ELECTRIC MOTOR PLANT LOCATION DESIGN TO SUPPORT MINIMIZATION OF DISTRIBUTION COSTS TO MEET DOMESTIC MARKET DEMAND

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ABSTRACT

Vehicles currently in operation are mostly fossil fuel vehicles, the combustion products produced can have direct and indirect impacts. Switching to electric vehicles is the government's plan to overcome these problems, this is something that needs to be considered by companies as providers of goods. The company must ensure that the availability of goods in each region is sufficient and ensure the stability of the selling price. At the moment the location of the electric motor factory is centered on several areas, however, this location is considered less than optimal in meeting market needs on the island of Java. This research was conducted to design the optimal location of electric motor factory construction on the island of Java to improve the distribution of electric motors properly. This is useful for companies that produce and provide electric motors on the island of Java, with location optimization analysis will facilitate companies in production. The method used in determining the optimal location of the electric motor factory is simplex in linear programming. The final result of this research is an optimal location in the establishment of an electric motor factory compared to other location options. With the construction of an electric motor factory at the specified location, it will ensure the fulfillment of market needs on the island of Java.

Keyword: Electric motor, Factory, Location, and Optimal.