



GLOBAL BIOMASS TO ENERGY





The greatest form of independence is to be self-sufficient...this is true for countries and individuals.



One of the best forms of energy is energy produced from renewable biomasses which do not compete with food sources & do not pollute our environment.



MISSION

Global Biomass to Energy LLC pledges to provide the most efficient and affordable renewable energy systems for “off the grid” power needs in all environments through a unique “biomass reformer” that produces a hydrogen syngas from very diverse types of biomass fuels that can be found in almost all parts of the world. These systems will use locally available biomass and biomass by-products generated from continuously produced agricultural products that presently are not used for animal feed or human food. The capital investment is low and the renewable energy systems will not have any adverse environmental impact. This will be accomplished without the use of petroleum based fuels that have economic barriers for many communities and that contribute to a wide range of environmental damage.

All of our energy systems can be used in developed urban communities, remote villages and small communities to create “mini-grids” or can be used in individual stand alone applications. Users will enjoy independent lifestyles and 21st century living standards breaking down the living standards barriers that presently effect a large portion of remotely located global populations.

Global Biomass to Energy LLC is developing a licensing program so that even the poorest country can purchase a license to assemble their own reformers (Green Power Machine) and use locally produced biomass fuels. Licensing will also include complete training of a start-up force to assemble and build systems. If you are a governmental agency, company, or non-profit organization, please contact us to learn more about our licensing program.





RENEWABLE ENERGY PROCESS



Global Biomass to Energy LLC's technology is the missing link for other technologies such as but not limited to fuel cells and Stirling generators to use green biomass fuels.



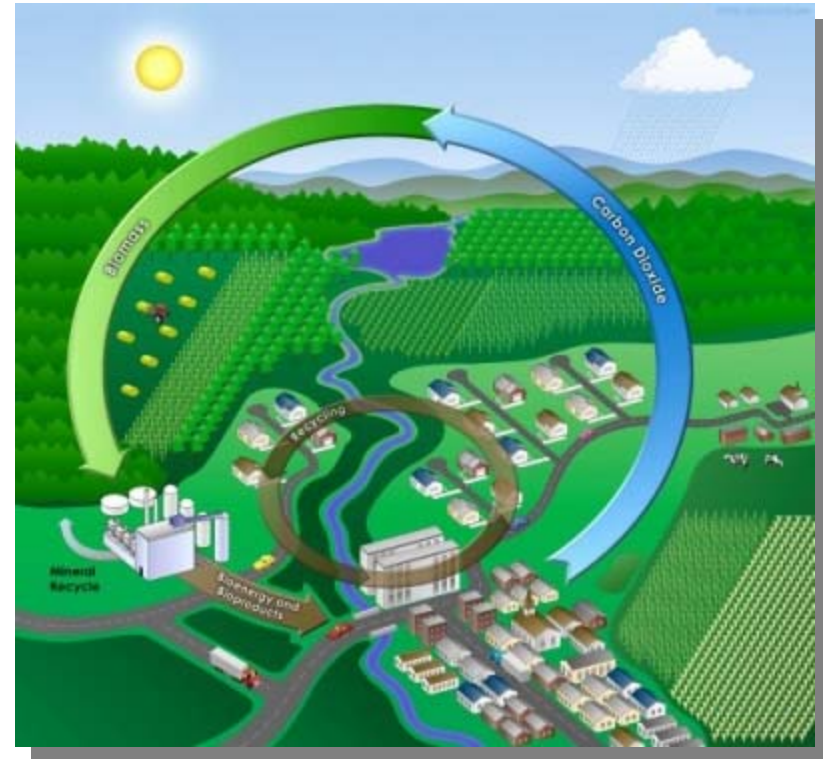
The biomasses used by the Green Power Machines are organic material made from plants and contain stored energy from the sun. Plants absorb the sun's energy in a process called photosynthesis.



The Green Power Machines "reform" (converts) the energy in various biomasses to heat and hydrogen syngas. The system is 80% to 85% selective at converting biomasses to hydrogen. The resulting hydrogen syngas stream is 40% to 45% hydrogen with the remaining syngas consisting of nitrogen (because of the air that is added in the process), CO₂, CO, trace gases and moisture.



