

## **Abstract**

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This dissertation consists of three essays in Energy and Environmental Economics. In the first chapter, an empirical analysis is employed to examine the relationship between energy consumption and economic output in Canada. Using provincial-level Canadian records, this chapter shows that there is a long run equilibrium relationship and a bi-directional Granger causality between energy consumption and economic growth in Canada. These findings have important implications for public policy because they show that constraints on energy consumption may impact future economic growth. In the second chapter, event study methodology and Canadian stock market data are used to assess the impact of seven recent event/announcements regarding the pipelines approval process on the equity returns of energy-related firms. This chapter shows that there is no market reaction (on average) to any of the news events, which implies two possible scenarios: either the market fully anticipated the events and they did not contain any significant new information or these events did not change investor's expectation regarding future profitability and cash flow of Canadian energy firms. In the third chapter, we use a prediction market mechanism to examine the possibility of using derivatives trading as a means of generating objective forecasts of future climate change and the value of marginal damages. This chapter shows that such a market can yield unbiased estimates of the true future climate state. Also, we find that the level of consensus about climate science strongly influences the efficiency with which market uses available information.