

عنوان مقاله:

Multi-Objective Rough Best-Worst Method to Evaluate Sustainability of a Biofuel Energy Supply Chain

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خلاصه مقاله:

The role of sustainability dimensions in the value creation process has received much attention. Adopting a proper set of key performance indicators sustainability leads to accurate calculation of chain value. This paper focuses on the dimensions of in the biofuel supply chain and seeks to evaluate the value in the chain. First, the importance of biofuels and its various types are discussed. Then, a new model is presented by designing the proposed energy chain and considering its sustainability dimensions and indicators in uncertain environment. Rough set theory is one of the best mathematical tools for dealing with uncertainty. The proposed biofuel energy supply chain is modeled to obtain the total value of the system considering sustainability indicators and layers of the supply chain. A multi-objective rough mathematical formulation is presented and solved. Best-worst method was integrated to determine the significance score of sustainability indicators. Finally, the model of the rough linear mathematical program is solved with optimization tools and the sustainable value of the chain is obtained.

کلمات کلیدی:

Biofuel Supply Chain, Multiple Objective Decision Making, Rough Set

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