

Chapter Eighteen – Potential of Biodiesel as Fuel for Diesel Engine

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A survey of biodiesel fuel production and utilization in diesel engine are illustrated in this chapter. The potential of biodiesel from different sources as alternative fuel to mineral diesel for the existing diesel engine is discussed and highlighted. The current trends of biodiesel fuel utilization are listed and discussed in addition to the different production methods. Economic considerations of biodiesel production and analyses of factors affecting the production cost are provided in detail. The relation between the feedstock cost and the total production cost is discussed in detail to show the viability of biodiesel fuel from the different feedstocks to replace mineral diesel. Biodiesel fuel properties, standards, and their usage limitations are discussed in detail. Furthermore, the various techniques used to introduce biodiesel as a fuel for diesel engine within biodiesel fuel standards are provided and discussed in detail.