

Mind the Gap: Climate Change Opinions in Canada and the United States

Erick Lachapelle, University of Montreal
Shannon Dinan, University of Montreal
Christopher Borick, Muhlenberg College
Barry Rabe, University of Michigan
Sarah Mills, University of Michigan

Presented at the Woodrow Wilson International Center for Scholars, October 13, 2015

2015 is shaping up to be an important year for climate policy. Indeed, President Obama's August roll out of the Environmental Protection Agency's Clean Power Plan (CPP) Final Rule represents an important attempt to limit each state's carbon emissions from the electricity sector. This was followed by President Xi Jinping's commitment to new greenhouse gas reduction efforts in China, announced from the White House in September 2015 on the same day Pope Francis gave his historic speech to Congress on a range of issues, including American responsibility to address the problem of a warming planet. While these announcements reflect efforts on behalf of the world's largest greenhouse gas (GHG) emitters to implement plans to substantially reduce their emissions, the federal government in Canada has to date remained noticeably silent.

As nations from around the world prepare for highly anticipated climate talks in Paris this December, in which hopes are high for the creation of a new international agreement for mitigating and adapting to climate change, the Canadian and American federal governments appear to be on very different policy trajectories. Though both countries submitted similar Intended Nationally Determined Contribution (INDC) emissions reduction targets to the United Nations Framework Convention on Climate Change (UNFCCC) earlier this year, only the Obama government has since unveiled policies to implement substantial emissions cuts. In contrast, the Harper government has set very ambitious targets but has yet to reveal a plan for reducing Canadian emissions.

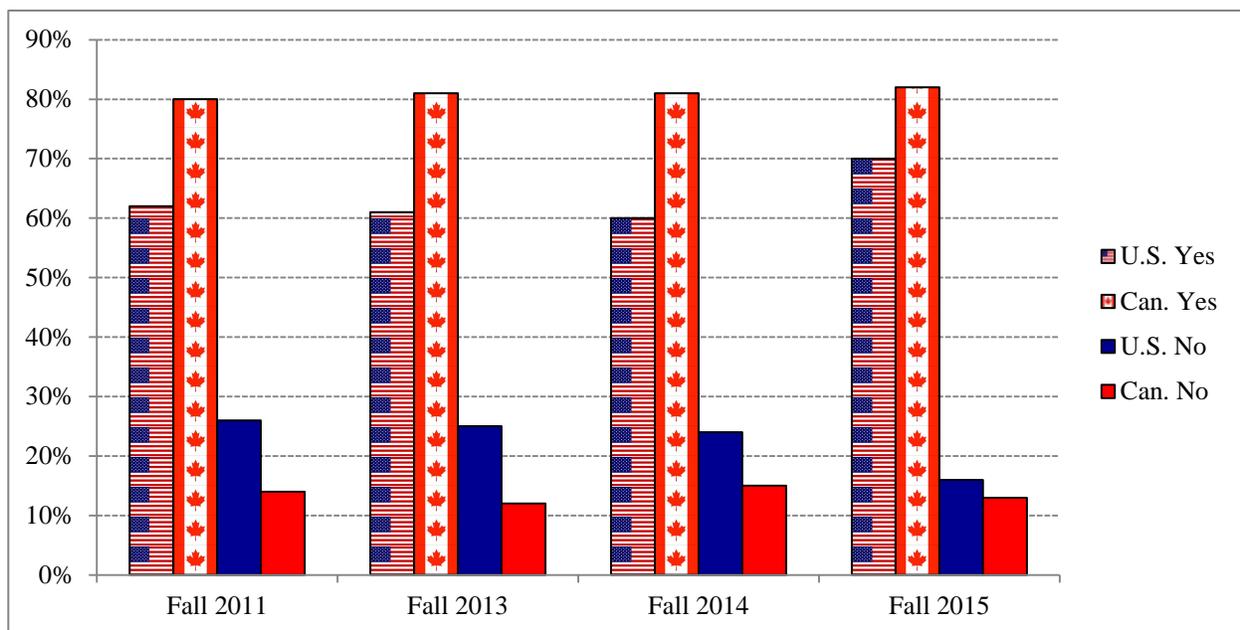
Do these apparently diverging policy trajectories reflect differences in public perceptions of the climate change problem? What is the state of public opinion on climate change in Canada and the United States? The following report examines several top line results from the most recent National Survey of Canadian Public Opinion on Climate Change (NSCPOCC) and from the National Survey on Energy and the Environment (NSEE). These two surveys administered a series of identical questions to representative samples drawn from the Canadian and American populations in September 2015. The latest data suggest that while strong majorities of Canadians and Americans see evidence of warming global temperature, there remain substantial gaps with respect to global warming knowledge, perceived cause of the warming trend, and the public's

