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Joint Meetings of Tax and Environment Experts

THE POLITICAL ECONOMY OF BRITISH COLUMBIA'S CARBON TAX

16 November 2012
OECD Headquarters, Paris

This paper was written by Prof. Kathryn Harrison of the University of British Columbia. It discusses the political economy of the carbon tax applied in British Columbia, Canada, and it contributes to two separate projects at the OECD:
• An ongoing project on lessons on environmental policy reform, under the auspices of the Working Party on Integrating Environment and Economic Policies; and
• A new project on the political economy of environmental taxes, under the auspices of the Joint Meetings of Tax and Environment Experts.

The same document is also issued as ENV/EPOC/WPIEEP(2012)16.

The only modification to the paper compared to the version placed on OLIS 02.11.12 is that the two graphs have been changed.

ACTION REQUIRED: For discussion.

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NOTE FROM THE SECRETARIAT

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Delegates are invited to provide comments in writing by 10 December 2012. It is planned to release this study as an ENV Working Paper.

The same document is also issued as ENV/EPOC/WPIEEP(2012)16.

ACTION REQUIRED: For discussion.

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THE POLITICAL ECONOMY OF BRITISH COLUMBIA'S CARBON TAX

1. Introduction

1. In July 2008, the Canadian province of British Columbia (BC) launched North America's first revenue-neutral carbon tax reform. The tax was introduced at a rate of CAD 10 per tonne CO_2, with a schedule for annual increases of CAD 5 per tonne CO_2 until the tax reached CAD 30 per tonne CO_2 in 2012. The BC tax stands apart from most other carbon taxes globally in applying equally to all combustion sources of all fossil fuels within the province (Ciocirlan & Yandle, 2003; Harrison, 2010). Many observers were surprised that a right-of-centre government not known for its environmentalism would embrace a carbon tax at all, let alone a textbook example of one, even as other governments in North American were opting for the more "incumbent friendly" solution of cap and trade (Baldwin 2008).

2. This paper reviews the political economy of the BC tax in three distinct periods – its origins, its survival in the face of political backlash, and its future prospects – examining the interplay of public opinion, interest group pressures, and competition between the province's political parties in each case. The BC carbon tax emerged from an unusual confluence of factors, including a surge in public attention to the environment, a strongly-committed government leader, and a right-of-centre party with the trust of the business community. Its survival was sealed by the equally unlikely timing of a global recession, which redirected the electorate's attention away from the unpopular tax. Looking ahead, however, the political economy of an established tax is very different from that of a new one. A decline of public opposition over time, combined with the BC government's growing reliance on revenues from the carbon tax, seem likely to ensure the carbon tax's survival for the foreseeable future. However, the province faces growing political pressure for exemptions from trade-exposed industries.

2. Economic and Environmental Context

3. Canada is among the most emissions-intensive countries in the OECD, with per capita emissions in 2010 of 20.3 kg of CO_2eq per year.[1] Those emissions reflect Canada's reliance on ample fossil fuel endowments for both domestic use and exports of carbon-intensive manufactured goods and fossil fuels (Davis *et al*., 2011). There are, however, pronounced differences in the carbon-intensity of the ten Canadian provinces. At the limits, hydropower-rich Quebec has per capita emissions of 10 kg of CO_2eq per year while Saskatchewan and Alberta, which both produce fossil fuels for export and rely on coal for electricity, have per capita emissions seven times greater. The provinces with the lowest per capita emissions and untapped hydroelectric potential have been the most active in addressing climate change, while those with the highest per capita emissions have been most resistant (Harrison, forthcoming).

4. British Columbia's second-lowest per capita emissions of 12.4 kg of CO_2eq per year reflect the mountainous province's access to abundant hydro-power, which accounts for 93% of its electricity generation. In the absence of fossil fuel power plants, stationary sources account for just 37% of BC's emissions compared to 54% nationally. The province's significant forest products industry also has relatively low greenhouse gas emissions. With relatively clean point sources, transportation accounts for a

1. All emissions data are from Canada (2010), while population figures are as reported by Statistics Canada.

proportionately larger share of BC's greenhouse gas emissions, at 38% compared to 28% nationally. BC's greenhouse gas emissions increased by 12% between 1990 and 2010 (British Columbia 2012a), while the provincial population increased by 40% over the same period. The transportation sector accounted for just over half of the emissions increase. In contrast, industrial combustion emissions were fairly stable.

