TECHNICAL AND ECONOMIC FEASIBILITY OF ELETRICITY GENERATION FROM WOOD REFORESTATION IN AMAZON

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ABSTRACT: The energy supply in isolated communities in Amazon is based exclusively on old and inefficient diesel
motors, corresponding to large-scale pollutant emissions. There is also the problem of high diesel oil consumption in the country. Brazil imported 6 billion liters of diesel oil in 1998 corresponding to US$630 million[1]. Besides the expenditure with oil imports, the country expends US$200 million per year (in average) in subsidies for diesel oil generation in Amazon, to keep accessible to the communities the electricity generated in those motors [2]. This is the so-called Fuel Consumption Account. On the other hand, there is the huge deforested areas in Amazon, which could be partially used for wood plantations aiming energy generation. Legal Brazilian Amazon is 5.035.958,9 km 2 , and the degraded land is estimated in 18,161% [3]. Therefore, the proposed possibility could not only collaborate to the energy supply in the region, but also to the reforestation of Amazon and the reduction of pollutant emissions.
In this context, this paper presents the results from the study realized by CENBIO and Winrock Foundation. This
study evaluated under technical and economic aspects the implementation of two thermo power plants in Amazon, using biomass from wood plantations in degraded areas.
Keywords: Biomass, Energy, Reforestation