

# Review of: "Refrigerant Selection in Air Conditioning Systems Considering Thermodynamic, Environmental, and Economic Performance Using the BHARAT-II Multi-Attribute Decision-Making Method"

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**Potential competing interests:** No potential competing interests to declare.

The research paper presents a simple and effective multi-attribute decision-making method, named "Best Holistic Adaptable Ranking of Attributes Technique (BHARAT)-II," to choose the best refrigerant for air conditioning systems. The authors considered the thermodynamic properties of the refrigerants, as well as their environmental and economic performance, for the selection of the best refrigerant.

The key points of the paper are:

1. The authors addressed the problem of selecting the best refrigerant for residential split air conditioners and automobile air conditioning systems using the proposed BHARAT-II decision-making method.
2. The BHARAT-II method is a systematic and logical approach that determines the weights of importance of the refrigerant selection attributes and ranks the alternative refrigerants based on their total performance.
3. The proposed method is compared with other well-known multi-attribute decision-making methods such as EDAS, TOPSIS, and MOORA, and it is found to be simple to implement and useful in solving the best alternative refrigerant selection problems.
4. The authors have provided two case studies to demonstrate the application of the BHARAT-II method. The first case study considers the selection of the best refrigerant for residential split air conditioners, while the second case study focuses on the selection of the best refrigerant for automobile air conditioning systems.
5. The BHARAT-II method does not require the use of fuzzy logic or complex computations, and it provides a reliable and consistent way of assigning weights to the selection attributes.

Overall, the proposed BHARAT-II decision-making method appears to be a promising approach for selecting the best refrigerant for air conditioning systems, considering the thermodynamic, environmental, and economic performance of the refrigerants.

