**Consumer Response to Low Emission Vehicles: The potential of novel design methodologies**

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Abstract

The challenges of energy security and environmental impacts of personal vehicle transport are encouraging the UK Government to reconsider personal vehicle transport. A variety of technologies are being developed to address these challenges but a clear understanding of the likely consumer response to these potential technologies has yet to be developed. Previous studies have investigated the functional attributes of alternative vehicle powertrains by utilizing discrete choice modeling generating useful insights relating to consumer preferences. These studies have been limited by elements of framing bias, respondent asymmetrical information and unstable preferences.

The application of in-depth product design methodologies can address these limitations of conventional choice modeling. These methodologies employ a more detailed context setting to inform the subject of the activity and provide a structured game environment for them to display their preferences. This study will incorporate aspects of stated preference, consumer decision making, problem solving and budget allocation. The objective of this methodology is to produce a more realistic simulation of the purchasing environment and allow subjects to design the vehicle that best reflects their desires. The development of this method has been informed from the product design literature and a review of current industry practice.

