Free article review about the need for alternative energy

Transportation

The primary source of energy and chemicals is crude oil with an annual demand of 43. 8 billion tons per year of which 30 % is used for transport. The transport sector is expanding rapidly across the globe, thus increasing the demand for oil in the future. Oil is a non-renewable resource and its availability will imminently reduce, this shall further escalate the prices of oil and energy (Hazell 2006).

The other concerning issue is global warming caused by fossil fuel combustion and other anthropogenic emissions that includes are greenhouse gases (GHGs) especially carbon dioxide, methane, nitrous oxide and sulphur hexafluoride. In 1992, United Nations Framework Convention on Climate Change (UNFCCC) was established to tackle the concerns of stabilization of GHG concentrations in the atmosphere which resulted in the formation of Kyoto Protocol in 1997. According to the Kyoto Protocol, by 2012 there would be an average reduction of 5. 2 % in these GHGs but these targets have not been met as of today. To worsen the situation, GHG emissions may increase up to 80 % by 2030 due to the high growth rate in transport sector (Luque 2008).

In recent years, considerable attention has been paid to the development of alternative fuels due to the continuous depletion of non-renewable energy resources, emission of greenhouse gases (GHGs) and soaring costs of petroleum. Biomass is one such important renewable source of energy and is extensively used fuel following only to coal, oil and natural gas. It is a carbon neutral renewable energy resource. Hence, there is a requirement of tapping this inexpensive and abundant reserve for energy production. One of the methods to attain this is the development of effective fermentation methods

for production of liquid biofuels from biomass (Kumar 2012). Recent advances in the field of biology and applied technologies have greatly increased the possibility of the production of biofuels using this vast store of renewable energy (Demirbas 2006).

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