willingness to pay for more renewable energy. This report will be followed by more extended analysis of key findings in the coming months.

Perceptions

Previous comparative surveys have found large differences in the way Canadians and Americans perceive the phenomenon of global warming, with Canadians consistently about twenty per cent more likely than Americans to perceive “solid evidence” of rising global temperatures (Lachapelle et al. 2012; Lachapelle et al. 2014). In the most recent 2015 survey, however, this gap appears to be closing, with strong majorities in Canada (82%) and the United States (70%) now saying there is solid evidence of global warming (Figure 1).

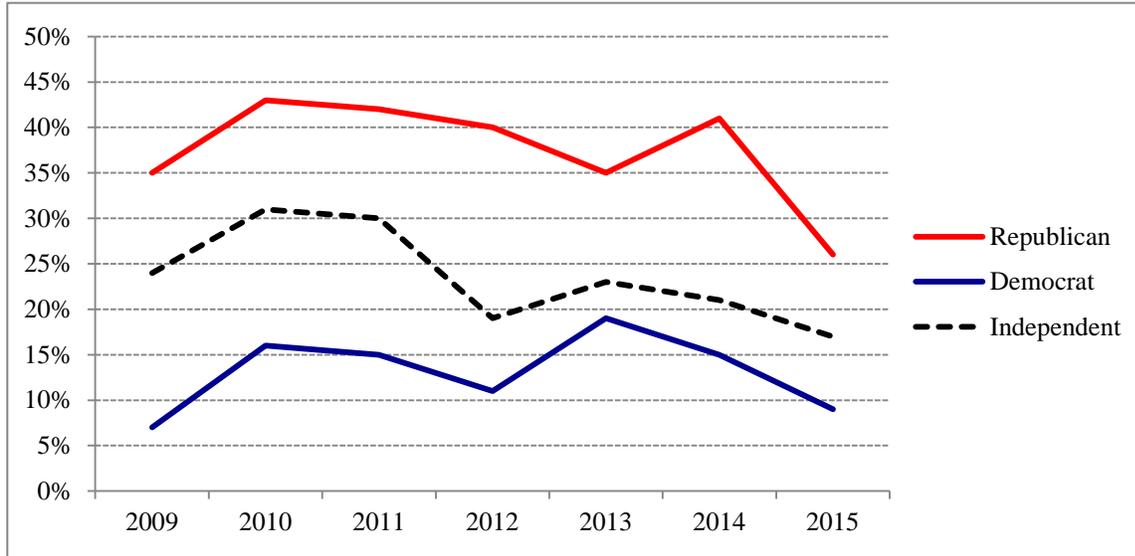
Figure 1: Perceptions of Global Warming in Canada and the United States



Question wording: “Is there solid evidence that the average temperature on earth has been getting warmer over the past four decades?”

