its power. The school superintendent wanted to look at using **cogeneration** to get power for the school building. But, the school board and the local utility were against using cogeneration. The superintendent had to convince the community that this would save money and be environmentally friendly.

## Cogeneration Can be Helpful

Cogeneration is just what the name suggests it would be. The prefix *co-* means *with* or *together*. *Generation* means *making* or *producing* the power. When you generate electricity and capture the left-over heat for use, this is cogeneration. By using every bit of energy, you reduce pollution and save on your electric bill.

Wasted energy is a big problem. Did you know that big power plants change only about one third of the energy in **fossil fuels** to useable electricity? The rest is just thrown away! So, by

using this energy that was wasted energy, we can reduce pollution.

Cogeneration systems work together and use all the power that is made. This saves energy and reduces the amount of **carbon dioxide** that we put into our air.

## **Waverly Junior-Senior High School Wins an Award!**

Because the community and power company weren't sure about using cogeneration, the superintendent had to convince them. Several studies were done and officials visited other places that used cogeneration. Finally, the school put in five cogeneration systems. The heat that would have been wasted in producing electricity for the school, is now "captured." It is used to heat the buildings and heat water. It is also used to heat the school swimming pool! There is even a way that the use of cogeneration can cool the building in the summer.

The students at the school like their new cogeneration system because the temperature in the building is now more consistent. They can even see their cogeneration system at work through viewing windows. This allows teachers to use the area to help students learn more about energy use.

In 1993, Waverly Junior-Senior High School won the Governor's Award for Energy Excellence. Even better, in eight years the school reduced energy use and the amount of carbon dioxide they put into the atmosphere by 60%. This is the same as taking 250 cars off the road. They saved more than \$800,000 on their power bill during that time, too.

## **Thinking About It**

By studying the issue of cogeneration and being willing to try a different approach to meeting their power needs, Waverly Junior-Senior High School is a model for others. Many people have visited the school to learn more about cogeneration. There

are many businesses that successfully use this combination of power and heat to meet their energy needs. Are there any in your community?

## **You're an Expert!**

1. Write a story about a time that you tried something new. Describe your feelings. Did it change the way you thought about doing the activity?
2. Make a model of a building that uses cogeneration. Write a caption that tells how cogeneration works.
3. Imagine that you are the superintendent who felt strongly about using cogeneration. Think about what you would say to convince people that this idea is a good one. Give an oral report to the class pretending they are members of the community who need to be convinced of the positive role of cogeneration.

## **Taking Action.....**

Are there any buildings that use cogeneration in your community? Find out about them and write a paragraph about the building, take a photograph or draw your own to submit to "The Gallery" at the Maggie website.