

**1 | Why has Canada been labelled an “environmental laggard?” If you were to make one or two policy recommendations for overcoming this infamous laggard status, what would it/they be?**

Canada’s record on climate change is the main reason why it is now viewed as an environmental laggard.<sup>1</sup> On 12 June 1992 Canada signed the *United Nations Framework Convention on Climate Change (UNFCCC)*, an international agreement with the objective of “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”. Canada ratified the treaty on 4 December 1992. Canada took part in the negotiations that led to the *Kyoto Protocol*, which was opened for signature in 1997 and came into force in 2005, choosing a target of reducing greenhouse gas (GHG) emissions to 6% below 1990 levels by 2012. Rather than implementing an effective domestic plan for meeting that target, subsequent Liberal and Conservative governments proposed largely voluntary plans which lacked effective mechanisms for producing the desired emission pathway. By 2011, the government of Stephen Harper could argue that meeting Canada’s target would be impossibly expensive, justifying the government’s decision to withdraw from the protocol. As of the time of Canada’s fifth national communication to the IPCC (describing emissions up to 2007), GHG emissions were 26% above 1990 levels, and 33% above Canada’s self-imposed *Kyoto* target.

While climate change isn’t the only area in which Canada’s environmental policy has backslid recently, there are several reasons to think that decisions in this area have done the most to establish Canada’s “laggard” status in the eyes of many, both domestically and internationally.<sup>2</sup> Climate change has attracted a large amount of international attention in recent years and, as a global prob-

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<sup>1</sup>For a more detailed explanation of Canada’s “laggard” status — incorporating electoral politics, perceived jurisdictional constraints arising from federalism, the continuing dominance of primary industries, and the lasting impact of neoliberal ideology — see: Wood, Tanner, and Richardson, “Whatever Happened to Canadian Environmental Law?”

<sup>2</sup>Other recent decisions, like cutting funding to the Experimental Lakes Area, weakening the environmental assessment process for new projects, and withdrawing from the *United Nations Convention to Combat Desertification* also generated international criticism.

lem that requires cooperation to overcome, it leads naturally to a comparative evaluation of the success or failure of different major emitters. Growing international attention directed toward the oil sands also highlights Canada's problematic GHG record.

As elaborated upon in section 3, the single most effective policy for changing Canada's international environmental reputation would probably be the establishment of a significant tax on GHG emissions, with sufficient clarity and certainty to motivate industry to begin making different investment decisions in response.

Alternatively, Canada could change its international reputation substantially by developing and implementing a long-term plan to wind down fossil fuel production, particularly from unconventional sources like the oil sands. As long as Canada sees its economic future being dominated by the production and export of fossil fuels, it will not be comfortably incorporated into a global framework designed to keep climate change at a safe level. To be credible, such a policy would need to be negotiated with the provinces, particularly those that are major fossil fuel producers. Such a policy would be highly innovative, and respond directly to the understanding of climate science re-affirmed in the latest Intergovernmental Panel on Climate Change (IPCC) report. Governments around the world continue to express their concern about climate change — for instance, by signing the *Copenhagen Accord* with its call to limit warming to less than 2°C above pre-industrial levels — but at the same time they continue to act on the basis that they can and should burn their entire reserves of fossil fuels. If Canada established a plausible multi-decadal plan to phase out fossil fuel production, import, and export it would be the first time a major government (and a major fossil fuel producer) translated its understanding of climate science into a clear plan for addressing the root cause.

Such an approach involves risks. Today's government may enact a plan that seems ambitious overall, but which offloads most of the unpopular decisions into the medium-to-distant future. By the time the target dates in the plan come around, it may well be the case that not nearly enough has been done and that achieving the target at the last minute would be excessively expensive or

impossible.<sup>3</sup> Many governments, including the government of Canada, have announced ambitious-looking GHG reduction targets for 2050 or later, but then failed to implement immediate policy measures that would set their economies on a pathway to meet the target. Often, long-term mitigation plans rest upon the assumption of additional unspecified measures in the future, or on ambitious and unrealistic assumptions about the deployment of new technologies like carbon capture and storage (CCS).<sup>4</sup> A larger difficulty is that major oil-producing provinces are likely to reject any plan that would leave most of these resources underground. This lack of political will, which is replicated at the federal level, is the major impediment to the creation and implementation of Canadian climate change policies that are effective and on the appropriate scale for addressing the problem.<sup>5</sup> While sufficient political will remains absent, the prospects for Canada overcoming its “laggard” status are limited.

