



**Analysis of Feasibility Usage Biogas in Case Study of Srimartani Village,  
Selopamioro Village and Bangunjiwo Village, Bantul Regency, Special  
Region of Yogyakarta**

**ABSTRACT**

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Energy is one of the important things in human life for cooking activities and commonly used energy such as LPG, kerosene, and firewood but has disadvantages such as expensive prices, scarce amounts pollution generated from burning. Srimartani village, Selopamioro, and Bangunjiwo are livelihoods as farmers and breeders. With the number of cattle that have the potential produced is quite large from the waste produced. Biogas is a technology that converts biomass waste into renewable energy so that it becomes a solution to energy problems. The purpose of this study was to find out the results of economic analysis of the use of biogas and find out the response of the community to the provision of biogas. The research method in this study the parameters sought Fixed cost, Variable cost, income, expenditure, response to public acceptance: such as Economy, Social, and Environment. The total cost of the biogas is Rp7,169,801/year, LPG gas is Rp1,956,464 /year and, firewood is Rp3,394,816/year. equivalent uniform annual value of biogas is Rp3.329.397, LPG gas of Rp1.508.049, and firewood of Rp3,394,816. feasibility analysis of biogas use such as net present value is -Rp29.419.000, payback period is 10 years, benefit cost ratio is 0.5, internal rate of return is -54, 78%. break even point of -Rp24.831.143. The response of community acceptance is very satisfied with the index formula of 70%.

**Keyword:** Biogas, Total cost, Analysis of the feasibility, Response of community.



**Analisis Kelayakan Penggunaan Biogas Studi kasus Desa Srimartani, Desa Selopamioro dan Desa Bangunjiwo, Kabupaten Bantul, Daerah Istimewa Yogyakarta**

**INTISARI**

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Energi merupakan salah satu hal penting pada kehidupan manusia untuk kegiatan memasak dan energi yang biasa digunakan seperti gas LPG, minyak tanah dan kayu bakar akan tetapi memiliki kelemahan seperti: harga mahal, jumlahnya langka dan polusi yang dihasilkan dari pembakaran. Desa Srimartani, Selopamioro dan Bangunjiwo mata pencahariannya sebagai petani dan peternak. Dengan jumlah sapi yang dimiliki potensi yang dihasilkan cukup besar dari limbah yang dihasilkan. biogas merupakan teknologi yang merubah limbah biomassa menjadi energi terbarukan sehingga menjadi solusi terhadap masalah energi. Tujuan penelitian ini mengetahui hasil analisis ekonomi dari penggunaan biogas dan mengetahui respon penerimaan masyarakat terhadap pemberian biogas. Metode penelitian dalam penelitian ini parameter yang dicari *fixed cost*, *variabel cost*, pendapatan, pengeluaran, respon penerimaan masyarakat: seperti ekonomi, sosial dan lingkungan. *Total cost* biogas sebesar Rp7.169.801/tahun, gas LPG sebesar Rp1.956.464/tahun, kayu bakar sebesar Rp3.394.816/tahun. Nilai *equivalent uniform annual cost* biogas sebesar Rp3.329.397, Gas LPG sebesar Rp1.508.049, Kayu Bakar sebesar Rp3.394.816. Analisis kelayakan penggunaan biogas seperti *net present value* sebesar -Rp29.419.000, *payback periode* sebesar 10 tahun, *benefit cost ratio* sebesar 0,5, *internal rate of return* sebesar -54,78%. *break even point* sebesar -Rp24.831.143. Respon penerimaan masyarakat adalah sangat puas dengan rumus indeks 70%.

Kata Kunci: Biogas, *Total cost*, Analisis kelayakan, Respon penerimaan.