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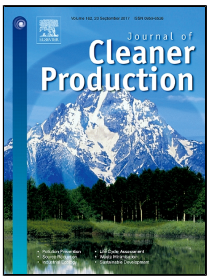

Systems Enabling Low-Carbon Operations: The Salience of Accuracy

Nigel P. Melville, Terence Saldanha, Daniel Rush

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SYSTEMS ENABLING LOW-CARBON OPERATIONS: THE SALIENCE OF ACCURACY

Nigel P. Melville
npmelv@umich.edu
Stephen M. Ross School of Business, University of Michigan
Ann Arbor, MI, USA, 48109-1234
(corresponding 734-764-0199 (T), 734-936-0279 (F))

Terence Saldanha
terence.saldanha@wsu.edu
Carson College of Business, Washington State University
Pullman, WA, USA, 99164-4750.

Daniel Rush
danrush@boisestate.edu
College of Business and Economics, Boise State University
Boise, ID, USA, 83725.

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Abstract

This article focuses on systems that enable low-carbon operations within organizations. The thesis that system accuracy matters to achieving low-carbon operations is explored using two approaches. First, a generic system model is developed and three alternative technical architectures are described, thereby illustrating that accuracy varies across architectures but can also be attended to outside system boundaries. Second, empirical analysis of 220 global organizations assesses the association between accuracy, managerial incentives, emission targets, and low-carbon impacts. Overall, empirical findings demonstrate that firms attending to accuracy tend to have managerial incentives to reduce emissions and emission reductions targets in place. They also tend to exhibit reduced carbon emissions for the same level of economic output.

Key words: accuracy, incentives, low-carbon operations, systems, targets.