

Thesis Title	Optimal Planning for Diesel Fuel Logistics System with Multiple Discount Models, Multiple Storages and Multimodal Transportation
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Abstract

Although there are many types of fuel that are substitutable to one another in Thailand, diesel fuel is still the most used type of fuel, particularly in transportation and in industry. This research studies planning of diesel fuel logistics system of a petroleum company in Thailand to minimize the system's costs. The logistics system comprises of purchasing the fuel from refineries, transporting it to storages, and managing fuel inventory. The fuel is purchased from 5 refineries, each can offer a different discount model at different discount rates. The fuel is transported to 7 central storages, and then to 8 regional storages in the Northern and Northeastern parts of Thailand. There are 4 transportation modes—pipe, rail, ship, and road—involved. The logistics costs are those incurred to the company. The system is then formulated as a mathematical program, and solved using Excel Premium Solver Platform to find the optimal solution.

Keywords : Fuel Oil / Logistics System Planning / Multiple Discount Model / Multimodal Transportation