Utilization of Cow Manure Waste into Biogas as an Electric Energy Source in Tegalmulyo Hamlet, Bungatan District, Situbondo Dr. Yuana Susmiati, S.TP., M.Si. as chief counselor

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ABSTRACT

Excessive use of non-renewable energy has the potential to trigger an energy crisis, one indication of the scarcity of LPG which has an impact on the availability and access of people to energy sources for their daily needs. Tegalmulyo Hamlet is dominated by the cattle farming sector, so far the cow dung waste is not maximally utilized and is just thrown away. This service aims to process cow dung waste into biogas as an alternative fuel for stoves. The implementation method of this program consists of surveys and interviews, preparation and framework, socialization, implementation plan, implementation of installation construction, installation testing, training on understanding and maintenance for the community, submission of manuals. The results of the service showed an increase in community understanding of cow dung waste processing and the realization of biogas energy conversion results as an alternative fuel for stoves. The application of a biogas installation of 1 m^3 is able to light a biogas stove every day, with the longest flame duration reaching 2 minutes 18 seconds. However, there are still impurities such as CO_2 and H_2S that affect combustion efficiency.

Keywords: Biogas, Cow manure, Stove