

## Algae to Diesel : Process brief

### *The System*

The STEPS system is unique in many ways than one. There is no mechanical and chemical solvent extraction involved. It eliminates the process of trans esterification and there is no intermediate stage of bio crude. It directly converts algae into diesel. The end product is hydrocarbon diesel not bio diesel. The STEPS diesel can be used as direct fuel and not as blended fuel. No additives are needed.

### *Distinct Advantages of STEPS process*

- 1) Direct conversion of algae to fuel without hydrogenation.
- 2) You can feed wet or dry algae directly into the process unlike other technologies which expel oil first using mechanical oil expellers and then go through an elaborate esterification process.
- 3) Low capital cost. Energy for the conversion is generated through the off gas from the conversion process.
- 4) Oil yield per kilo of algae feed stock > 40%
- 5) Create a sustainable industry that can grow algae as a profession.
- 6) This technology can bring the resources to the local level. Any place having a water body can grow sustainable source of fuel and be independent from refineries or major oil suppliers.
- 7) Every Ton of algae yields approximately 500 liters of hydrocarbon fuel.
- 8) Gas re-used for internal energy needs of the process.
- 9) End residue is Bio-char, has a high commercial value.
- 10) Thus the process is self sufficient in power.
- 11) STEPS system is small foot print, simpler to use, does not require additional plants, and is one step conversion process.

*For complete process details send mail to: [info@stepsenergy.net](mailto:info@stepsenergy.net)*