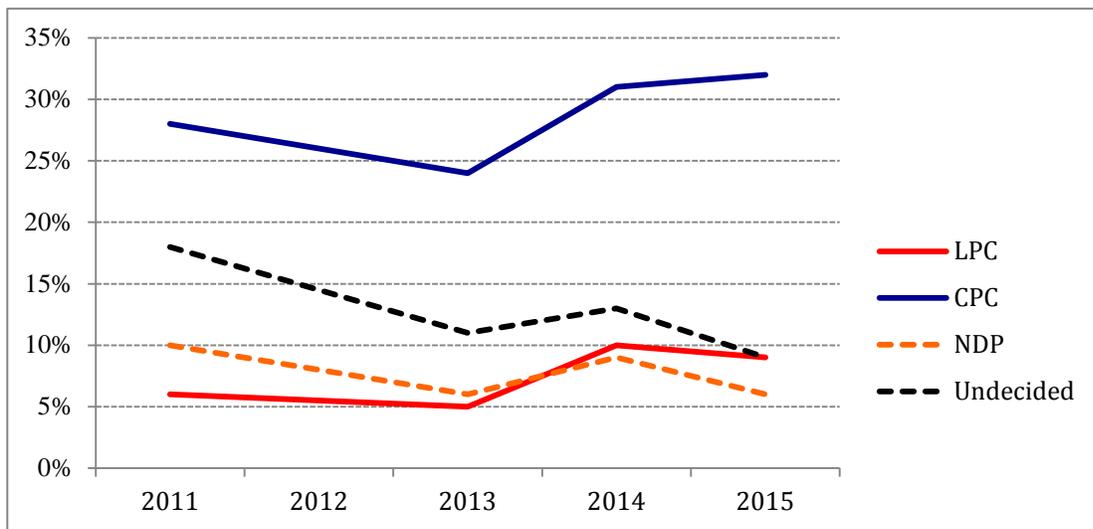
While the “perception gap” between Canadians and Americans with respect to climate change appears to be closing, exploring differences in national averages may potentially mask other differences within key population segments. In particular, all members of the American public – including those who consider themselves Republican and independent – are less likely in Fall 2015 to be skeptical of global warming than in prior years (Figure 2). Meanwhile in Canada, global warming skepticism declined among all partisans and undecided voters – with the notable exception of Conservative party supporters. In 2015, this segment of the Canadian population does not appear to be following the general dynamic observed elsewhere with respect to declining global warming denial.

Figure 2: American Skepticism that Earth is Warming, by Political Party



Note: Percentage of respondents who answered “No” when asked “Is there solid evidence that the average temperature on earth has been getting warmer over the past four decades?”

