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Public acceptance of biofuels in the transport sector in Finland

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Abstract

The Finnish transportation sector is the second biggest greenhouse gas emitting sector in Finland. Despite large-scale investment and government commitments to promote biofuels for transport sectors in Finland, little is known about the public acceptance of this alternative transport fuels. Public's opinion, awareness and knowledge can contribute to social acceptance of new renewable energy and to the overall improvement of consumers' energy behaviour. This study examines public acceptance in terms of public's opinion and knowledge about biofuels and their consumer patterns of transportation fuels by designing a multiple-choice questionnaire with four groups of questions: background information, community perspective, social perspective, and market perspective. The analysis of 90 respondents' survey shows that 50% of the respondents think that there is a direct effect of biofuel production on food prices and would not buy biofuels derived from food crops. Only 60% of them are willing to switch towards purchasing biofuels; however, the lack of information about biofuels prevents them to use biofuels for their transports. Finally, 63 respondents of the car owners, their ideal fuel would be hydrogen (20%), electricity (60%), and other (20%), which meant hybrid. Study findings have important policy implications related to the public acceptance of biofuels in the transport sector.

Keywords: Public acceptance; biofuels; consumption behavior.

1. Introduction

The European Union is devoted to increase the share of renewable sources in its energy portfolio (Galanopoulos et al. 2017). By 2020 the target for renewable sources in fuels used in the transportation sector is 10% for each member state (EC, 2015). In 2010, the average share in the member states was around 4.7%; Slovakia and Sweden being the closest to the target by having 8% renewable share within transportation fuels.

Finland as a member state of EU aims to reduce around 4 million tonnes of CO₂ by 2020, partially by increasing the share of renewable energy sources in the transportation sector

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