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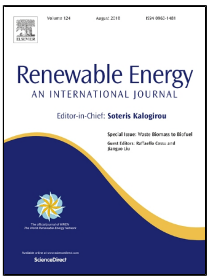

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Understanding the interaction among the barriers of biodiesel production from waste cooking oil in India- An interpretive structural modeling approach

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Abstract

Regardless of fragile biodiesel market of the present day, it is foreseen that biodiesel will draw a lot of public interest throughout the world in the not too distant future. Among different feed stocks available for biodiesel production, waste cooking oil is under a major prospective for large-scale biodiesel production as it can cut down the fuel costs than other alternative feed stocks. However, there are several barriers that hinder large-scale biodiesel production from waste cooking oil. Also, there might be contextual relationships among those barriers. In this perspective, this paper aspires to identify the most influential barrier and to describe the interactions among different barriers influencing biodiesel production from waste cooking oil. For this reason, an interpretive structural modeling approach is employed to determine relationships among barriers. MICMAC analysis has additionally been carried out to classify the barriers based on dependence and driving power. The results indicate that vehicle access problem, lack of processing technology, inconsistent supply quantity and inadequate production