

Bio-Diesel Project details

Introduction

Energy in one form or another is essential for tribal people to meet the basic needs such as cooking, heating, lighting for all sections of the community. In India, with its predominately rural population, energy is mostly obtained from forest and agricultural sources i.e. wood and charcoal, and where, available, coal. In addition, fossil fuel based products like kerosene, petrol, diesel and LPG have also become important. Of these, kerosene and diesel are the most important, especially in the context of domestic water supply, irrigation pump sets and lighting. Given the periodic scarcity and ever increasing cost of petrol based products, combined with the logistic difficulties of transportation to remote areas, attempts have been made in the past to find alternative sources of fuel/ energy from renewable sources like organic oils and starches. Examples of these are refined oils added to petrol products or 'gasohole', the combination of petrol and alcohol that has been used as vehicle fuel. However, the results are often uncertain, unreliable and uneconomic.

Proposal

In the current project we propose the use of Mahua, Pongamia or similar oil, derived from the forest resources, amply available in these areas (without felling, planting or any other interference). In addition to environmental benefits, the project addresses the difficulties faced by poor people, especially in the tribal areas, of finding suitable fuel / energy to meet basic requirements such as drinking water and irrigation water for agriculture as well as domestic lighting, thus significantly improving the quality of life.

The objectives of this project are:

- a) Locally generating electricity using vegetable oil as a fuel
- b) Pumping of potable water through pipes for village water supply scheme.
- c) Pumping irrigation water during the crop season to enable better agriculture.
- d) Promotion of tree borne oil as fuel for other energy needs.

In addition to the benefits associated with the above objectives the following benefits will also help the tribal people and improve the quality of their lives:

- Generation of extra income by saving fuel costs for irrigation of agricultural land
- Provision of local employment opportunities
- Use of oil cake residue for fuel in fires and as fertilizer
- Reduction of biotic pressure on forest when used to provide fuel wood, thus improving the habitat and reducing disturbance
- Reduction of use of conventional fossil fuel.

It is planned that local persons will be involved during the installation of pumps and the Genset. Unemployed youth with an inclination towards technology will be identified and these persons trained on site. If necessary, further technical training will be available. Similarly, other groups of villagers will be trained for oil extraction operations and wiring etc. However, training is a separate component and not budgeted for in this project.