Figure 3: Canadian Skepticism that Earth is Warming, by Political Party

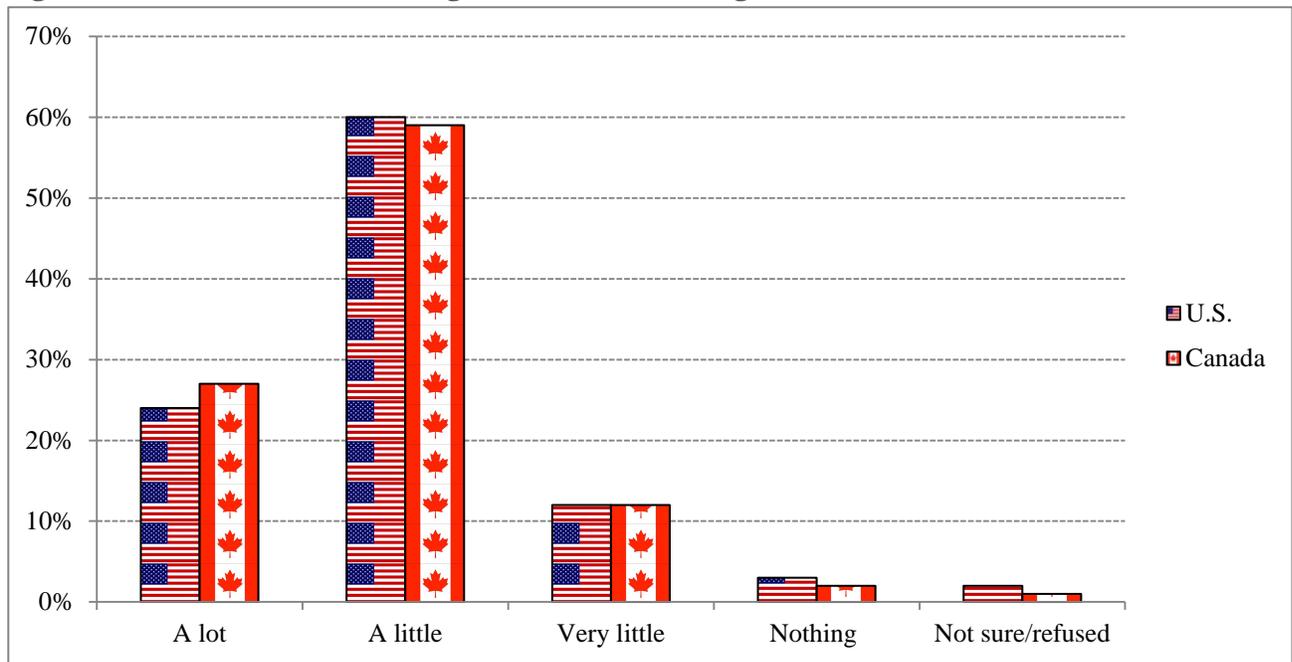


Note: Percentage of respondents who answered “No” when asked “Is there solid evidence that the average temperature on earth has been getting warmer over the past four decades?”

Knowledge

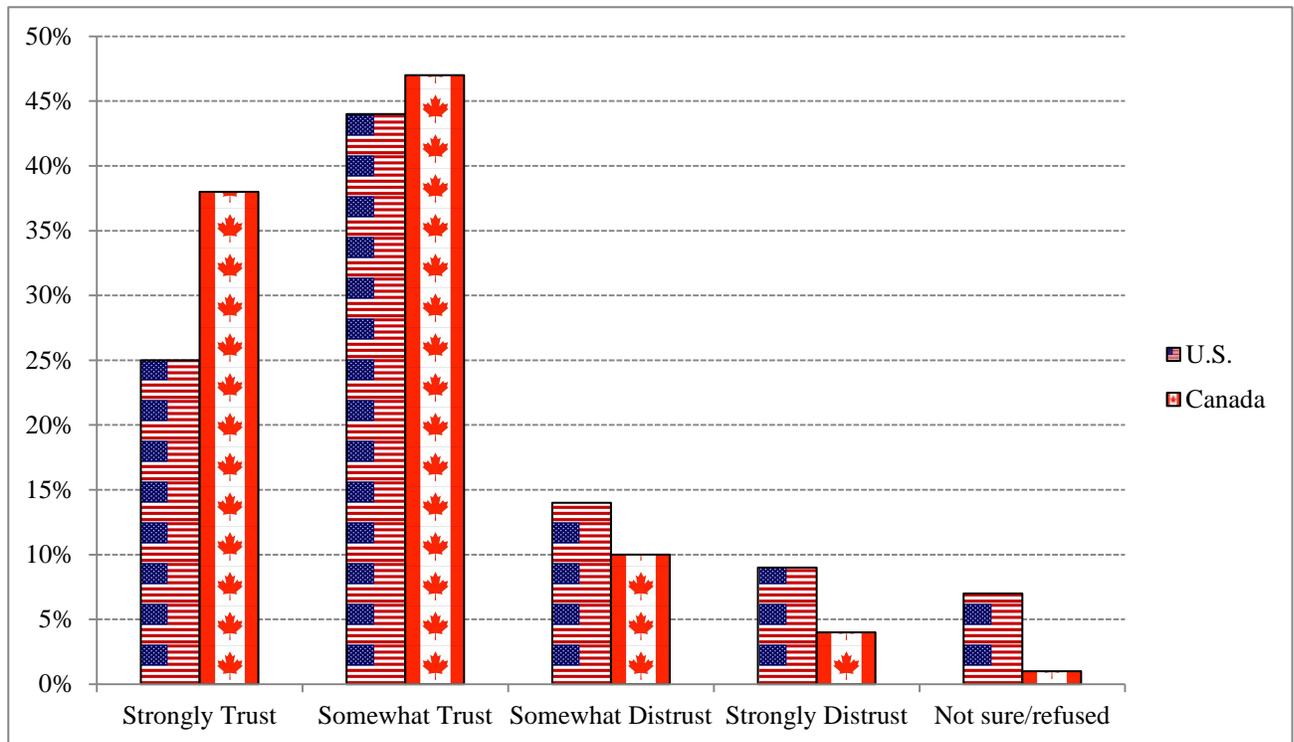
When asked to assess their own understanding of global warming, only 1 of 5 citizens of both countries perceives they know “a lot.” Majorities (three in five) of Canadians and Americans say they know “a little” (Figure 4). Yet Canadians (38%) are more likely than Americans (25%) to say they strongly trust climate scientists (Figure 5). Despite majorities in Canada (85%) and the United States (69%) saying they strongly or somewhat trust climate scientists as a source of information about global warming, public perceptions in both countries are substantially out of step with the prevailing scientific view regarding the role human activity in causing observed global warming (IPCC 2013). This gap is observed in Figure 4. Of the 82% of Canadians who perceive evidence of global warming, only 60% attribute this warming primarily to human activity. This implies that only about half of Canadians perceive evidence of warming temperatures and are convinced of the human cause (Figure 6). In the United States, perceptions of a human cause are even more ambiguous, with only about a third of Americans perceiving evidence of global warming and attributing this warming primarily to human activity such as the burning of fossil fuels.

