



Decarbonization of waste management practices and GHG accounting for energy transition: evidence from European electricity corporations' reporting

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Abstract

This study advances the understanding about the waste management practices adopted by the electricity sector for meeting the energy transition. Specifically, through the institutional, stakeholder, and legitimacy theory lens, it investigates the decarbonization practices in 11 major electricity producers in Europe trying to understand their sincere concern for enhanced performance and transparency. This study analyzes the content of non-financial disclosures shown by 90 reports, that is 64 sustainability reporting and 26 integrated reporting published between 2015 and 2022. Hence, this study seeks to clarify the linkages between waste management for emissions reduction, GHG accounting and sustainability reports through which the corporations seek legitimacy from stakeholders. The results highlight the commitment of electricity corporations for energy transition using green technologies and renewable energy sources to decarbonize the waste practices. However, they underline the absence of quantitative evidence in the SR for the evaluation of initiatives impact and the reduction of GHG emissions. To the best of our knowledge, this is the first study that conceptualizes the linkages between waste decarbonization for energy transition and the accounting systems i.e. GHG accounting and reporting in the electricity sector towards a cleaner production.

Keywords GHG accounting · Waste management practices · Renewable energy sources · Sustainability reports · Non-financial disclosure · Content analysis

1 Introduction

Greenhouse Gas (GHG) Emission reduction is an urgent priority for policymakers and stakeholders facing the crucial challenge of designing an economic long-term strategy for energy transition. The adoption of the 17 Sustainable Development Goals (SDGs) in the United Nations (UN) 2030 Agenda (2015) induces business organizations to increasingly monitor, measure, and report their impacts on the environment (United Nations, 2016; Dijk-

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