

The Green Source Fuel Plan, in Brief:

1. Until algal oil is practical, Green Source Fuel hopes to utilize waste vegetable oil and rendered animal fats to the greatest extent possible...especially as new oil costs are rising and also causing food costs to rise.
2. New vegetable oils are planned to be sourced mostly from alliances with local & regional domestic producers, including local family farms that are struggling to survive. Imported oil, if used, will be purchased from producers utilizing previously cleared land. We will not encourage rain forest destruction to grow oil plants.
3. Green Source will add to the price it can pay farmers for oil seed by rebating to them part of the profit garnered from sale of the residual seed-cake & by returning, to them, the residual, cellulosic waste.
4. Green Source will work to dispense knowledge about biodiesel and encourage home biodiesel production or production by small coops in the feedstock growing areas we promote. To this end, the plant will have meeting & training facilities to support farmers and encourage clean, efficient and safe production.
5. To further encourage production, Green Source intends to market reasonable priced, safe kits for "home" production of biodiesel; provide local analytical services at reasonable costs; and is investigate the possibility of providing turn-key plant franchises for those interested in larger (but not huge) cooperative operations.
6. To the extent that economics allow, new oil will be derived from sources that enrich soils, such as soy beans and peanuts, rather than soil-depleting crops that requiring fertilizers, pesticides, etc, like corn, and we plan to work with feedstock growers to encourage use of composted feedstock waste.
7. If it proves feasible, Green Source hopes to use Potassium Hydroxide as a catalyst and Phosphoric Acid to neutralize the byproduct. This will yield phosphate fertilizer, that can be sold, rather than salt, which is a pollutant. If it is economically feasible, ethanol, less toxic than methanol, will replace the methanol.
8. Green Source plans to maximize the use of by-products, such as by purifying our own glycerin or concerting it to propylene glycol, to increase financial returns and minimize pollution.
9. Green Source plans to partner with a local university to do our own algal-oil research. Algal oil promises to give huge oil yields per acre while also having the ability to literally "eat" the emissions from smoke stacks.
10. Green Source will investigate the use of innovative additives and processes to provide biodiesel that has better low temperature performance (ie: lower the cloud point...the temperature at which it solidifies).
11. Green Source will investigate the feasibility of processes to convert biodiesel to bio-kerosene, that is usable in jet engines or other processes that require a "thinner" fuel.
12. Green Source will be investigating alternative oil producing plants that would thrive locally. One example is the Chinese Tallow Tree (Florida Aspen or Popcorn Tree), introduced to the southern US in the 1700's. Considered by many to be an invasive "weed tree", its nuts yield more oil per acre than the Oil Palm. It is also a source of nectar for honey. If taken advantage of as an oil source, it may be considered more of an asset, and less of a weed. Another possibility is the Castor Bean, of "Castor Oil" fame. Other plants produce ils that can be "cracked" like petroleum, without any biodiesel-like conversion process needed.
13. Green Source intends to work to reactivate areas in the Caribbean basin that were previously cleared for sugar cane, but are now lying fallow for economic reasons...similar to the situation in southern New Jersey. The oil palm can grow there, producing up to 750 gallons of oil/acre, twice the yield of most other plants.
14. Green Source intends to use an automated, continuous ("in-line"), ultra-high-shear, "cavitation" process for production. This efficient, high-yield, process saves time and energy; is safer, and needs fewer tanks than the "batch process". We consider batch processors to be suitable for small, or home operations, but they require hours, or days, of settling and washing to produce high quality biodiesel batches.
15. High speed centrifuges and other innovative waterless drying and recovery technologies will minimize alcohol, catalyst and water use, yet produce ASTM standard product, recover as much alcohol as possible (without venting it) and also produce the cleanest glycerin byproduct possible.
16. Green Source will have a state-of-the art lab on-site to keep analytical costs low and product quality at the highest standards of ASTM and the National Biodiesel Board, which we will join.
17. Green Source's plant will be as environmentally benign as possible...no unpleasant smells, minimal noise, no release of pollutants, recycling of all byproducts and powered, to the greatest extent possible, by our own biodiesel and solar technology.
18. The Green Source facility will be constructed to take advantage of the various low-interest loans and grants available as an incentive to the development of alternative fuel infrastructure in the US.
19. While Green Source will target sales to fleets (trucks, buses, school buses, large farms, railroads) to provide them a cleaner-burning, more environmentally friendly fuel than petroleum diesel fuel, it also hopes to ensure that there are at least several retail pumps of dispensing biodiesel or biodiesel blends in the southern NJ area. Presently, there are no retail biodiesel sales in southern NJ, if at all anywhere in the state.