Figure 4: Self-Assessed Knowledge of Global Warming



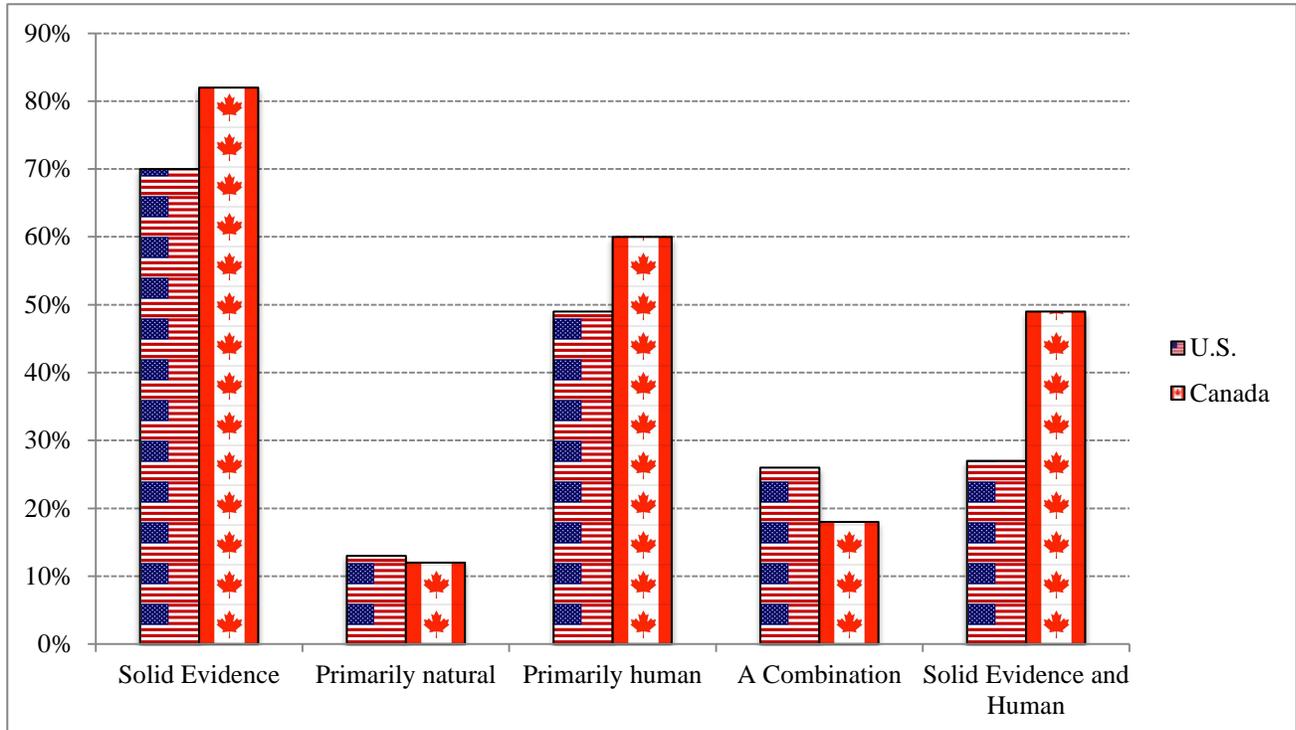
Question wording: “How much do you feel you know about global warming?”

