A "Win–Wind" Solution

Silja Kallenbach and Martha Merson

If you live in the U.S., you use electricity. It's a big part of what makes home feel like home. Electricity powers the lights, and makes it possible for us to watch TV, listen to music, talk on the telephone, play or research on the computer, and cool down with air conditioning. Some of us manage cooking and laundry with electric stoves and clothes dryers. We warm up with space heaters and electric blankets. Do you know where your electricity comes from?

Most of our electricity comes from power plants. The most common type of power plants use coal, nuclear power, natural gas, or oil. Less common but better for the environment and human health and safety are power plants that use the energy from wave motion or falling water (hydropower), wind, sunlight, heat from inside the earth, or even biological materials from plants. This type of energy is called ***renewable energy***.

There is a limited supply of coal, oil, and gas. This kind of energy is not renewable: once it's gone, it's gone. (See pp. 8-9.) There's another problem with using coal and gas to make electricity. They produce chemicals that make the air dirty and heat up the climate. (Of the two, coal is almost twice as dirty as gas.) There are cheaper and cleaner ways to make electricity. One way is to use wind to make electricity. Some countries are already doing that.

Windmills sound like a win-win, or "win-wind" solution in any community that has the land and the wind. On Cape Cod, Massachusetts we have a situation that shows it's not so simple. This is the kind of story that plays out over and over.

In 2001, a business man proposed building 170 windmills (later reduced to 130) 4-5 miles offshore in the ocean to generate electricity. Even though this plan would provide three-quarters of the power needed by the Cape and Islands, very wealthy owners of big, fancy beachfront homes formed a group to fight the windmills called the Alliance to Protect Nantucket Sound.

The leaders of this group have given many reasons to prevent the Cape Wind project. For example, they claimed that the wind mills would hurt birds. But the main reason they seem to care is that the windmills would ruin their ocean views and interfere with pleasure boating and yachting. They have powerful connections to the media and politicians whose campaigns they help finance. They are also connected to the coal industry through the head of the Alliance, Glenn Wattley, who is a long-time coal industry salesman. To-

Wind is a renewable resource.

Wind mills capture wind energy and turn it into electricity.

day, the debate continues and there are still no windmills on Cape Cod.

So, why should anyone outside of Cape Cod care about the fight over windmills? On very cold and very hot days, when the demand for electricity is at its peak, the power supply in New England is at its limit. To provide electricity to every home and business, we are using every power plant we have. If one part of one plant goes bad, there will be no way to compensate. If the residents on the Cape had their own power supply, it would make a huge difference.

Everyone around New England would benefit from a situation where there is less demand for electricity from power plants. Everyone needs to breathe, and if wind can produce energy, we'll need to burn less of the dirty chemicals that contribute to problems like asthma. Wind power can result in better air quality. That's better for people's health.

As our communities look for cleaner and cheaper energy sources, all of us can learn from the Cape Cod windmill fight. Here are a few things to consider and questions to ponder:

- Windmills produce clean energy that is available whenever the wind is blowing.
- Windmills do not pollute the air. Using wind power helps reduce ***greenhouse gas emissions*** that heat the ***atmosphere***.
- Wind energy is an investment that pays for itself in a few years and then produces clear profit for whoever invests in it.

Windmills may be coming to your community. Where will you stand? How will you decide? Where will your elected officials stand and how will you persuade them to represent your position?

DISCUSSION QUESTIONS

1. Should communities and local governments in the U.S. invest tax dollars in wind energy, or leave it to business to invest the money and later make all the profits? Is wind a common good?
2. Would you support windmills in your community? Why or why not? What else would you want to know?

SOURCES: <http://www.capewind.org>; *Cape Cod Times*, "Group fighting Cape Wind names new leader," Patrick Cassidy, September 1, 2007 <www.capecodonline.com>; *Cape Wind: Money, Celebrity, Class, Politics, and the Battle for Our Energy Future on Nantucket Sound*. Wendy Williams and Robert Whitcomb. New York: Public Affairs, 2007.

Silja Kallenbach is the director of the New England Literacy Resource Center. Martha Merson is a project director at TERC, where she works on projects that situate math learning in everyday situations, and she is co-author of the EMPower series.

A Note about the Title

"Win-Wind" is a pun. A pun is when you play with words to make meaning. In this case, "win-wind" plays with the phrase "win-win." A win-win solution is one where no one loses. Discuss some examples of win-win situations that you have been in or that you know of.