



WOOD^{to} ENERGY



Handout

Media Question and Answer Handout

What is woody biomass?

Woody biomass is plant material that comes from trees and shrubs. Branches, trunks, limbs, shrubs, and vines are all types of woody biomass.

Where does woody biomass come from?

Woody biomass can come from many sources. A major source of woody biomass is found right in our backyards, since urban waste wood and roadside trimmings can be collected and used as fuel. Land clearing for development can provide another source of woody biomass. In addition, by-products of local forestry industries, such as leftover tops and branches or poorly formed trees can be used. Trees can also be grown specifically for energy production, just as they are grown for paper or lumber production.

How can woody biomass be used to generate energy?

Wood can be used for fuel at utilities similar to the way that coal is used, to generate electricity. Although there are lots of different ways to convert wood to energy, typically fuel (wood or coal) is burned in boilers to create steam, which is passed through steam turbines to generate power. Wood can be converted into gas or oil, and then those syn-fuels can be burned to produce energy. Wood can be used in institutions such as hospitals and schools to generate heat, electricity, hot water, or any combination of the three. Wood can also be used to produce steam or electricity for industrial processes such as powering a sawmill. Furnaces and boilers can be designed to use wood, alone, or in combination with other fuel sources.

How much energy can be produced from woody biomass?

Wood-fired power plants typically generate from 1 to 50 MW of electricity. In addition, industrial and commercial facilities can use wood to generate steam and electricity using combined heat and power (CHP) systems on-site, or can just generate steam, hot water, or hot air on-site. Large coal power facilities can co-fire wood with coal to improve their air emissions. Some facilities do not require extensive modification to accept about 5% of their fuel in wood.

How can we protect our local forests and use woody biomass for energy?

Using wood for energy provides another economic market that may encourage landowners to sustainably manage their forests rather than sell their land for development. If appropriate management practices are used for growing and harvesting forests, environmental impacts are minimized. Many programs and certifications exist that provide timber growers with information and tools to implement sustainable practices. In addition, energy companies can hire a forester to ensure these practices are being implemented on lands where they obtain wood.

Is woody biomass more expensive than coal?

In areas where woody biomass is readily and economically available on a sustainable basis, and where coal must be transported long distances, energy from wood can be economically competitive with energy from coal and natural gas. This depends on how far both fuels are transported, how much is needed, and the quality of the fuel.



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