As a corollary to a long-term fossil fuel phase-out plan, Canada might benefit from adopting a policy to protect the ability of government experts to comment in factually-accurate ways about science and its relationship to policy. Specifically, the policy could establish that the “duty of loyalty” to which public servants are bound does not bar them from making factual claims about matters such as the likely effectiveness of proposed environmental policy, or Canada’s standing relative to other countries as measured by various environmental indices. In some ways, the most worrisome feature of environmental politics in Canada has been the enthusiasm of *status quo* actors for distorting the public debate. If a democratic society is to devise a suitable and effective response to the problem of climate change, the public must be reasonably well-informed about its causes and consequences; about the potential of different policies, technologies, and behavioural changes to

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<sup>3</sup>An analysis of the climate policies of the major Canadian parties undertaken by the Pembina Institute in 2011 shows more enthusiasm for medium- and long-term targets than for the immediate implementation of specific and effective measures: Pembina Institute et al., *Election 2011: Where Do The Parties Stand on Environmental Issues?*

<sup>4</sup>See: Gosselin et al., *The Royal Society of Canada Expert Panel: Environmental and Health Impacts of Canada’s Oil Sands Industry*, p. 90–1.

<sup>5</sup>For an especially clear example of the current Canadian government’s view on climate change and resource development, see: Oliver, *An open letter from the Honourable Joe Oliver, Minister of Natural Resources, on Canada’s commitment to diversify our energy markets and the need to further streamline the regulatory process in order to advance Canada’s national economic interest*.

change our GHG impact; and about the scale of the challenge both domestically and globally. Across time, a properly-informed public discourse may contribute to the emergence of political will to solve the problem. In combination with increasingly-evident climate change impacts and demands from other countries and international organizations to take greater action, such a public discourse may eventually feed through into major changes in Canada's political landscape that could facilitate more benign environmental outcomes.

**2 | Hoberg and Phillips argue that pressure on the oil sands subsystems came through the emergence of multi-stakeholder groups and a policy image shift sometime around 2005. Why have we not seen policy change in this subsystem?**

Hoberg and Phillips describe growing global awareness about the impacts of Canada's oil sands after 2005.<sup>6</sup> This scrutiny has led to a partial transition away from a "policy monopoly", with a close relationship between government and industry. Three multi-stakeholder bodies were created around this time: "the Oil Sands Consultations Multi-stakeholder Committee (MSC), the Oil Sands Ministerial Strategy Committee (which produced the Radke report) and the Cumulative Environmental Management Association (CEMA)". Despite the creation of these bodies, there has not been large-scale policy change in relations to the oil sands at either the national or provincial level. Output from the oil sands continues to increase, and plans for major further expansion remain in place. The federal government also remains an enthusiastic proponent of new export pipelines. The main explanation is the unwillingness of Canadian companies, individuals, and governments to forego the revenue that would be produced by exploiting the resource. The oil sands are estimated to be the world's third-largest remaining oil reserve and, while most of the harm associated with exploiting it would be imposed on non-Canadians in the future, most of the benefits of doing so accrue to those who are politically influential and profiting today. A powerful *status quo* bias within Canadian politics and industry prevents policy change, assisted by other factors such as the constitutional al-

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<sup>6</sup>Hoberg and Phillips, "Playing Defense: Early Responses to Conflict Expansion in the Oil Sands Policy Subsystem", p. 507–527.

location of responsibility for natural resources to the provinces. Persistent confusion also endures among both policy-makers and the general public about the causes and consequences of climate change, as well as the nature and scale of action required to address it.

Hoberg and Phillips define “policy subsystems” as “issue-specific patterns of interaction between policy actors and institutions”.<sup>7</sup> The emergence of new multi-stakeholder bodies could conceivably have affected the oil sands subsystem to the extent of driving policy change, but such an outcome was unlikely given the powerful conflict of interest facing today’s decision-makers. Voluntarily foregoing the revenue associated with oil sands exploitation would require the interests of non-Canadians and those in future generations become as politically pertinent as billions of dollars in tax revenue and thousands of jobs. Given the international free rider problem and the intergenerational conflict of interest, there is a plausible case that the creation of multi-stakeholder bodies was intended more as a distraction than as a good-faith effort to control the environmental impact of oil sands development. One of the few real legal dangers to the continued growth of the oil sands is opposition from First Nations groups, so government and industry must be in a position to say that they have consulted adequately. Furthermore, as illustrated by advertising from fossil fuel companies in recent decades, the general public is open to the idea that technological progress will automatically correct for the environmental harm caused by the industry. As Hoberg and Phillips identify, the “strategy of selective opening” pursued since 2005 may be “designed to bolster the legitimacy of the policy process while maintaining control over decision rules and venues”.<sup>8</sup>

As Kathryn Harrison and others note, there is usually an asymmetry between those who are affected by pollution and those affected by environmental policy. Pollution imposes relatively small costs on a vast number of people who have relatively little information about what is happening and relatively little incentive to form a group to lobby for effective change; by contrast, polluters who could be subjected to regulation face highly concentrated costs and have more information, often

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<sup>7</sup>Hoberg and Phillips, “Playing Defense: Early Responses to Conflict Expansion in the Oil Sands Policy Subsystem”, p. 508.

<sup>8</sup>Ibid., p. 509.

making them more effective at driving the development of policy.<sup>9</sup> Arguably, this dynamic has been reflected in the operation of the three multi-stakeholder bodies examined by Hoberg and Phillips. In the case of the MSC, “recommendations expressing a commitment to planning and evaluation were accepted by all, but those that contained regulatory limits were not” and the government of Alberta’s response included no substantial new policy direction.<sup>10</sup> Similarly, “the policy actions taken by the government based on CEMA reductions have not significantly advanced regulatory policy”.<sup>11</sup> By contrast, the Radke report from the Oil Sands Ministerial Strategy Committee largely described means for facilitating continued growth of the oil sands and prompted more substantive action from the provincial government.<sup>12</sup>

The heightened global concern about the oil sands after 2005 follows a pattern of ‘waves’ of elevated environmental concern. Previous ‘waves’ occurred around the 1960s, with concern about toxins and the establishment of important environmental institutions in the United States and Canada, as well as in the mid-1980s, prompted in part by disasters like Chernobyl and Exxon Valdez.<sup>13</sup><sup>14</sup> As Harrison explains, these ‘waves’ have a tendency to peak and retreat before strong legal and institutional responses to the problems which they focused on are implemented. Often, the emergence of difficult economic conditions has undermines public willingness to prioritize environmental protection over jobs and economic growth. These dynamics may also help explain the continuing inaction on GHG pollution from the oil sands in Canada. Arguably, the situation may be even more challenging than that. Many previous environmental problems like local air and water pollution could be solved in ways that didn’t challenge the fundamental model of capitalism and never-ending economic growth, whereas climate change may require a more systematic change

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<sup>9</sup>Harrison, “Federal-Provincial Relations and the Environment: Unilateralism, Collaboration, and Rationalization”.

<sup>10</sup>Hoberg and Phillips, “Playing Defense: Early Responses to Conflict Expansion in the Oil Sands Policy Subsystem”, p. 516.

<sup>11</sup>Ibid., p. 516.

<sup>12</sup>Ibid., p. 523.

<sup>13</sup>Paehlke, “The Environmental Movement in Canada”, p. 2–13.

<sup>14</sup>For more on the 1990s wave, see: Toner, “Contesting the Green: Canadian Environmental Policy at the Turn of the Century”, p. 71–120.

in the political and economic structure of countries around the world.<sup>15</sup> If so, the half-hearted and short-lived concern of the general public may be an especially inadequate counter to the influence of fossil fuel companies whose business models demand the unlimited ability to emit CO<sub>2</sub>.

### **3 | If Canada wanted to address climate change by reducing GHG emissions, what should it do?**

Many studies — including the Stern Review in the U.K. and private sector studies by the consultancy McKinsey — have found that it is possible for the world to achieve an economically-efficient transition to a low-carbon global economy, and that carbon pricing is likely to be a crucial tool for achieving that aim. Carbon pricing, whether in the form of a carbon tax or a cap-and-trade system with permit auctioning, has many appealing features. By sending a coherent signal to the economy as a whole, carbon pricing would encourage emission reductions wherever doing so is most cost-effective. As long as firms believe that a carbon price will remain in place (or, better, rise predictably over time), they will be able to make long-term investment decisions that better reflect the need to decarbonize. They would have less of an incentive to make major new investments in fossil fuel infrastructure, such as building coal-fired power plants, since firms could more easily look ahead to a future in which operating such facilities would become uneconomical. Furthermore, economy-wide carbon pricing would spur efforts in research and development directed toward reducing GHG emissions. A carbon price applied equally across the Canadian economy would limit opportunities for rent-seeking behaviour by firms, which might otherwise reduce the effectiveness of the GHG reduction strategy. It could also eventually be incorporated into a global system of GHG control, in which different major economies adopt distinct but integrated carbon pricing schemes and associated measures.

