

Department : **Mechanical**

Year : **2018-2019**

Group No: **8**

Guided By

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Project Title

**DESIGN AND DEVELOPMENT OF PARABOLIC SOLAR COOKER
FOR SRPEC CANTEEN**

Abstract:

Multi-criteria decision making is an emerging technique for evaluation and policy formulation for renewable energy technology promotion. In this paper, the case of the parabolic solar cooker (PSC), which is a relatively recent innovation, is evaluated with respect to eight prevalent domestic cooking devices in India. Thirty different criteria categorized under technical, economic, environmental, social, behavioral and commercial aspects are considered for the evaluation based on the additive Multi Attribute Utility Theory (MAUT) model. A survey of various decision making groups and user preferences for domestic cooking devices in India is used to formulate the evaluation matrix. Expert opinion is collected to devise the utility functions. On the basis of user preferences and expert opinion, it is found that the liquefied petroleum gas (LPG) stove has the highest utility, followed by the kerosene stove, solar box cooker (SBC) and PSC, respectively. Sensitivity analyses are carried out to identify of improvement for the widespread use of PSC.

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