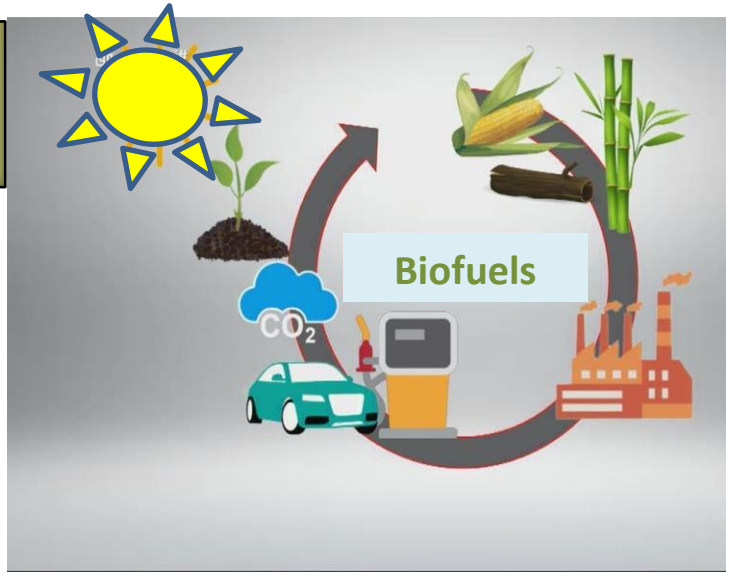
Biofuels: Future of Renewable Energy

Assistant Prof. Dr. Mohammed A. Fayad



Biofuel development and use is a complex issue, as there are many biofuel options available. For example, methanol and biodiesel are extracted from traditional agricultural crops that produce food, sugar and vegetable oils [1-3]. These plants include wheat, corn, sugar cane, palm oil and castor oil, but any substitution for using these crops to produce biofuels will have implications for human food and animal feed production. Biofuels open new horizons in increasing competition within the oil market and moderation in oil prices. In addition to securing a healthy supply of alternative energy sources, which will help combat high gasoline prices and reduce dependence on fossil fuels, especially in the transport sector, and use more efficient fuel in the means Transport, which is an integral part of a sustainable transport strategy [4-6]. The increasing rises in the prices of traditional energy and the increasing concerns about the instability of their supplies and the possibility of their near depletion, which made it necessary for the main energy importing countries, especially the developed ones, to search for non-traditional sources of energy (renewable energy sources) [7-9].

Several organizations are trying to reduce pollution and reduce dependence on traditional sources through the use of biofuels in order to preserve the environment and reduce the environmental risk resulting from growth and industrial and extractive development at the same time [10, 11].

The new generation of biofuels:

The production of the second generation of biofuels began by exploiting wider plant resources containing cellulose, recycling food industry waste, and processing vegetable waste. Advances in conversion processes will improve the sustainability of biofuels, through higher efficiency and reduced environmental impacts from the use of bioenergy. The production and use of biofuels illustrated the environmental risks caused by fossil fuels. But at the same time, the production of biofuels is not without the social and environmental costs of rising food prices. Therefore, the recent trend has been to produce biofuels from other sources that do not compete with man for global food, and from these sources are waste oils, edible oils, grease oils, wood, algae and oil of non-fruitful trees.

Responsible production of sustainable energy sources that do not need to convert land from growing food to growing energy crops does not harm the environment, but can also help solve the waste problems generated by western society, and can create jobs for poor people.

Uses of biofuels:

Biofuels have a good potential for replacing fossil fuels, and should not be seen as a panacea for dealing with transport sector emissions. In its current state, sustainable fuel transportation cannot replace traditional transportation. Therefore, a plan must be drawn up for its development, as part of an integrated approach, which promotes other options for renewable energy and increases energy efficiency, as well as mitigating overall demand and the need for transportation . The development of hybrid fuel vehicles and fuel cells and improving urban and rural planning are essential needs. One of the most important applications of biofuels is in car fuel.

It is considered a clean and renewable source and reduces the harmful pollutants that are emitted from car engines, such as carbon monoxide, carbon dioxide and hydrocarbons, which positively affect the environment and human health.

Revised international aviation fuel standards officially allow commercial airlines to blend conventional aviation fuel with up to 50% biofuel.

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