5. Although it has taken advantage of its clean energy endowments, BC does have economically significant greenhouse gas-intensive industries, most notably cement, aluminum, mining and smelting, and natural gas. The political influence of those sectors also tends to be reinforced by their location in economically dependent rural communities. Paradoxically, although the coal industry is a significant contributor to the province's economy, and account for 85% of national coal production,[2] it does not pose particular problems for BC's own climate targets because almost all of BC's coal is shipped to other jurisdictions. The province's rapidly growing natural gas sector is another matter. Fugitive and venting emissions contributed 26% of provincial emissions growth between 1990 and 2010 (British Columbia, 2012a). Rapidly expanding production from emissions-intensive "fracking" of shale reservoirs and proposed energy-intensive liquefied national gas export terminals will together present a significant challenge to BC's greenhouse gas reduction targets.

6. The same mountainous terrain that has given rise to BC's relatively low-carbon economy also has given rise to a strong environmental movement. That is something of a mixed blessing for BC climate policy, however. While the environmental community strongly supports action on climate change, there is significant political opposition to new hydro-power developments that threaten BC's wilderness.

3. Mechanics of the BC Carbon Tax

7. The BC carbon tax was announced in February 2008 and took effect on July 1 of that year. The tax was introduced at a relatively low rate of CAD 10 per tonne of CO_{2eq}, but with a predictable schedule of four annual CAD 5 per tonne increases until it reached CAD 30 per tonne in July 2012. The tax applies to all greenhouse gases emitted by all sources of combustion of all fossil fuels (plus peat and used tires where used for heat or energy). The carbon tax does not cover all sources of greenhouse gas emissions within BC, however. Non-combustion emissions from industrial processes, such as cement production, and venting and fugitive emissions (*e.g*., from natural gas production and landfills) are not covered, though combustion emissions from those same sectors are subject to the tax. When it was introduced in 2008, the carbon tax applied to 77% of BC's greenhouse gas emissions, but that has fallen to 70% in 2012 with the increase in non-combustion emissions from growing natural gas production.

8. The carbon tax is charged to the consumer at the point of final sale, but passed back via the retailer to the wholesaler, who is responsible for conveying the tax revenue to the province. Administration of the new tax is was relatively straightforward because it is collected at the same time as pre-existing taxes (*e.g.*, the motor fuels tax). No provisions are made to tax imported goods based on production emissions, nor to reimburse BC manufacturers for carbon taxes paid on goods that they export. However, exported fossil fuels and sales of marine and aviation fuels that will produce emissions outside the province are exempt.

9. In establishing the carbon tax, the provincial government made a binding legislative commitment to return all carbon tax revenues to individuals and firms via corresponding tax cuts. Indeed, the enacting legislation threatens to reduce the Finance Minister's salary by 15% should she or he fail to do so. Interestingly, revenue-neutrality is defined as having tax cuts of value equal to or greater than carbon tax revenues, and in practice, the province has given back more money than it has collected in each of the first 5 years. This is perhaps not surprising since the threat to the Minister's salary creates an incentive to err on

2. Statistics Canada table 379-0025. Data for 2010.

the side of tax cuts, though carbon tax revenues also have been lower than anticipated. In 2012-13, during which the tax reached its scheduled maximum of CAD 30 per tonne, the province projected annual revenues of CAD 1.2 billion and tax expenditures of CAD 1.3 billion, relative to a CAD 43 billion provincial budget (British Columbia, 2012b).

10. The initial tax cuts announced in 2008 included a 5% reduction over two years in the individual income tax rate for the first two tax brackets (less than about CAD 70,000 per year). In recognition of regressiveness of an energy tax, a low-income tax credit also was included at CAD 100 per adult and CAD 30 per child. The general corporate income tax rate was reduced from 12 to 10% over two years, while the small business rate was reduced from 4.5 to 2.5% over three years. A one-time Climate Action Dividend of CAD 100 per adult also was provided in 2008, in the form of a direct payment rather than tax deduction.