Figure 5: Trust in Climate Scientists



Question wording: "How much do you trust or distrust scientists as a source of information about global warming?"

Figure 6: Perceived Cause of Global Warming

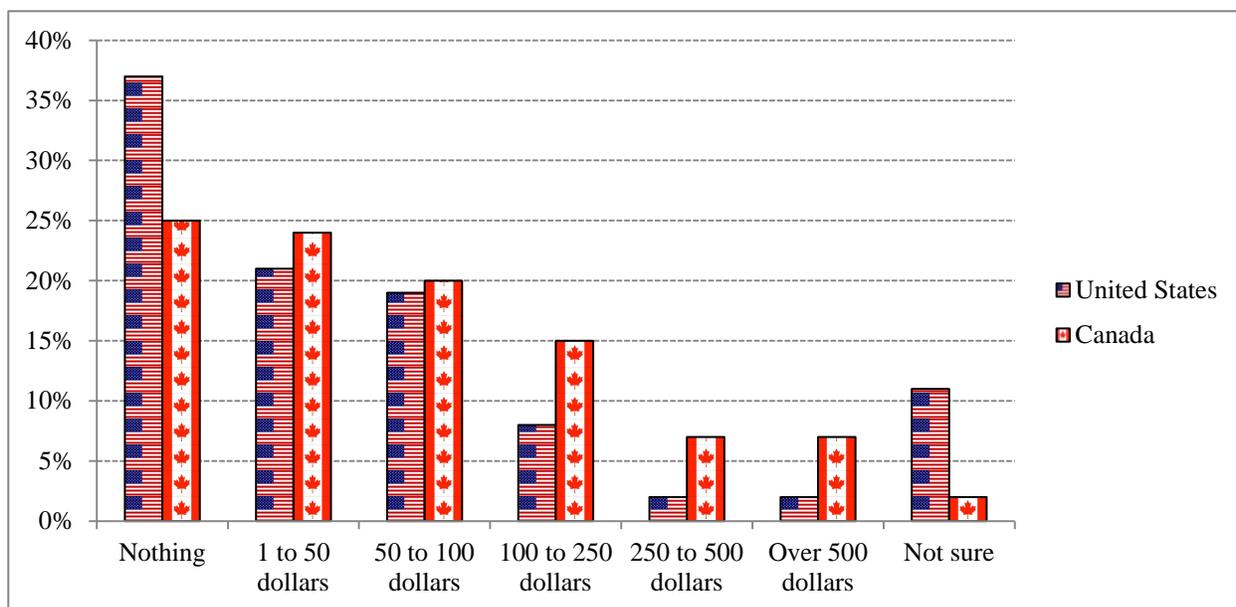


Question wording: “Is there solid evidence that the average temperature on earth has been getting warmer over the past four decades?” AND “Is the Earth getting warmer because of human activity such as burning fossil fuels or mostly because of natural patterns in the Earth’s environment?”

