The Sensible Environmentalist

Wood Waste Lowers Dependence On Foreign Oil

(NAPSA)—**DEAR DR. MOORE:**

I recently heard about a power plant that uses forest debris as fuel. Can burning wood waste reduce our dependence on foreign oil?

Dr. Moore

Reducing our reliance on foreign oil is one of the advantages of using "biomass"—that's the name for organic matter such as bark, wood chips and agricultural crops—to produce energy. This is certainly one of the reasons that governments in North America are seeking to bolster their bioenergy industries. But there are environmental benefits as well.

Biomass fuels are renewable and can be burned cleanly. Aside from the security risks of sourcing oil from politically unstable parts of the world, it's also a fossil fuel—and fossil fuels are non-renewable and result in large emissions of carbon dioxide (CO_2), which is thought to be a major cause of global warming.

Wood waste can be burned to produce energy in the form of electricity, steam or heat. Some plants make use of forest debris (which is increasingly removed from national forests to reduce the risk of wildfire) or waste from local sawmills. This approach is also commonly used by forest products companies, which burn biomass on-site to meet their own energy needs and sell the surplus. It has the added benefits of diverting waste from landfills and lowering production costs.

When biomass is burned, it also releases CO_2, but this is offset by the fact that trees and plants absorb CO_2 as they grow back. The production process also incorporates a variety of pollution controls to reduce emissions.

Wood waste can also be converted to ethanol—a fuel commonly distilled from corn and sugar cane—although research is underway to determine if this can be done economically on a large scale. Right now, any gasoline-powered engine can run on a mixture of 10 percent ethanol and 90 percent gasoline. Specially designed vehicles can run on a mixture of 85 percent ethanol and 15 percent gasoline. Given that the U.S. transportation sector gets 97 percent of its energy from oil, this could represent a tremendous opportunity to reduce the use of fossil fuels.

Even though biomass is the second largest source of renewable energy after hydro, there are barriers to creating a stable domestic industry, including a lack of public awareness and support. I can only hope that the heightened risk of sourcing oil in places like the Middle East, combined with the environmental impacts of fossil fuels, will bring the subject of bioenergy to the mainstream.

Dr. Patrick Moore has been a leader of the environmental movement for more than 30 years. A co-founder of Greenpeace, he holds a PhD in ecology and a BSc in forest biology. Questions can be sent to Patrick@SensibleEnvironmentalist.com.