11. Several features of the tax cuts are noteworthy. First, corporate tax cuts were phased in more gradually than tax cuts for individuals. Initially, two thirds of tax cuts went to individuals and one third from individuals, even though the opposite proportion applied to tax revenues. Over time the ratio has shifted, however, and more than half of tax cuts now flow to the business community. Second, as increases in the tax have necessitated further cuts to achieve revenue neutrality, the list of new tax expenditures has included increasingly specific tax credits. An industrial property tax credit and Northern and Rural Homeowner Benefit were added in the 2009 budget, while 2012 additions include business tax credits for video game production, film production, and scientific research, and individual tax credits for children's fitness and seniors' home renovations. At least some of these tax credits existed prior to 2012, suggesting that revenue-neutrality over time could become a shell game, transferring pre-existing tax expenditures to the carbon tax ledger to justify further tax increases. The shift from adjustments in broad tax rates to specific tax credits also represents an evolution from collecting less money from the same people who pay the carbon tax to redirecting revenues from carbon taxpayers to more specific subgroups.

12. The BC carbon tax was one of many provincial climate policies introduced in 2007 and 2008, two of which are particularly entwined with the tax. In 2007, the provincial government committed to participation in economy-wide emissions trading with four other provinces and seven US states as part of the Western Climate Initiative. Although it remained to be determined how the fixed-price carbon tax would be reconciled with a concurrent floating-price trading regime, the latter was expected to cover non-combustion sources that were exempt from the carbon tax.

13. The province also committed to carbon-neutral government by 2010. Public sector organisations within provincial jurisdiction, including provincial ministries, public schools, universities, Crown corporations and hospitals, were mandated to purchase carbon offsets at a rate of CAD 25 per tonne from a new Pacific Carbon Trust. The Pacific Carbon Trust is directed to purchase emissions offsets only within British Columbia. The combined effect of the carbon tax and carbon neutral government commitment was that public sector organisations would be required to pay twice for their carbon emissions, once via the carbon tax on fuel purchases and once to purchase offsets on the resulting emissions, and without the benefit of corresponding income tax cuts available to the private sector.

4. Origins of the BC Carbon Tax

14. British Columbia's emergence as a climate policy leader in 2007 was a surprise to most observers. The Liberal government led by Premier Gordon Campbell had been reviled by environmentalists for cuts to the province's environment budget and support for offshore oil and gas exploration and new coal-fired electricity-generating stations. The BC government's adoption of a carbon tax, at a time when other North American governments were embracing cap and trade, also was a surprise. Carbon taxes have several political disadvantages relative to emissions trading (Harrison, 2010, 2012). From business' perspective, cap and trade offers the prospect of windfall gains from free allocation of

permits, which have no counterpart under a carbon tax regime. From voters' perspective, the costs of a carbon *tax* are more visible than those passed on to consumers under a trading regime. This visibility is compounded the psychological phenomenon of loss aversion (Kahneman, Knetsch, & Thaler, 1991), which suggests that voters' appreciation of tax deductions is unlikely to match their resentment of new taxes, even when the two are of the same magnitude.

15. Against this backdrop, the origins of British Columbia carbon tax are explained by the confluence of five factors. First, as noted above, BC was in an enviably position to draw on hydropower resources to reduce its emissions. The second factor was a Canada-wide surge in voters' attention to climate change. For more than two decades Canadians have expressed concern when asked about climate change; however, the issue has seldom been "top-of-mind" with voters. That changed over the course of 2006, when the proportion of Canadians who identified the environment as the single "most important problem" facing Canada surged from single digits to over 20%, at which point it was the single most frequently cited issue.