Mitigation

If substantial segments of the Canadian and American public fail to see a human role in global warming, then it is hard to see how they would be willing to support policies that require them to alter their emissions-generating behavior and make some short-term investment for benefits much further down the road. When asked how much they would be willing to pay for more renewable energy to be produced, most people in Canada (about 1 in 4) and the United States (about 1 in 3) say they would be willing to pay nothing. Of those who are willing to pay, most (about 2 in 5) are willing to pay between 1 and 100 dollars a year, likely far below any transitional costs to significant expansion of renewables. Smaller percentages of Canadians are more likely than Americans to pay larger sums of money for more renewable energy to be produced (Figure 7).

Figure 7: Willingness to Pay for More Renewable Energy



Question wording: “If it required you to pay extra money each year in order for more renewable energy to be produced, how much would you be willing to pay?”

Conclusion

The present report has summarized similarities and differences in attitudes toward climate change in Canada and the United States. While it appears as though the “perception gap” between Canadians and Americans narrowed in 2015, self-assessed public understanding of global warming in both countries is low, reflected in the ambiguity both Canadians and Americans have with respect to key tenets of the prevailing scientific view on climate change. There also appears to be a substantial gap between the likely cost of transitioning to less polluting forms of energy and the public’s willingness to pay. These dynamics will be further explored in a series of reports planned for release with the Trottier Energy Institute and at the University of Michigan’s Centre for Local, State and Urban Policy in the coming months.

Methodology

The surveys used for this study were designed by Chris Borick (Muhlenberg College), Barry Rabe (University of Michigan), Erick Lachapelle (Université de Montréal) and Sarah Mills (University of Michigan).

The American survey was administered to a nationally representative sample of 911 Americans aged 18 and over. All interviews were conducted in English from 2 September 2015 to 24 September 2015. Calls were made using both landline (353 completions) and cell phone (558 completions) listings. Up to 10 callbacks were made. The AAPOR RR3 Response Rate was 12% overall. The margin of sampling error for the full sample is plus or minus 3.5% in 19 of 20 samples. Data were weighted to gender, age, race, income and educational attainment.

The Canadian survey was administered to a nationally representative sample of 1,014 Canadians aged 18 and over. All interviews in Canada were conducted via telephone in English and French from 1 September 2015 to 15 September 2015. Calls were made using both landline (601 completes) and mobile (413 completes) phone listings. Up to 7 callbacks were made. The AAPOR RR3 Response Rate was 8% overall. The margin of sampling error for the full sample is plus or minus 3.1% in 19 of 20 samples. Results reported here are weighted according to gender, age and region to reflect the latest population estimates from Statistics Canada (Census 2011).

Funding and Financial Disclosure

The NSEE does not accept agenda-driven or advocacy-based funding. Funding for the NSEE surveys to-date has been provided by general revenues of the University of Michigan Center for Local, State, and Urban Policy, and the Muhlenberg College Institute of Public Opinion.

The 2015 NSCPOCC was partially funded by the Trottier Energy Institute, Polytechnique Montreal, an engineering school affiliated with the Université de Montréal.

The authors did not accept any stipend or supplemental income in the completion of the survey or this report.

References

Lachapelle, Erick Christopher P. Borick and Barry Rabe. 2012. “Public Attitudes toward Climate Science and Climate Policy in Federal Systems: Canada and the United States Compared.” *Review of Policy Research*. 29(3): 334-57.

Lachapelle, Erick, Christopher Borick and Barry Rabe. 2014. “[Public Opinion on Climate Change and Support for Various Policy Instruments in Canada and the US](#).” *Issues » in Energy and Environmental Policy* 11 : 1-21. CLOSUP, University of Michigan (pp. 1-21).