

Multi-Criteria Analysis for Green Industrial Policy: methodology for application to Australia's Guarantee of Origin Scheme?

ZCEAP Working Paper 01-24
January 2024

Christopher Jackson¹ and Emma Aisbett^{1*}

* Corresponding author

1. ANU School of Law, Australian National University. 5 Fellows Rd, Acton ACT 2601.
Email: emma.aisbett@anu.edu.au.

Abstract

We demonstrate the application of an Analytic Hierarchy Process (AHP) Multi-Criteria Analysis (MCA) to support best-practice Green Industrial Policy. The Green Industrial Policy application in the current study is the prioritization of products for inclusion in the Australian Government's Guarantee of Origin Scheme. The scheme certifies climate-relevant characteristics of products – especially their embedded emissions. The current paper applied the AHP-MCA to compare nine potential products for inclusion in the scheme against twenty quantifiable criteria, nested under five qualitative dimensions. Pairwise comparisons undertaken by relevant Australian Government employees were used to generate the weightings for the dimensions and nested criteria.

The five dimensions were: Technology Readiness, followed by Economic relevance, Policy relevance, and Emissions relevance close together, and lastly Regulatory Burden. Overall product priority rankings were obtained by inputting the (objective) criterion data and (subjective) aggregate weightings to the AHP-MCA algorithm.

It was concluded that AHP-MCA provides a transparent analytical tool to support Green Industrial Policy development.

Keywords: Analytic Hierarchy Process; Multi-Criteria Analysis; Green Industrial Policy; Technology Readiness; Economic relevance; Policy relevance; Emissions relevance; Regulatory Burden