In the absence of carbon pricing, there are many other mechanisms through which Canada

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<sup>15</sup>As explained in a Royal Society of Canada report on the oil sands: “increasing direct GHG emissions from growing bitumen production creates a major challenge for Canada to meet our international commitments for overall GHG emission reduction that current technology options do not resolve.” Gosselin et al., *The Royal Society of Canada Expert Panel: Environmental and Health Impacts of Canada’s Oil Sands Industry*, p. 7.

could work to reduce GHG pollution. It could enact policies to accelerate the phase-out of the most harmful fossil fuels: primarily coal burned for electricity generation, as well as pollution-intensive fuels burned inefficiently by trains and ships (producing ice-melting black carbon, in addition to CO<sub>2</sub> and sulphur and nitrous oxide GHGs). This could be done in many ways. Tightened limits for toxic air pollution from power plants and vehicles could encourage the retirement of Canada's dirtiest fossil fuel capital stock. There is also scope for reducing the severity of impacts from the oil sands by encouraging or obligating all production facilities to implement best practices in "environmental management, land impacts, air pollution, water use, and management of greenhouse gases".<sup>16</sup> Alternatively, efficiency standards could target CO<sub>2</sub> specifically, establishing maximum acceptable quantities per kilowatt-hour of electricity produced (as has just been announced for new power plants in the U.S.), or per passenger-kilometre or tonne-kilometre for transport.<sup>17</sup> In some cases, individuals and firms can be encouraged to purchase more energy-efficient equipment (such as furnaces or air conditioners) by adding a supplemental fee to the cost of the least efficient options and using the revenue to provide a rebate for part of the cost of the most efficient equipment of the same type. Building codes could also be substantially toughened, bringing them more in line with those in Germany and Scandinavia. Particularly in places with high energy expenditure for both winter heating and summer cooling, tougher building standards for new building and retrofit programs for existing buildings can reduce GHG pollution while saving money. Efficiency may also be boosted through novel pricing schemes that shift the benefit from efficiency improvements from individual building owners to large utilities. This could be achieved through contracts where utilities provide heat and light for a particular rate, have the option of investing in more efficient systems, and are able to keep the extra profit from doing so. Innovative technologies like ground- and air-source heat pumps have the potential to perform the same heating and cooling tasks as con-

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<sup>16</sup>See: Dyer et al., *Under-Mining the Environment: The Oil Sands Report Card*.

<sup>17</sup>Some of the perverse incentives facing politicians are illustrated by the case of Mike Harris "slashing" insulation standards for new houses in Ontario during the 1990s, in response to pressure from the building industry. In the long run, poorly insulated homes are a net drain on everyone's welfare, but the short-term demands of industry profitability can drive policy-making in the opposite direction. See: Paehlke, "The Environmental Movement in Canada", p. 7.

ventional furnaces and air conditioners with much greater efficiency. Canada could boost energy efficiency by adopting higher standards for consumer appliances and industrial equipment, though policy would need to be designed to prevent such efficiency increases from simply encouraging more intensive use, negating their CO<sub>2</sub> reduction impact (the so-called ‘boomerang’ or ‘rebound’ effect with energy efficiency). When McKinsey comprehensively ranked mitigation options by both cost per tonne and potential CO<sub>2</sub> emission reductions, they found many options for reducing CO<sub>2</sub> at a net-negative cost.

Canada could also enact additional policies to encourage the deployment of low-carbon and renewable energy.<sup>1819</sup> These could include feed-in tariffs of the sort already implemented in Ontario, more favourable tax treatment for new renewable energy facilities, low-cost financing, as well as support for research and development — particularly for novel renewable options like engineered geothermal systems, in which water is artificially injected into deep hot rock to produce steam and drive turbines. Building more capable inter-linkages between different electricity grids could help to address the intermittence of energy sources like wind, as would the deployment of energy storage options like pumped hydroelectric facilities and pumped and multi-lagoon tidal facilities. International electricity grid linkages could also help address the intermittence of many renewables. For instance, offshore wind from Canada could be balanced with solar energy from the southern United States or Mexico, particularly if new high voltage direct current corridors with low per-kilometre energy losses are built. At the same time, ‘smart grid’ deployment and demand management (especially in collaboration with industry) can help shift energy use away from periods when demand eclipses renewable supply to times when renewable energy is available in excess.<sup>20</sup>

While nuclear energy remains controversial, it can plausibly be seen as a useful transitional technology, capable of producing low-carbon electricity in very large quantities and with a stabil-

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<sup>18</sup>See also: Drieson, “Renewable Energy under the Kyoto Protocol: The Case for Mixing Instruments”.

<sup>19</sup>Duff and Green, “A Comparative Evaluation of Different Policies to Promote the Generation of Electricity from Renewable Sources”.

<sup>20</sup>Some renewable energy sources can incorporate their own energy storage. Notably, concentrating solar power stations where mirrors concentrate sunlight on a central tower can use sodium rather than water as a coolant, retaining sufficient heat during the night to continue with steam production and power generation.

ity that is harder to achieve with renewables like solar and wind. There are many ways in which Canada could position itself to maintain and enlarge its nuclear capacity, ranging from the overdue establishment of a national long-term geological repository for radioactive waste to helping to finance the construction of new reactors. Canada could support research into next-generation nuclear designs that may be able to mitigate some of the special risks associated with nuclear energy, for instance by being truly ‘passively safe’ in the event of a station blackout.

Canada could also introduce policies aside from a carbon price which are meant to discourage harmful behaviour. For example, the use of roads by private and commercial vehicles could have a per-kilometre fee, and short-haul air travel could be discouraged. These measures could also include education and exhortation to drive voluntary lifestyle changes compatible with reduced GHG emissions, such as reduced meat consumption or smaller families.

**4 | Wood et al. and Parson both make references to Canada’s exploding economy and neoliberal policies in their separate accounts of Canada’s dismal environmental track record. The success of the oil sands is a case-in-point. Do Driesen or Duff & Green or Green provide a way for the Harper Administration to grow the economy and maintain neoliberal policy? What does your answer imply for climate change policy in Canada domestically and nationally?**

At times, “neoliberalism” is used as a generic calumny levelled with little discrimination at many features of modern political and economic life. Used more precisely, the term describes a constellation of beliefs implemented in policy, including that markets are efficient and function well with a minimum of regulation, that governments should strive to maximize the rate of economic growth, and that the appropriate role for government is to establish a legal framework where individuals and firms can pursue their economic objectives unhindered, rather than striving to create a society where individuals experience similar levels of physical and economic well-being. Defined in this way, many of Canada’s recent policies have been neoliberal, including the establishment of free trade with the United States, participation in the broader international free trade regime gov-

erned by the World Trade Organization, and limited government involvement in the operation of private industry.

Wood et al. describe how after the 1970s “Canada’s increasingly mangled environmental regulations reflected the effects of neoliberal deregulation, fiscal restraint, and corporate influence”.<sup>21</sup> Parson is focused on the challenge of addressing “subtle, chronic, and long-term” environmental problems.<sup>22</sup> While he doesn’t discuss neoliberalism directly, he does discuss why politicians and regulators might fail to effectively address environmental issues, including because of “an ideological opposition to regulation in general, or a desire to favour their friends and supporters”.<sup>23</sup> He also describes how the Canadian federal government has sometimes required external prodding in order to regulate in areas where it was clearly legally empowered to do so. Collectively, these three articles provide some support for the notion that the Canadian government has internalized many of the key values of neoliberalism, including those which risk being an impediment to sound environmental management.

Insofar as the deployment of renewable energy has the potential to be a climate change solution, the mechanisms for promoting it discussed by Drieson have the potential to help shift the energy basis of Canada’s economy onto a more sustainable footing.<sup>24</sup> Drieson explains that “[a] tension exists between maximizing short-term cost effectiveness and maximizing long-term investments needed to address global warming”, but in a liberal analysis this simply reflects the failure of the market to internalize the externalities associated with climate-altering forms of energy generation.<sup>25</sup> Arguably, the solution is not to abandon markets or the private pursuit of profit, but rather to establish a legal structure in which the incentives presented to individuals and firms encourage a transition to climate stability. Similarly, the comparative analysis of Duff and Green illustrates numerous policy approaches that a sufficiently serious government could use to drive the large-scale

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<sup>21</sup>Wood, Tanner, and Richardson, “Whatever Happened to Canadian Environmental Law?”, p. 994–5.

<sup>22</sup>Parson, “Environmental Trends and Environmental Governance in Canada”, p. 1.

<sup>23</sup>Ibid., p. 30.

<sup>24</sup>Drieson, “Renewable Energy under the Kyoto Protocol: The Case for Mixing Instruments”, p. 203–213.

<sup>25</sup>Ibid., p. 213.

implementation of renewable energy technologies.<sup>26</sup> Their informative account illustrates many of the details and complexities involved in trying to set policy to create appropriate incentives, but these challenges can be interpreted as a set of surmountable barriers that can be overcome, rather than evidence of a fundamental incompatibility between neoliberal political and economic ideology and avoiding catastrophic climate change. In “Bringing Institutions and Individuals into a Climate Policy *for* Canada”, Green stresses how the establishment of a carbon price would be helpful but not sufficient.<sup>27</sup> It is also necessary to consider the institutional context in which the price would operate, the values of individuals, and the peculiarities of the Canadian context.<sup>28</sup>

Provided climate change mitigation can be reconciled with sustained economic growth, there is a neoliberal road forward for addressing the problem. Governments inescapably need to be involved, in order to counter the aggressive privileging of short-term interests that has dominated climate policy-making in recent decades, but with the right incentives capitalist structures should be able to address the climate problem effectively and efficiently. Tens of trillions of dollars of investment need to be re-directed from the exploitation of remaining conventional and new unconventional fossil fuel reserves, flowing instead into renewable and nuclear energy deployment, technological development, improved energy efficiency, and other climate fixes. If this re-investment happens quickly enough, humanity may be able to avoid worst-case climate change impacts, while also rolling out a low-carbon and renewable global energy system that can provide the basis for human prosperity indefinitely. Achieving the transition from the business-as-usual trajectory to one compatible with that outcome is, of course, an enormous political challenge, and may be beyond what the political system can reasonably be expected to bear.<sup>29</sup> At the same time, it can be argued that there is no fundamental contradiction between the operation of neoliberal structures un-

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<sup>26</sup>Duff and Green, “A Comparative Evaluation of Different Policies to Promote the Generation of Electricity from Renewable Sources”, p. 222–239.

<sup>27</sup>Green, “Bringing Institutions and Individuals into a Climate Policy *for* Canada”, p. 247-255.

<sup>28</sup>This analysis is echoed in: Toner, “Contesting the Green: Canadian Environmental Policy at the Turn of the Century”, p. 71–120.

<sup>29</sup>The energetic response to the 2008 financial crisis reveals the extent to which governments privilege the stability of the financial system over other policy concerns, such as the environment.

der appropriate institutional constraints and the achievement of climatic stability. Indeed, pursuing such a strategy may be the most plausible possibility open to us, given the deep uncertainty about whether neoliberal structures could be replaced with something else sufficiently quickly to avoid the worst impacts of climate change, along with uncertainty about whether any other system (such as Chinese-style state capitalism) would actually produce superior environmental outcomes. Green comments on how it might take a crisis to produce the value change necessary to address climate change, warning that by the time such a clear crisis arises it may be too late to avoid climatic catastrophe.<sup>30</sup> Something similar may be true of large-scale political change; by the time the severity of the flaws in the current system are broadly understood, it may be too late to shift to something more sustainable.

There have certainly been accounts of the politics and political economy of climate change that argue forcibly that neoliberal political and economic structures simply cannot address the problem — they are too fundamentally dominated by short-term interests, or politicians are too inescapably corrupted by well-moneyed *status quo* interests. Similarly, some have argued that the real environmental problem isn't climate change *per se*, though that is an important symptom, but the global capitalist system itself. Evaluating such arguments is deeply challenging. Over the past 250 years, humanity has been undertaking a vast uncontrolled experiment in global development driven by fossil fuels. Now, if scientific projections about the likely seriousness of climate change are reasonably accurate, there is reason to think we are approaching some hard limits to the successful perpetuation of that model. While there is some merit in analyses that attribute the difficulty of the problem to persistent (or even ineradicable) features of capitalism or neoliberalism, there is also reason to hope that the system that constructed the world's massive existing fossil fuel energy system could, with suitable incentives, help build its replacement. If that is possible, it may be the most feasible route forward, since it would do less to challenge the interests of powerful *status quo* actors who are presently in control of the political system.

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<sup>30</sup>Green, "Bringing Institutions and Individuals into a Climate Policy for Canada", p. 255.

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