

Biomass Energy

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In the day and age of the world trying to bring about a better tomorrow, people are trying to find a “greener” solution. People are using the rays from the sun to power their cars, new ways to renew water for drinking, and the wind to power their homes. Everywhere society is bombarded with the media trying to convert people to “reuse, renew, and recycle,” all to ward off the potentially harmful greenhouse effect of global warming. There are so many ways to convert energy from the earth that don’t emit harmful gases into the atmosphere. An example of this is biomass energy; this often smelly form of energy gives off emissions of methane and carbon dioxide, so one has to weigh in the positives and the negatives of using this natural energy. Many companies have already tapped in on it and are reaping the rewards from this overabundant resource, but with the carelessness of some humans, this source of energy can be tapped out, so you have to wonder if it’s worth it to use this energy or not.

According to Biomass Energy Centre, biomass energy converts waste from “any living organism” into electricity and other means of positive feedback (“What is Biomass?,” 2011). Biomass can be found in trees, energy crops, agricultural residues, and waste and residues (“What is Biomass?,” 2011). Forms of biomass energy have been used in many different ways since 1826, when Samuel Morey invented a car engine that can be run on ethanol and turpentine. Today biomass energy is used in powering electricity and producing ethanol (“Alternative Energy Source Timeline,” 2011). A lot of the energy for electricity is harvested from the decomposition of waste in the many landfills in the United States (Spear, 2011). We as Americans need to find ways to harvest more of the waste from over populated landfills, eradicating unnecessary waste. Harvesting biomass energy from decomposed animals, human waste, and dead plants and trees can help take care of the unwanted material. Before the

second World War, ethanol was used to fuel all cars in the U.S., but during the war, we were unable to market the material. That was when America made the switch from ethanol to petrol during the late 50's to the late 70's. Then in the 80's, the government made an act, the Energy Security Act, to bring back the use and research for ethanol in vehicles to reduce the greenhouse effect that the emissions from the fossil fuels current vehicles are emitting ("Alternative Energy Sources Timeline," 2011).

The positives of using this overabundant decomposing material are numerous. Many companies are experimenting with biomass energy to power their factories, using this organic "fuel" to make their business more "green" (Spear, 2011). This renewable resource can be used as a "solid" or a "liquid." The solid is used to power electricity to homes and factories, stores and buildings, and the liquid form is used for powering cars in the form of ethanol (Hughes & Wright, 1993, pp. 483-497). This energy can be found in landfills that are giving off copious amounts of methane, which is used for electrical energy, and harvesting this gas is what powers the electrical plants (Spear, 2011).

Biomass energy is a big conductor of carbon dioxide, which can be considered a huge negative in the list of reasons for not using this material to benefit the earth. Carbon dioxide is great when it comes to plants and trees, but when there is an overabundance, it will cause a depletion of the ozone layer, leading to global warming (Posey, 1994, pp. 28-38). Whether we know this to be true, or not, is still up for debate. Scientists are researching ways to harvest and use carbon dioxide and store it to harvest as a power source. Scientists have come up with a four-category series to store the carbon dioxide that is emitted when harvesting biomass

energy The new technology consists of four main categories: post-combustion capture, pre-combustion capture, oxyfuel combustion capture, and capture from industrial processes (International Energy Agency, 2011). They work together to control how much CO₂ is released in the process of harvesting biomass energy. Scientists are exercising new ways to harvest the negative effects of biomass engineering and turn it into a positive force for the world to benefit from. As science and technology become more advanced, the possibilities for biomass engineering become more promising as a positive renewable resource to harvest energy and power for many lives to come.

Biomass energy can be harvested and used in many different ways, from heating a home, to fueling a car, to harvesting electricity. Biomass can be used as a solid, a gas, or a liquid to the power the lives of many. When researching a new source, the positives by far outweigh the negatives. The world needs to see that taking about sources that have already been found and researching ways to use them is the best way to turn this world around.

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