

Small-Scale Complete-Cycle Biodiesel Pilot Plant: Technology Transfer to Communities in Celebration of His Majesty King Bhumibol's 60-Year Anniversary of Accession to the Throne

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Abstract

The rising of petroleum price in the world market influences domestic economy of all countries. Renewable energy can be an alternative way to reduce the amount of petroleum used. Currently in Thailand, biodiesel production and utilisation of its by-products development have been set up as one of the national energy strategic plans. Vegetable oil and biodiesel have been promoted to use in small communities in order to reduce cost of energy and improve people living standard, while many larger production plants are being built to support the country requirement of this alternative fuel in the near future. Since biodiesel properties are dependent on raw materials which it is derived from, the quality of biodiesel can be variable. To produce a quality fuel, one needs experience or requires a good training in biodiesel production. Collaboration between the Metal and Materials Technology Centre (MTEC) and Thailand Institute of Scientific and Technological Research (TISTR), this project is aimed to set up a complete cycle biodiesel pilot production, which includes a small oil plant plantation, oil extraction and refinery, biodiesel production and by-products utilisation, and to organise training courses in order to efficiently transfer the technology to communities.