The Green Power Machine's syngas can be used to provide heat to a Stirling generator that then produces electricity or the syngas can be further filtered to produce 99.9999% pure hydrogen and used in a fuel cell to produce electricity. 99.9999% hydrogen purity is required for fuel cells.





Biomass Feedstock

The biomasses used by the Green Power Machines are organic materials made from plants and contain stored energy from the sun. Plants absorb the sun's energy in a process called photosynthesis.

The Green Power Machines "reform" (converts) the energy in various biomasses to hydrogen syngas and produces useable heat that is a by product of producing the hydrogen syngas. This is all done without a carbon footprint. One of the many benefits of the Green Power Machine is that it can use many different types of biomasses and their by-products as a fuel feedstock. This is important because locally grown biomasses can be used to produce energy where the energy will be used...unlike petroleum based fuels.

Examples of biomass fuel feedstocks are but not limited to the following:

- Glycerin – a by-product of processing various oils such as coconut & palm oil and a by-product of producing biodiesel.
- Rice/Wheat Waste Products
- Oils from Pennycress or any other type of biomass
- Carbohydrates from Switchgrass or any other types of biomass
- Sugars from sugar cane, molasses, etc.
- Algae & Algae Oil
- Ethanol produced from a wide range of biomasses and diluted with up to 60% water
- Waste Grease & Oil
- Any many more kinds of biomasses





Green Power Machine Systems

Each Green Power Machine System is engineered and configured for the target application and the available local biomass.

A Green Power Machine System BioLF-12CFM-hydrogen syngas reformer (42 inches x 42 inches x 42 inches) will be available April, 2010.

Systems will be sized up to 100 cfm.





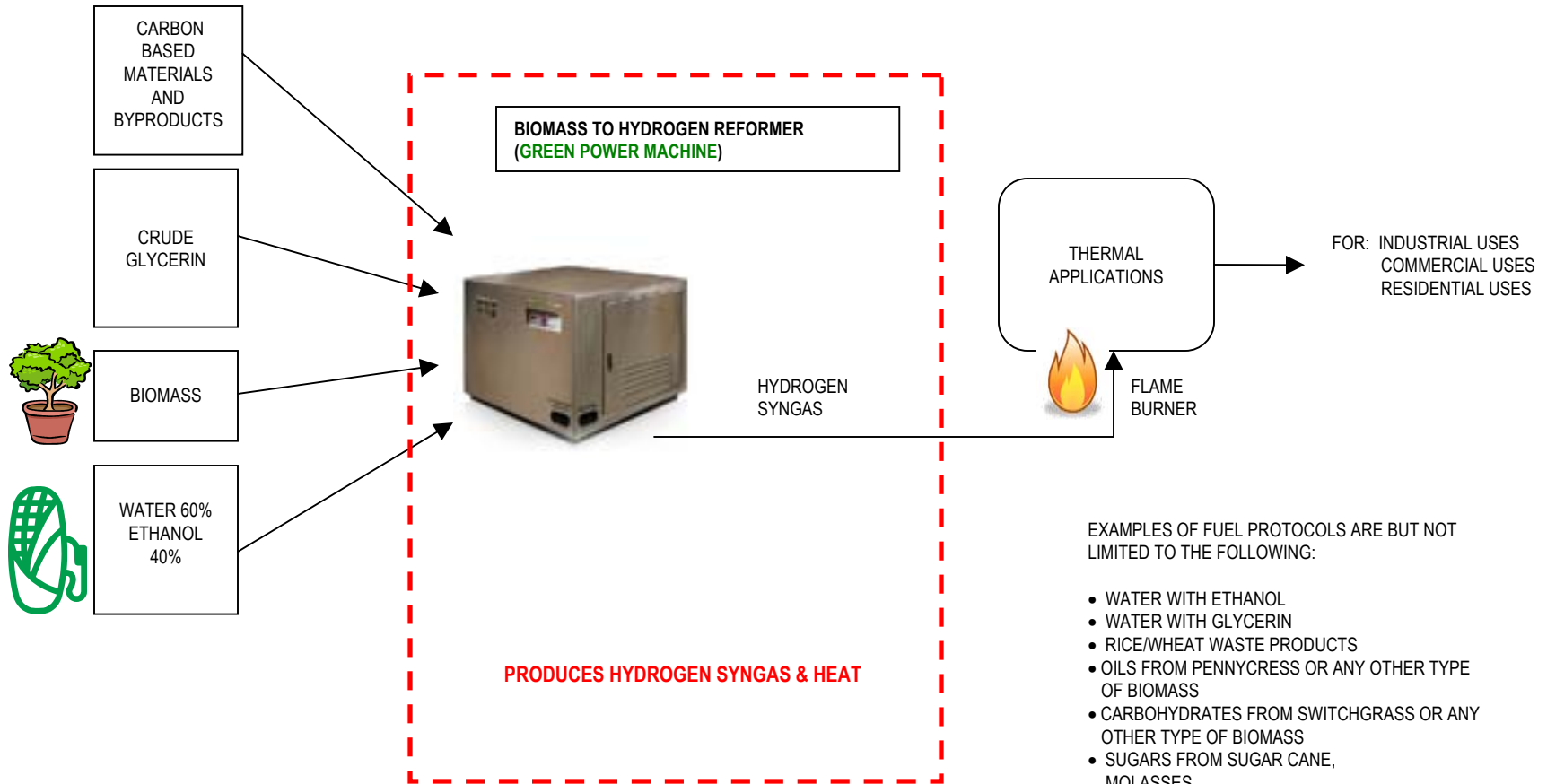
The world is on a quest to use renewable energy without a carbon footprint. Global Biomass to Energy LLC is bringing a new technology to the marketplace that reforms many different types of biomasses into a hydrogen syngas that then produces energy that can be used to provide heating, cooling, hot water, and electricity...all of which can be used in homes and commercial and industrial facilities and can create “mini grids” to power small communities.

The reformer (Green Power Machine) system is 80% to 85% selective at converting biomasses to hydrogen syngas. The following are three types of Green Power Machine Systems. Each system can be sized for different capacities and applications.

System No.	Major Components	Energy Produced
#1	Green Power Machine	Hydrogen Syngas & Heat
#2	Green Power Machine, Hydrogen Syngas Filter & Fuel Cell	Hydrogen Syngas, Pure Hydrogen, Heat & Electricity
#3	Green Power Machine, Hydrogen Syngas Filter & Stirling Generator	Hydrogen Syngas, Pure Hydrogen, Heat & Electricity

Note: Systems #2 & #3 are commonly called combined heat and power (CHP) systems.



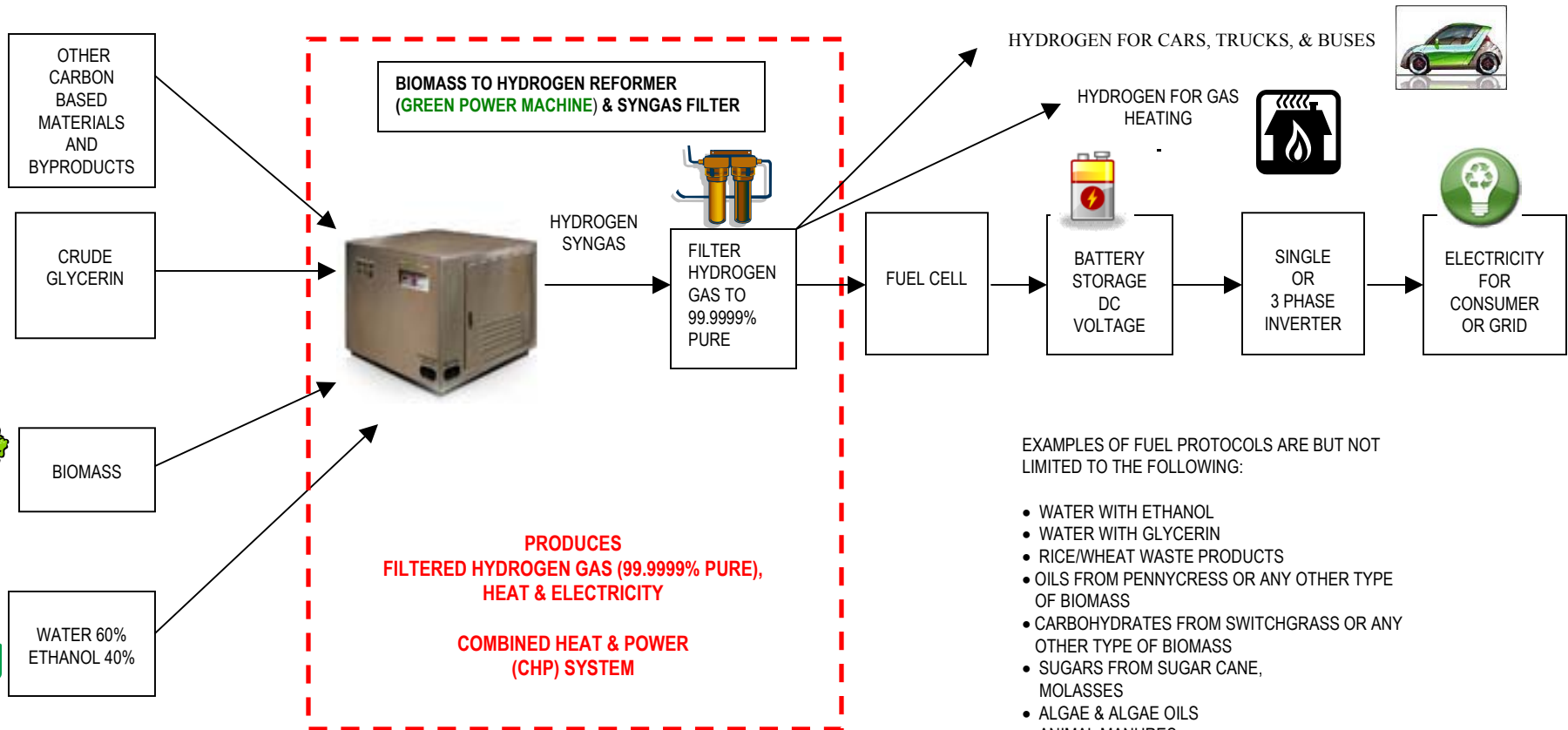


ALL GRAPHICS FOR ILLUSTRATION PURPOSES ONLY.

GLOBAL BIOMASS TO ENERGY SYSTEM #1

EXAMPLES OF FUEL PROTOCOLS ARE BUT NOT LIMITED TO THE FOLLOWING:

- WATER WITH ETHANOL
- WATER WITH GLYCERIN
- RICE/WHEAT WASTE PRODUCTS
- OILS FROM PENNYCRESS OR ANY OTHER TYPE OF BIOMASS
- CARBOHYDRATES FROM SWITCHGRASS OR ANY OTHER TYPE OF BIOMASS
- SUGARS FROM SUGAR CANE, MOLASSES
- ALGAE & ALGAE OILS
- ANIMAL MANURES
- WASTE COOKING OIL AND GREASES

