

Energy Security in India: A Review of the Liquid Bio-Fuels Production from Renewable Sources

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Abstract: Any growing nation will always require economic expansion, and that growth will also always create a need for energy. Oil use makes over 36% of India's total energy consumption. India is now one of the top 10 oil-consuming countries in the world. Nearly 24% of commercial energy-consuming industries are accounted for by the transportation industry. The primary goal of energy security for India is to achieve energy independence. This necessitates a diversity of oil import sources. Biofuels are steadily becoming one of the most important energy sources in India for sustainability and aid in limiting greenhouse gas emissions. An overview of several methods and procedures for producing liquid biofuels from renewable sources is provided in this review article, which improves India's energy security.

Keywords: Bio-Fuels, Bio-Ethanol, Bio-Methanol, Bio-Diesel and Bio-Gas

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