16. Canadian federal and provincial governments alike responded to voters' newfound enthusiasm for climate change with a flurry of policy announcements. The BC government's climate policy agenda, unveiled in February 2007, included commitments to reduce the province's emissions by 33% (10% below 1990) by 2020, to match California's tailpipe standards for motor vehicles, that at least 90% of electricity would be derived from renewable sources, and that new and existing electricity production in BC would have net zero emissions by 2016. The last of these commitments had the immediate effect of forcing the public electric utility, BC Hydro, to cancel planned coal-fired and co-generation plants (Rhodes and Jaccard, forthcoming). Within months, BC also announced that it would join five US states in development of the Western Climate Initiative's cap and trade program.

17. Public attention to climate change and access to renewable energy were not sufficient, however, to prompt a carbon tax in this initial package of climate policy measures. A third factor that contributed to adoption of the carbon tax is the existence of a right-of-centre government when climate change surged in prominence. British Columbia has a two-party system with the "free enterprise" Liberals on the right and the social-democratic New Democratic Party (NDP) on the left. With no risk of a competitor stealing votes on the right at the time, climate change offered a potential opportunity for the Liberals to steal centrist votes from the NDP. Perhaps more importantly, the business community was arguably willing to grant greater leeway to a Liberal government than it would have been to an NDP government.

18. The environmental community, although historically more closely affiliated with the NDP, was supportive of the provincial government's new climate announcements, but urged the provincial government to take a further step and include a carbon tax in the 2008 budget (Harrison, 2012). The academic community also voiced support for a carbon tax via editorials in the province's newspapers (Mather, Olewiler, & Elgie, 2007; Jaccard, 2007) and an open letter signed by 70 economics professors from BC's four major research universities (Green, 2007).

19. Perhaps more striking than expressions of support for a carbon tax from predictable sources, though, was the absence of any backlash from the BC business community. The business community had been stunned by province's new climate policy agenda in early 2007 (Harrison 2012), but faced with unprecedented public attention to climate change, and resulting investor anxiety, by year-end the business community acknowledged the need for some form of carbon pricing (Belfry, 2010). In that context, business leaders expressed cautious support for a carbon tax when privately consulted by the Premier's office. The business community's support was contingent on two conditions, both of which were subsequently met by the provincial government: that the tax reform be revenue neutral, and that the tax be applied evenly to households and industrial sources (Peet and Harrison, 2012). A carbon tax provided a mechanism to share the burden for meeting the province's ambitious emissions targets with households

and the transportation sector, which was particularly important to industry's relatively low share of provincial emissions.

20. Despite public support for generic actions to address climate change, the provincial government anticipated that a carbon tax could generate backlash among voters. By the time of the spring 2008 budget, the environment also had begun its fall from the top of the polls. The fourth factor that accounts for the government's decision to move forward with a potentially controversial carbon tax was the strong personal commitment of Premier Gordon Campbell. In 2006 and 2007, the Premier had undertaken extensive reading on climate change, and engaged in several conservations on the subject with his counterpart in California, Governor Arnold Schwarzenegger (Harrison 2012). In response, the Premier created a Cabinet committee on climate action, which he personally chaired, and established a Climate Action Secretariat within his office. A closely related fifth factor that facilitated BC's carbon tax is political institutions. The combination of parliamentary government and a single member plurality electoral system tends to concentrate authority in a small number of hands, most notably those of the leader of a majority party. Premier Gordon Campbell thus was able to personally make the call to adopt a revenue-neutral carbon tax in British Columbia.

5. Survival of the BC Tax

21. Initial reaction to the carbon tax was positive. Academics were enthusiastic. BC's major environmental groups offered an unprecedented show of support for a government that previously had few friends in the environmental community (David Suzuki Foundation, 2008a). Even the business community was cautiously supportive (Vancouver Board of Trade, 2008; Finlayson, 2008). A poll taken days after the budget announcement found 54% of British Columbians supportive and 40% opposed to the carbon tax (Environics, 2011).

22. A backlash soon emerged, however, led by Northern and rural communities, who argued that the tax was unfair to their residents because they live in a colder climate and have few, if any, transit options. Although analysis by academics and government indicated that with well-insulated homes and shorter commutes rural residents actually would pay *less* on average than residents of the urban south, perceptions of unfairness persisted, fuelled by longstanding political alienation among rural British Columbians (Peet and Harrison, 2012). Northern municipalities passed a series of resolutions condemning the tax in the spring of 2008.

