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ADVANCES IN CLEANER PRODUCTION

“INTEGRATING CLEANER PRODUCTION INTO SUSTAINABILITY STRATEGIES”

Methodological Inconsistencies from Greenhouse Gas Estimations in the Brazilian Electricity Matrix

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Abstract

Concern about climate change is moving actions in both directions: adaptation to possible disasters that may occur and mitigation of Greenhouse Gases (GHG) emissions. In order to control such emissions is necessary to measure them accurately at first. The present study examined the concept of carbon footprint, emission GHG factors resulting from sector generation and distribution of electricity in the country available in the literature, the difference between scopes of analysis for the same product (electricity) and some practical implications. It was found that depending on the scope of analysis adopted the emission factor varied considerably, and within the same scope variations were also realized. Regarding the scope of approach, it was concluded that both are necessary: Scope 1 is indicated for the environmental management of businesses and Scope 3 for the preparation of environmental labeling of products. Moreover, there is a need for transparency with respect to the data source or the basis of calculation used in some cases and discrimination of the method adopted, if Scope 1, 2 or 3.

Keywords: Greenhouse Gases, Carbon Footprint, Electricity, Scope, Life Cycle Assessment.

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