



By ECON, the Energy Conservation Company

Vehicle Gasification: The Pros and Cons

PROS:

- A. Today, modern materials greatly simplify and improve construction and use of biomass gasifiers.
- B. Wood is a clean fuel with virtually no Sulfur, creating no NO_x (nitrogen oxide).
- C. Wood residue is considered to be carbon neutral, as it will ultimately succumb to degradation and the release of its CO₂.
- D. Most living matter, from trees through grass and even to algae, has a fuel potential.
- E. Biomass gasification was proven to be a realistic factor during the crisis of WWII; wood was absolutely the only alternative fuel source for the conversion of millions of vehicles.
- F. The fact that wood gas is a gaseous fuel is an advantage, as with propane. Propane is, however, cleaner and more powerful.
- G. Wood etc. is also a renewable resource and must be considered as one of many national assets that may be called upon in a national crisis—within the broad view of the obvious downsides of unwise usage.
- H. Residual, surplus or unwanted wood or plant matter is available now. Billions of tons of wood rot away in the forest in the natural course of events, as well as the residue from harvesting and planting—most, a hindrance to creation of new forest. An immense tonnage of wood or plant fiber is disposed of at great cost each year in the U.S.

CONS:

- A. Today, gasification would not be a popular option with most, and only prolonged gas rationing or a total ban on unessential vehicle usage would encourage a significant acceptance of its downsides.
- B. It is common knowledge today that biomass is a finite resource, unable to withstand a tremendous onslaught of ever increasing harvesting practices. Any plan for the use of a significant amount of such a valuable and sensitive resource will add to the difficulties of explaining all of the positive aspects.
- C. The process of mobile biomass gasification requires considerable hands-on effort by a motivated operator.
- D. Wood gas operation produces only 70% of the power of gasoline, thus limiting acceleration and often speeds.
- E. Wood gas cannot be stored in all practicality, and the gasifier must be attached to or towed behind the auto, truck, bus or tractor.