23. Negative reaction was not confined to rural voters. A spike in the price of gasoline between the February budget and the tax's application in July inflamed opposition across the province. With singularly unfortunate timing, the carbon tax took effect the same week that the price of gasoline reached its peak, pushing the price per litre over the symbolic CAD 1.50 mark at Vancouver gas stations. Although the tax accounted for just 2.4 cents of the 40-cent increase experienced by consumers, the carbon tax offered a lightning rod for voter discontent with gasoline prices.

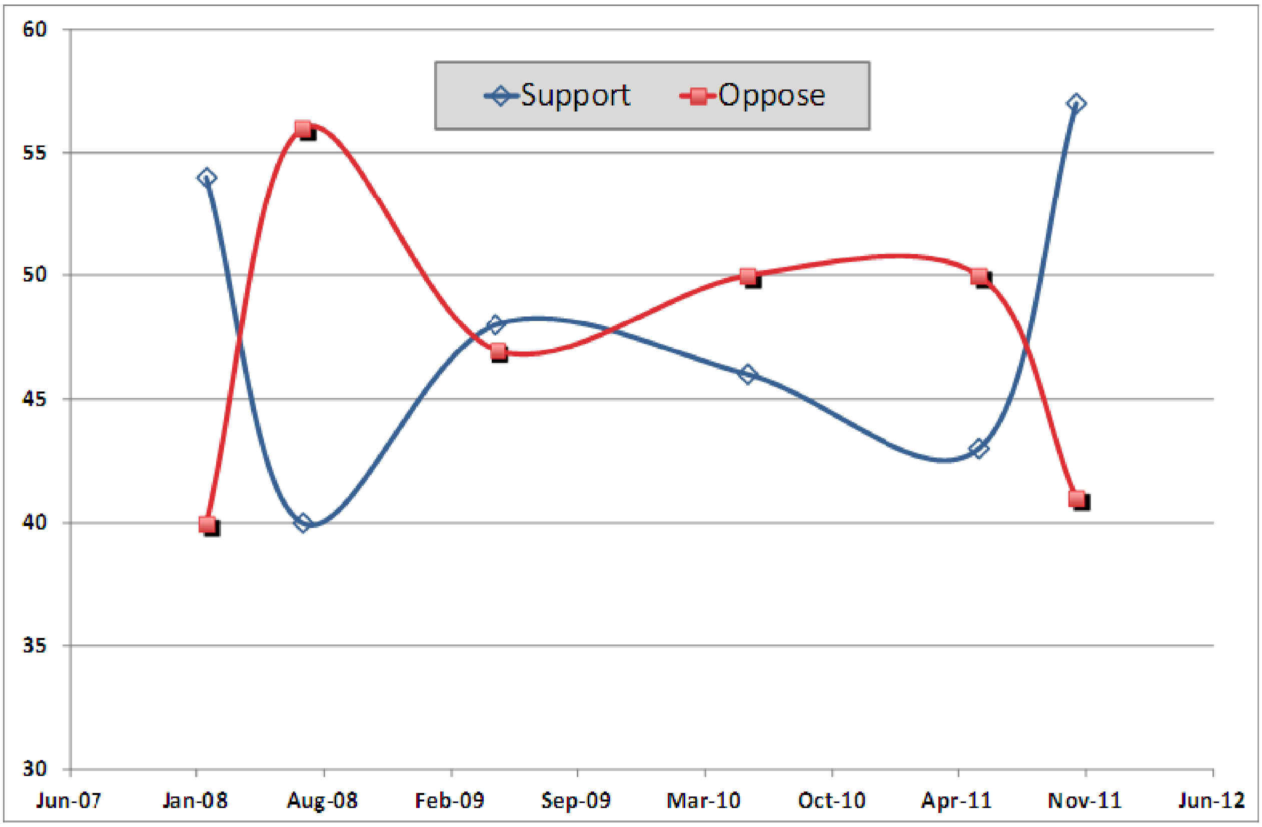
24. A one-time Climate Action Dividend was provided to help British Columbians make investments to reduce their carbon footprints. However, the mailing of cheques to individuals just as the tax was scheduled to take effect, in contrast to a delayed tax credit, appears to have been an attempt to offset political opposition. If so, the strategy backfired, as the Climate Action Dividend was depicted as a cynical ploy to buy voters' support, and also may have deflected voters' attention from the significance of permanent income tax cuts.

