



**University  
of Victoria**

Graduate Studies

Notice of the Final Oral Examination  
for the Degree of Doctor of Philosophy

of

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MSc (University of Victoria, 2010)

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**“Personal, Interpersonal, and Contextual Influences on Consumer Preferences  
for Plug-in Electric Vehicles: A Mixed-methods and Interdisciplinary Approach”**

Department of Psychology

Thursday, April 7, 2016

4:00PM

David Turpin Building

Room A136

Supervisory Committee:

Dr. Robert Gifford, Department of Psychology, University of Victoria (Supervisor)

Dr. Anthony Marley, Department of Psychology, UVic (Member)

Dr. Curran Crawford, Department of Mechanical Engineering, UVic (Outside Member)

External Examiner:

Dr. Ray Cooksey, School of Business, University of New England

Chair of Oral Examination:

Dr. Douglas Baer, Department of Sociology, UVic

## **Abstract**

Widespread adoption of plug-in electric vehicles (PEVs) can help to achieve deep reductions in global greenhouse gas emissions; however, the degree to which this potential will be realized depends on consumers' decisions to purchase these vehicles over conventional ones. To provide comprehensive insight into the psychological and contextual influences on consumer vehicle preferences, three studies were performed using a mixed-methods approach. Study 1 employed a survey and stated choice experiment to explore: 1) the explanatory power of the three psychological variables from Ajzen's (1991; 2005) theory of planned behaviour in predicting PEV purchase intentions among new vehicle buyers from British Columbia, and 2) the influence of hypothetical variations in financial and non-financial incentives on estimated PEV preference, with the goal of informing the design of provincial policy measures. Vehicle preferences were most strongly influenced by purchase price and point-of-sale incentives – with a roughly 4% forecasted increase in PEV new vehicle market share under a \$5,000 purchase rebate – as well as by attitudes about PEVs (especially concerning personally-relevant PEV benefits), perceived behavioural control, and social norms. In Study 2, a latent class choice model was used to integrate survey and choice experiment data to characterize consumer classes based on vehicle preferences, demographic characteristics, and psychological variables. Findings revealed profiles of five distinct preference-based segments and demonstrated that the inclusion of psychological covariates can improve the fit of such latent class models. Study 3 extended these findings through a controlled message framing experiment that evaluated the impact of psychological distance on PEV purchase intentions. Results demonstrated that messages emphasizing both personally-relevant and societally-relevant PEV benefits increased related purchase intentions compared to the control group. Taken together, these findings may be useful in the development of PEV policies as well as targeted marketing and communications strategies aimed at supporting a transition to PEVs within Canada.