ABSTRACT

The present rate of economic growth is unsustainable without saving of fossil energy like crude oil, natural gas, or coal. There are many alternatives to fossil energy such as biomass, hydropower, and wind energy. Also, suitable waste management strategy is another important aspect. Development and modernization have brought about a huge increase in the production of all kinds of commodities, which indirectly generate waste. Plastics have been one of the materials because of their wide range of applications due to versatility and relatively low cost.

Most of plastics that are used today are non-biodegradable in nature, they remain in environment for long period Which affects environmental quality. Plastic wastes include different type's viz. Low Density Poly Ethylene (LDPE), High Density Polyethylene (HDPE), Poly Ethylene Terephthalate (PET), Polypropylene (PP), Polystyrene (PS), Poly Vinyl Chloride (PVC) etc. Among the alternatives to fossils energy, conversion of plastic waste to bio fuel is also one of them. The paper deals with implementation of the conversion and recycling of plastic wastes into alternative fuels.

Our Project deals with the extraction of oil/diesel from the waste plastics termed as plastic pyrolyzed oil which can be marketed at much cheaper rates compared to that present in the market. As we know that both Plastics and Petroleum derived fuels are Hydrocarbons that contain the elements of Carbon & Hydrogen. Pyrolysis process becomes an option of waste-to-energy technology to deliver bio-fuel to replace fossil fuel. The advantage of the pyrolysis process is its ability to handle unsort and dirty plastic. The pre-treatment of the material is easy. Plastic is needed to be sorted and dried. Pyrolysis is also no toxic or non-environmental harmful emission unlike incineration.

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