

Biomass

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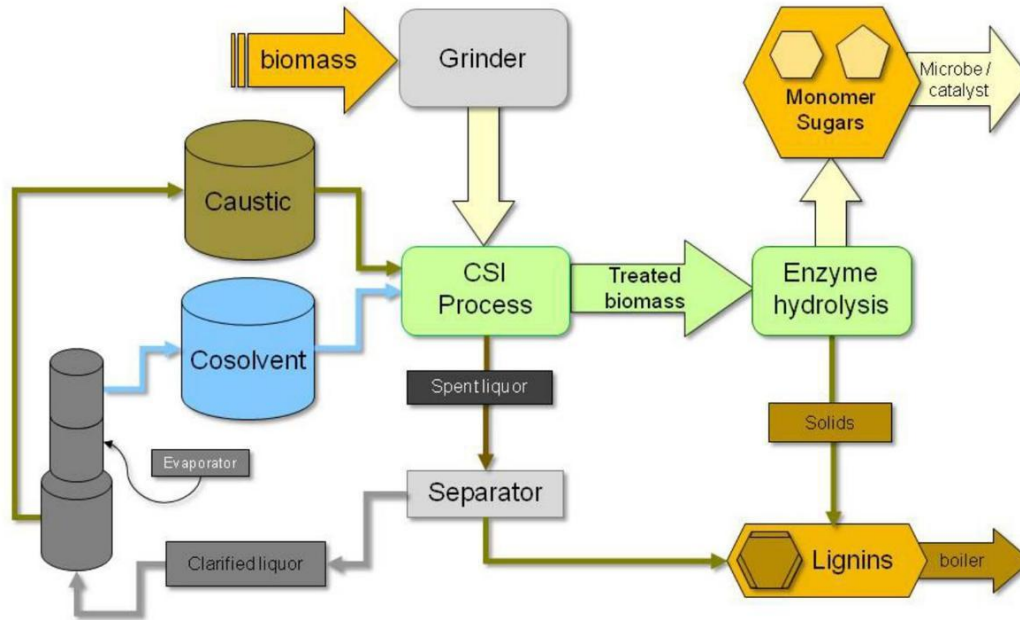
Key Terms

1. Biomass fuel- Fuel made from things that once were alive.
2. Gasohol- A mixture of gasoline and alcohol.
3. Methane- A colorless, odorless flammable gas which is the main constituent of natural gas.



Diagram

Simplified Process Diagram





Pros and Cons

Pros includes:

- Renewable- Biomass energy is a renewable resource. The positive about biomass energy is that it creates power by utilizing renewable assets.
- Dependency on Fossil Fuels is Reduced- It replaces other fuel sources. In other cases, the fuel might be immediately replaced.
- Widely available- Biomass energy is available all over the world. From organic waste in the form of dead leaves, grass and trees, animal carcasses are available in abundance and can be produced to energy.

Cons includes:



Pros and Cons

Cons includes:

- Not fully cleaned when burned- The biggest disagreement against biomass as a clean energy is the pollution that is created from burning the wood and other natural resources.
- Can Lead to Deforestation- Since wood is a major source of biomass energy, to produce considerable amounts of power, large amounts of wood and other waste products have to be burned.
- In-efficient- Biodiesel product like Ethanol which is produced by biomass is relatively efficient compared to gasoline.



Best location to build plant

You can build this almost anywhere. The main material to produce the biogas, which is algae, are expected to usually only be in ponds or areas of water, but the algae we used could be found in many convenient locations all around our island. For example, any grassy area, fields, or even the parking lot. The other materials such as wood ashes and gravel could also be gained just outside. However if you do not want to build near a pond or body of water, you can make an algae farm where you have man made pools of water. If you wanted to do this we would suggest that you make the pools on flat land and in a tropical climate because that is where algae thrives best.



Mini Quiz

1. What is biomass fuel?
2. Define gasohol.
3. What does the term methane mean?
4. What is one way to use biofuel?
5. How can you make biomass fuel/biodiesel?