Processes for lowering the road transportation costs of eucalyptus for energy generation

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Abstract

With the increasing need for renewable energy sources due to possible fossil fuel scarcity in a near future and pollution caused by these fuels, which degrade the environment, there is a need to look for alternatives. Road transportation costs are a very significant part of the biomass fuels cost and some processes can be used to reduce them. The purpose of this paper is to assess the economic feasibility of some of these processes: drying, briquetting and torrefaction. Calculations based on data obtained from related literature and companies have been made for the assessment. The results indicated that the most economical scenario for eucalyptus transportation is the dried eucalyptus and the least economical one is raw eucalyptus.

Recent Publications

1. Chen WH, Peng J, Bi XTA (2015) State-of-the-art review of biomass torrefaction, densification and applications. Renewable and Sustainable Energy Reviews.
2. Gonzales D, Searcy, EM, Eksioglu SD (2013) Cost analysis for high-volume and long-haul transportation of densified biomass feedstock. Transportation Research Part A.
3. Bach QV, Skreiberg O (2015) Upgrading biomass fuels via wet torrefaction: A review and comparison with dry torrefaction. Renewable and Sustainable Energy Reviews.
4. Araújo MPS, Bandeira RAM, Campos VBG (2014) Custos e fretes praticados no transporte rodoviário de cargas: uma análise comparativa entre autônomos e empresas [Costs and freights charged in road cargo transportation: a comparative analysis between owner operators and companies]. Journal of Transport Literature, v. 8, n. 4, p. 187–226.
5. Golecha R, Gan J (2015) Biomass transport cost from field to conversion facility when biomass yield density and road network vary with transport radius. Applied Energy.



Biography

Bruno Santos Silva is a mechanical engineer and is now working on his master degree doing research on the field of biomass at the Federal University of Bahia (UFBA).

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Notes/Comments: