An optimistic approach

By: Matea Ceric, of Waterloo Collegiate Institute in Waterloo

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Over the course of its 200 year history, Canada's story has been one modelled on the ideas of innovation and overcoming hardship. Whether it has been wars, economic struggles or achieving independence, often the country has pushed for a better standard of living, for current, as well as for future generations of Canadians. Indeed, there has never been one greater moment of hardship and innovation than when the human population faced one of the greatest problems of all: climate change. The fight for a clean, green and sustainable world has, undoubtedly, presented itself as both the greatest challenge and the greatest opportunity that Canada has ever faced. However, due to several key factors, this country has, over the past fifty years, astonished the world with its ingenious new technology and daring ideas, along with its highly cooperative citizens all vying for a better world. Through rigorous efforts to use more efficient sources of power, to completely rethinking the way it lives and conducts business, Canada has demonstrated that it has reached its potential as an environmental superpower that is capable of positive change for the future. Thus, as a direct consequence of Canada's creative and bold mentality as well as it optimistic approach to the issue, this country has managed to help curb climate change for good, and this can be seen through several of its most vital efforts.

To begin, one must first mention one of the more prominent ways Canada has helped shape its image as a powerhouse for environmental change, and that is due to how it completely rethought the way it obtained its energy. Fifty years ago, Canada's main energy sources consisted of a mixture of pernicious crude oil and gas, nuclear energy, coal, and natural gas. All of this accounted for approximately one fifth of the 732 megatonnes of total carbon dioxide produced around that time.[1] No matter how much the energy companies claimed that their method of energy extraction was "clean" and "safe", the facts were starting to sink in: these toxic energy sources could not be viable long-term, and secondly, the health of the natural world and the communities living close to the extraction sites were at serious risk. After years of protests and petitions, the federal government decided it was time to change tactics. It began the "Project CanRenew", a nation-wide initiative designed to make the shift from the dependence on fossil fuels to a nation completely reliant on renewable sources. In essence, each province determined its most valuable natural resource. Then, over the next 15 years, using a portion of the annual 2.7 billion dollars that would otherwise be given to the fossil fuel industry, they had the task of gradually transitioning to complete renewable dependence. Vast wind farms were installed all over Canada, such as in Quebec and Nunavut, and the coastal provinces utilized new technology that Canadian scientists developed, which

[1] This figure is the total amount of carbon dioxide produced in Canada alone in the year 2014. According to the Government of Canada website, this figure is set to continue to rise in the next couple of years. Environment and Climate Change Canada, *Greenhouse Gas Emissions* https://ec.gc.ca/indicateurs- indicators/default.asp?lang=en&n=FBF8455E-1 (accessed December 21, 2016)

harnessed the immense wave power of the oceans. It became commonplace for all homes and public institutions to have solar panels on their roofs and thousands of new jobs were created. Furthermore, there were now opportunities for more innovative and creative solutions, like using special types of anaerobic bacteria to consume trash and convert it into energy.[2] By deciding to make the switch from non-renewable to renewable energy sources, Canada advertently made a huge step in stopping climate change.

Not only has Canada made great progress in its energy sector, but also through conscientious changes in lifestyle, business and infrastructure. These days, a green lifestyle is second nature to Canadians who enjoy eco-smart cities, filled with green space and gardens, reliable but sustainable modes of transport, and ample opportunity to lead healthier and more purposeful lives. This transition was not an easy goal to accomplish. Just as early as a few decades ago, Canada's cities were built more for the car than for the average citizen. There was also a lack of decent organization, as towns were overrun by huge swaths of suburban land and spread over large distances. With few fast public modes of transport, travel was difficult and time-consuming. However, as people became more concerned about their health and also the health of their environment, political leaders started to take notice. In 2016, a revolutionary plan, called the "Transformational Infrastructure Plan" invested over 180 billion dollars in areas like public transit, green and social infrastructure and advancement in rural and northern communities, courtesy of the federal government. Cities were completely redesigned to become more pedestrian friendly, vibrant and sustainable. Due to this initial advancement, Canadian businesses began incorporating environmental concepts into their business models and were more respected by the citizens. For example, many zero waste restaurants popped up that used animal products created in-vitro, and instead of city lights, the streets began to use bioluminescent bacteria that did not require electricity. The transportation sector was vastly improved so that people could essentially go from one end of a city to another using nothing but bikes, elevated, aboveground and underground hydrogen trains or frictionless vehicles. The shift in the way Canadians thought about their lifestyles vastly reduced harmful methane, carbon dioxide and chemical emissions, and it demonstrated a bold and optimistic mentality in combatting climate change.

Through several of Canada's greatest achievements as well as its positive approach to climate change, it has managed to contribute its hand to curbing the global problem once and for all. By radically changing the way it fuels our homes and our economy to making large improvements to our cities and businesses, it has demonstrated its capacity in tackling this challenge along with other countries. In fact, many other countries followed in its footsteps and adopted its drive for innovation and problem-solving. Now that Canada has successfully survived the greatest challenge of this century, it is up to future generations to continue to innovate and persevere through the next steps in the Canadian as well as the human story.

2 For more information on these bacteria, please consult the website: United States Environmental Protection Agency Turning Food Waste into Energy at the East Bay Municipal Utility District: https://www3.epa.gov/region9/waste/features/foodtoenergy/ (accessed February 25, 2017)

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