ABSTRACT

North Sulawesi has a power rated capacity to 165.01 MW with 154.29 MW of peak load. In the calculation, North Sulawesi has excess electrical energy. But many generating plants are old and some are influenced by water discharge conditions (Hydropower), so when a plant susceptible to interference machinery operation and maintenance will occur power blackouts in North Sulawesi.

North Sulawesi has electrification ratio 60.15% and expected electricity demand in North Sulawesi will continue to rise. The composition of the existing PLTD 136.488 MW (58.24 %), PLTA/M 57.780 MW (24.6 %), PLTP 40.00 MW (17 %) and PLTB 0.08 MW (0.03 %). Specifically, the initiatives to increase the supply of electrical energy continuously executed in North Sulawesi. One of these developing Minahasa coal fired power plant 2 x 55 MW at Kema, North Minahasa, North Sulawesi.

Developing Minahasa coal fired power plant 2 x 55 MW expected to improve the welfare of society because all activities of the population of North Sulawesi in various sectors can be properly utilize electrical energy. It also can replace PLTD (58.24 %) which can ultimately reduce fossil fuel usage and cost of electricity supply which impact on regional electricity basic tariff reduction of North Sulawesi to 36% from the previous electricity basic tariff.

Keywords: Electrical energy, coal fired power plant, the cost of Electricity Supply, Regional Electricity Basic Tariff
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