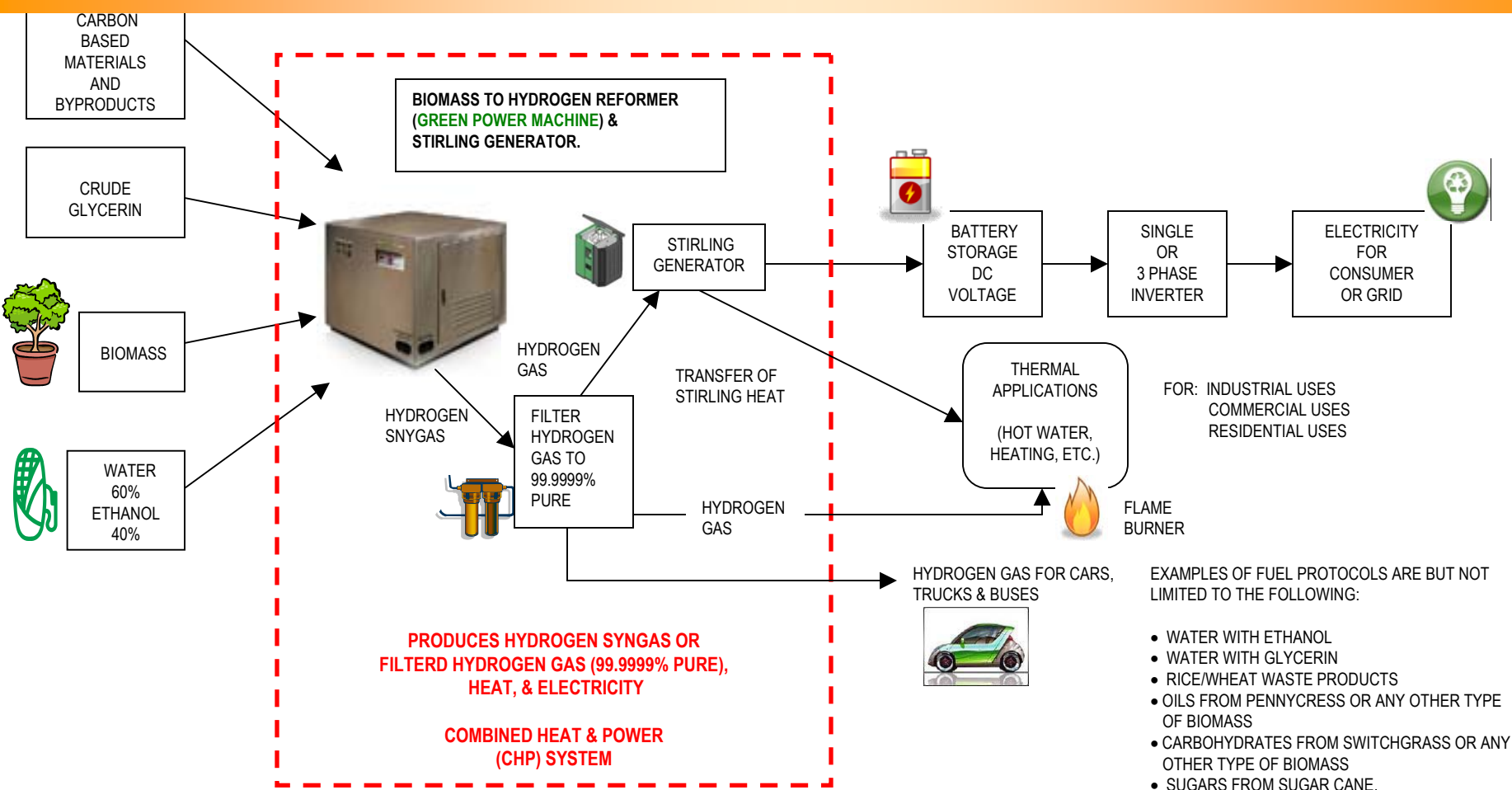


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- ALGAE & ALGAE OILS
- ANIMAL MANURES
- WASTE COOKING OIL AND GREASES

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GLOBAL BIOMASS TO ENERGY SYSTEM #2



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GLOBAL BIOMASS TO ENERGY SYSTEM #3



Benefits of the Green Power Machine Systems



Green Power Machines can be sized to provide power to a home, to commercial and industrial projects, and even to a small community.



In remote areas, you do not need to invest large sums of money to expand or build expensive electrical grid infrastructures and distribution systems to bring power to rural areas.



Jobs are created through the harvesting and processing of local biomasses to useable fuels in the Green Power machines.



Energy is consumed where it is produced (insitu) unlike petroleum based fuels. Further, when producing hydrogen syngas with the Green Power Machine, you do not need expensive storage and transportation systems for hydrogen syngas because the hydrogen snygas is being used as it is produced. Expensive transportation and storage for hydrogen are what has prevented the wide spread use of fuel cells.



Small water systems with ultra violet technology for purification can be powered by the Green Power Machines to bring clean water to a community.



Most countries energy needs are based on petroleum based fuels and the use of capital to bring in petroleum based fuels can reduce the standard of living in some countries that do not produce and refine petroleum. Because the Green Power Machine uses locally grown biomasses, a country can reduce the amount of imported fuel to produce energy.





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