25. The opposition New Democratic Party (NDP) sought to capitalise on populist opposition with a campaign to "Axe the Tax" unveiled just before the tax was scheduled to take effect. The party leader argued that the tax was unfair not only to Northerners, but to all "working people who pay the tax, [while]

big polluters get a pass" (James, 2008). The claim was misleading, since process and fugitive emissions were slated for coverage under a future cap and trade programme (as proposed by the NDP itself), and because firms, like households, were subject to the carbon tax on all their fossil fuel purchases. However, the rhetorical claim that industry was avoiding responsibility reinforced the NDP's proposal for a cap-and-trade alternative that would "make big polluters pay". The opposition leader also played to voters' concern for rising gasoline prices, invariably referring to the carbon tax as a "gas tax."

26. The Axe the Tax campaign shocked the NDP's longstanding allies in the environmental community, not least because the party itself had called for a carbon tax only months before (NDP, 2007). The axe the tax campaign resonated with voters, however. In June 2008, 71% of British Columbians expected to pay more than they got back through tax cuts, even though with initial tax cuts favouring households, the figure would have been well below 50% (Hogben, 2008). An August 2008 Angus Reid poll found that 54% of British Columbians agreed that "putting a price on greenhouse gas emissions is a good idea", but only 19% thought a carbon tax was the best way to do that. Consistent with the opposition's rhetoric, three quarters believed that government should "exclusively" target "big polluters." As indicated by Figure 1, support for the carbon tax declined significantly between the date of the announcement in February and the tax's introduction in July 2008. At the same time, the NDP surged forward in the polls, pulling even with or slightly ahead of the Liberals by the fall (Harrison, 2012).

Figure 1. Public Reactions to the BC Carbon Tax



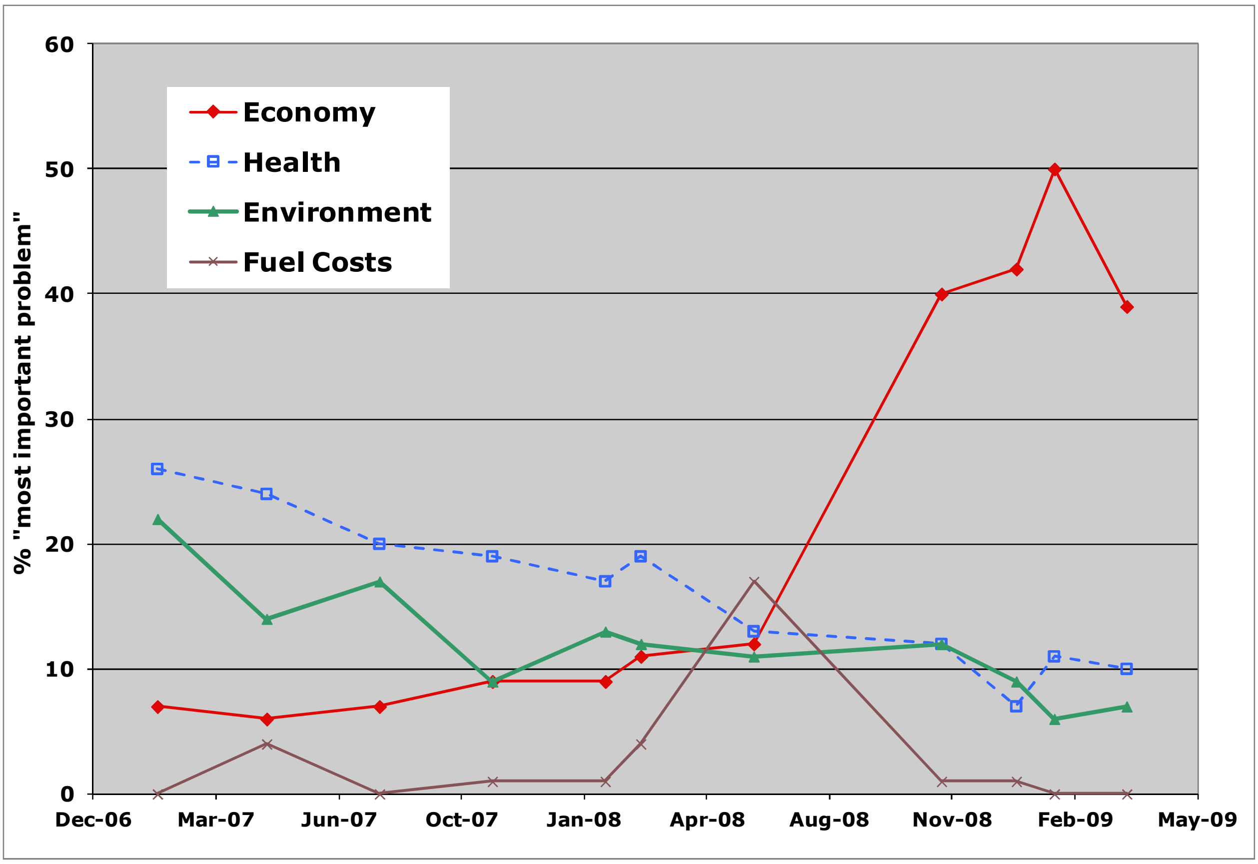
Source: Environics.

