Abstract

The number of residents in an area will be directly proportional to the electricity demand in the area. But it was inversely related to the provision of electric energy, the day the reserves non-renewable energy source which has been the main fuel power plant in Indonesia has become depleted, so the supply of electrical energy also faltered. Therefore, it should be considered a renewable alternative energy to overcome the crisis.

In this final project will be discussed about the potential of biogas as a power plant owned by Mekarsari Farmers Group at dander Bojonegoro. Based on the analysis, biogas can be used as an alternative renewable energy sources appropriate if applied there. Mekarsari Farmers Group dander Bojonegoro itself currently has no less than 411 cows on their ranch, so the potential of manure produced is 10,275 kg per day. This amount can be converted into electrical energy by 206,08 kWh per day through a biogas installation is equipped with a biogas generator. The environmental impact caused by the processing system is also considered to be very friendly to the environment.

Keywords: Biogas, Cow dung, Self-Energy Village, Dander-Bojonegoro