

Multiple criteria decision-making as an operational conceptualization of energy sustainability

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Abstract-

There is a broad international consensus about the urgency of promoting a strong change towards energy models that are less dependent on non-renewable energy sources, more equitable, and truly environmentally friendly. In order to achieve this goal, we need to define the problem so that it can be operationally and comprehensively addressed. This paper presents a proposal of a framework for the analysis of the sustainability of energy models based on multiple criteria theory, which we consider comprehensive and operational enough. Its application to a real energy model, the Spanish one, shows that the framework is able to address most of the elements both of weak and strong sustainability and find a reasonable compromise within the limits of the problem.

Index Terms- energy sustainability; weak sustainability; strong sustainability; sustainability frameworks

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