Techno-Economics of Coffee Peel Waste Charcoal Briquettes With Cassava Peel Adhesive,

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ABSTRACT

Coffee peel briquettes with cassava peel adhesive obtained 6.60% moisture content, 6.56% ash content, density 0.536gr/cm^3, calorific value 4.546 cal/g. The overall assessment of whether or not the investment in waste briquette products is feasible is carried out with several criteria including HPP (cost of goods sold), BEP (Break Even Point), NPV (Net Present Value), BCR (Benefit Cost Ratio) PBP (Pay Back Period)), the calculation of the comparison of fuel consumption and the calculation of the value of fuel efficiency.

Techno-economic analysis on coffee husk charcoal briquettes with cassava peel adhesive obtained BEP (break event point) of Rp. 27.550.000 ; NPV Rp. 134,738,581; BCR 1.49. The NPV and BCR values are positive and >1 so the project is feasible to run. PBP of 3.01 which means the capital will return within 3 years and 1 month. The comparison of fuel efficiency concludes that the price per kilo calorie of coffee husk briquettes is still relatively cheaper than kerosene and only slightly more expensive than LPG. Where the price of rupiah/calorie for kerosene is 1.07 while LPG is 0.062 and coffee skin briquettes are 0.87.

***Keywords** : Coffee husk briquettes, techno-economist analysis, NPV, BCR, HPP, BEP, PBP, Efficiency*