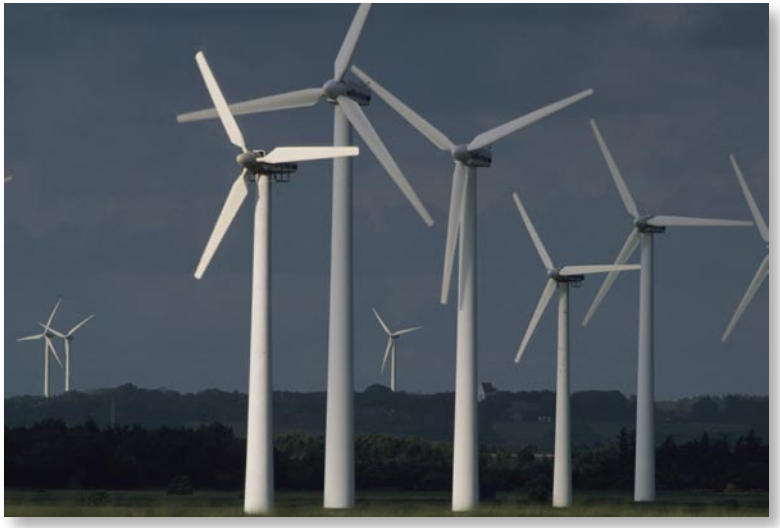
The Carbon Connection

We don't agree on everything, but the world does seem to agree on one thing: Global warming is happening, and it's causing big problems. And the biggest cause of global warming is carbon in the form of carbon dioxide produced by burning coal and oil.

Carbon dioxide in the atmosphere keeps heat from escaping into space. Long ago, this **greenhouse effect** was a good thing. It kept the earth from becoming too cold. But in modern times, more carbon dioxide has been entering the atmosphere, so less heat can escape. We've already raised the earth's temperature over one degree Fahrenheit, and we can see the devastating effects—melting polar ice, retreating glaciers, severe weather, and changes in sea life.



The solution is to burn less, but with the earth's population growing, how can this be accomplished? The answer, according to experts, is not one amazing new technology, but rather all of the existing technologies combined.

Clean electricity Coal-burning power plants produce much of the carbon that enters the atmosphere. If we use natural gas or nuclear energy in all new power plants, we will greatly reduce carbon **emissions**. Coal can also be converted to a clean-burning gas before it is used to produce electricity.

There is also technology that captures the carbon produced by burning coal so that it can be stored underground.

Sustainable energy Energy for heating and electrical power can also come from **sustainable** sources. Large *wind farms* with dozens of wind turbines can be seen in many parts of the world. Thousands more wind turbines would decrease the world's carbon emissions, and we will never run out of wind, unlike coal or oil. Solar panels are another investment in the future, along with **bio-fuels** from corn, soybeans, sugar cane, and grasses.

Forest protection Trees have the ability to remove carbon dioxide from the atmosphere, but unfortunately, they're disappearing fast. Forests are logged to meet the construction industry's demands for wood, and trees are cleared to make room for farming, which only increases the amount of carbon in the air. Protecting forests, on the other hand, leads to a better environmental future.

Conservation Using less energy to begin with may be the easiest way for most of us to decrease carbon emissions. Switching from old-fashioned incandescent light bulbs to high-efficiency fluorescent lights dramatically decreases our electrical consumption. Lifestyle changes are also important, for example, turning off computer monitors when we're not using them and riding bicycles or using public transportation. Finally, if all new buildings, appliances, and vehicles were designed with energy efficiency in mind, we could stabilize or even decrease the amount of carbon entering the atmosphere.