## **ABSTRACT**

PT. PLN (Persero) is a single player the sale of electricity market in Indonesia. Indonesian society became more critically react to the treatment received, so that PT. PLN (Persero) strives to improve the service provided to customers in order to obtain PLN customer satisfaction for service grid. One of field service products that need to be improved by PLN is the service handling power failures. Level percentage technique interference power reduction in 2009 is still as much as 37 percent. PLN electricity technique interference reduction target can be decreased to 70 percent in 2010. Compatible with the aim of the PLN, the research required to measure and analyzes the performance of maintenance treatment failure by the PLN.

Performance measurement of maintenance treatment failure can be done by applying Six Sigma methods. Six sigma is a structured methodology to measure and improve business processes that focus on reducing process variation while reducing disability (products / services beyond specifications) by using the statistical and problem solving tools intensively. Six sigma, quality of process improvement model to be used in this study is DMAIC improvement model: Define, measure, Analysis, Improvement, and Control.

Based on research results, obtained two critical aspects that affect performance Electricity Use Behavior Disorder, which the officer arrived at the location of grid failure and the officer PLN complete repair failure. Sigma value of maintenance treatment failure within six months of observation (January-June 2010) is PLN 1.947 for the officers arrived at the location of electrical interference, and 3.747 to complete improvements to the officer PLN power interruption. A recommendation is given to improve the handling treatment failure sigma grid. Keyword: Performance, Six Sigma, Electric Disturbance Handling Services