

ABSTRACT

The delay of Pandanduri dam construction project is the background of this research. Project acceleration effort is something that commonly and frequently executed without comprehensive planning and the application of certain method. In this research project acceleration is carried out by using Linear Programming method. The insufficient understanding of Linear Programming method is a separate issue for project owners and service providers. Therefore the aim of this research is trying to apply such method, proves that this method can be used to accelerate the project and provide information about the process.

Acceleration analysis using Linear Programming method is started by constructing Precedence Network Diagram to determine the critical trajectory and sequence phases of activity. The acceleration carried out is to increase the working hours by 1 and 1.5 hours of work per day. Then starts calculating Cost Slope which is a reference to formulate its Linear Programming model. In order to formulate the model, is required three things: objective function, constraints and variables. Objective function of this research is to find the lowest cost. Completion of the model using Lindo assistance program, and the results obtained are the addition of costs Rp 630,590,200 with a duration of 720 days (increase of 1 hour) and Rp.708,044,900 with a duration of 711 days (increase of 1.5 hours). It is necessary to have a proof against such result by trying some other duration among others 700, 730, 740, etc., by adding limitation on its Linear Programming model. It is proven that such above result is the lowest duration and cost as shown in the graph of cost and duration.

Keywords: *Precedence Diagram Network, cost slope, objective function, limitation, variables and graphs of costs and duration*