

Bio-mass Energy



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The Positive Use of Bio-mass Energy in Pennsylvania

Bio-mass energy helps America to lower the toxic pollutants being put into the air. This energy also means cleaner oil in cars and houses, which also means we don't depend on foreign oils as much.



Learning About Biomass Energy:

Bio-mass energy is a type of energy that requires the burning of any living or dead biological material.

Bio-mass was first

discovered several hundred years ago when wood was burned to heat homes and cook foods. It can be turned into different types of fuels today and are taking the place of fossil fuels that are now decreasing. Bio-mass sources are things such as dead trees, dead/left over crops, recycled paper products, wood chips, old tires, trash, manure from livestock, clippings from yards, and other things such as those. Once burned, bio-mass can be turned into ethanol, methanol, bio-diesel. It can also be used for gasification.

Using Bio-mass energy can also provide energy for rural communities around the world. Bio-mass is growing and becoming more common. The tripling U.S. use of Bio-mass energy could also provide as

much as \$20 billion in new income for farmers *and* reduce global warming. Rural communities will also be assisted in the \$20 billion also. Bio-mass energy is changing a lot for everyone in the world, and our world for the better. Bio-mass energy is globally meeting 14% of the world's energy and is now beating hydroelectric power as the number one renewable source in the United States.

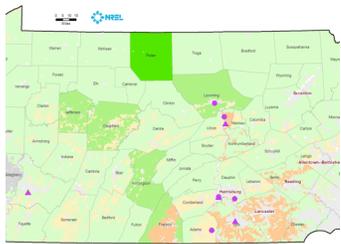


The High Costs of Transferring to Biomass Energy

The cost of electricity using Bio-mass

energy depends on the type bio-fuel that is being used. The price of converting to Bio-mass energy depends on the size of the electricity plant and how it's converted to electricity. Some companies give their customers the option of running on Bio-mass energy, which also means customers have to pay more money too.

By: Nashaya, Tranisha, and Shon



Pennsylvania's Bio-Mass Use

This map explains the amount of bio-mass energy that the state of Pennsylvania consumes alone. The Legend to the

right shows you how to read the map. Keep in mind that Bio-mass energy is the second most common form of renewable energy in the U.S. There are 7.4 million dry tons of bio-mass in Pa. This amount of bio-mass can be generated to 1500 milliwatts of

energy. Bio-mass that is in the U.s can power up to 2 million homes.

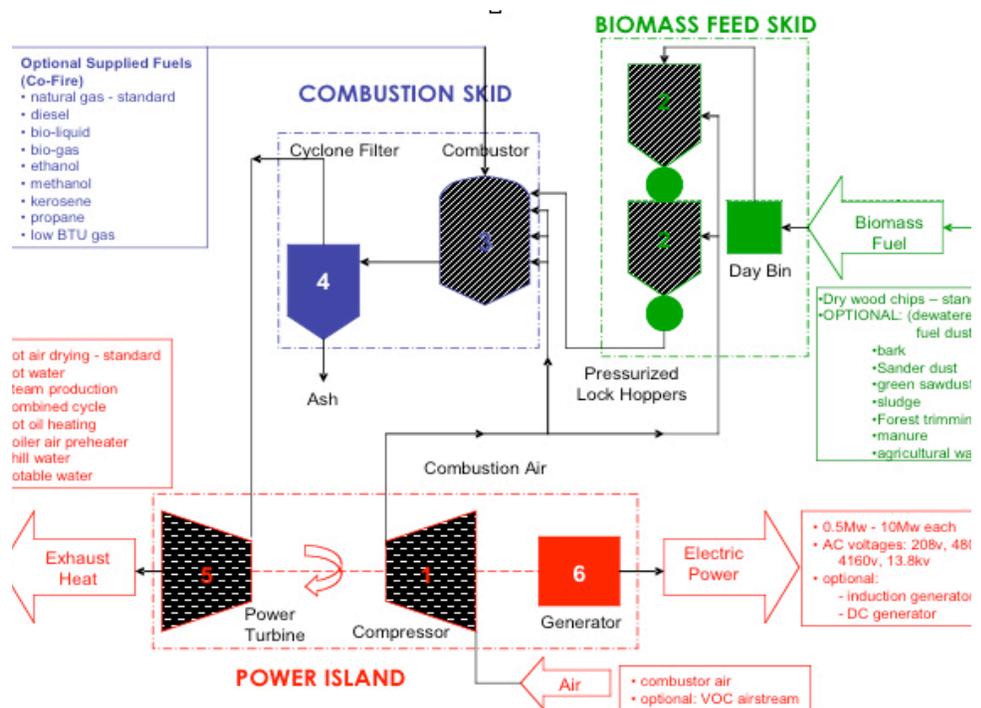


What's This?

This is a diagram of a bio-mass energy unit that was installed in December of 2006.

David Beasten from UGI (an electric company) had this to say: "Keep in mind that the cost of electricity from these renewable resources is more expensive than from the traditional methods of generating electricity (coal, nuclear and natural gas) and UGI's goal is keep customers' electric rates as low as possible. The supply of electricity from all renewable energy resources, much less just bio-mass, is not sufficient to meet all of the electricity used in Pennsylvania."

Although the use of renewable energy may help the environment replenish itself, not many companies are willing to pay the cost for a fancy device such as the one shown.



To his knowledge, Mr. Beasten believes that there is no one plant that uses bio-mass energy as its only main source of energy. In the e-mails, he has mentioned that UGI purchased a very small quantity of electricity produced from bio-mass.

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