27. In the short term, the tax's survival owes much to Premier Gordon Campbell's championing of the policy. According to one account, the Premier told anxious caucus colleagues "that if they wanted to get rid of the tax they would have to get rid of him" (Palmer, 2009). The government did make a concession that local governments and school boards (though curiously not hospitals and universities)

would be rebated their carbon tax payments if they signed the government's Climate Action Charter, which required a commitment to carbon-neutral operations by 2012. In response, 180 of 189 BC municipalities have since signed the Charter. The concession was readily justified on the grounds that municipalities were paying the tax without the benefit of corresponding income tax cuts. Moreover, in order to obtain a refund of their carbon taxes, municipalities would have to commit to paying a comparable price for carbon offsets beginning in 2012. It is problematic, however, that the mechanism for revenue recycling is not independent of the tax itself.

28. Although the Premier could resist pressures from his Liberal colleagues in the short term; over the longer term, the government would have to answer to the electorate. The carbon tax remained unpopular with British Columbians as a provincial election approached in May 2009 (Figure 1). However, voters' attention was deflected from the tax by two events. The price of gasoline fell by CAD 0.50 per litre, and with it the public's attention to fuel prices (Figure 2). Arguably more important, the economy had eclipsed all other issues among voters' priorities with the onset of the global recession in the fall of 2008.

Figure 2. Trends in British Columbians' Priorities



29. On the most important issue in the election by far, the economy, voters favoured the Liberals over the NDP by a margin of 28% to 34%. While the NDP platform led with "axe the tax", the Liberal platform focused on economic confidence and stability. The Premier seldom mentioned the carbon tax on the campaign trail. However, in its 2009 budget, the government had introduced a Northern and Rural Homeowner Benefit of CAD 200 per household, which was presumably given greater emphasis by Liberal candidates in rural communities where opposition to the carbon tax was strongest. Although the tax credit was extended to further offset the tax, the Finance Minister's own staff had projected that northern and

rural residents would pay *less* carbon taxes than urban dwellers (North Central Municipal Association, 2008). The expenditure can only be seen as a ploy to woo back disaffected voters in rural ridings.

30. The Liberals retained their majority in the 2009 election, though with a reduced number of seats. Given voters' overwhelming attention to the economy, it is unlikely that the carbon tax had much impact on the outcome. To the extent the carbon tax did influence the outcome at the margins, its direction is unclear. The tax's impact depends on how public opinion varied regionally, especially in swing ridings, for which data is not publicly available. In addition, both parties staked out positions that alienated historical supporters, environmentalists in the case of the NDP and anti-tax conservatives in the case of the Liberals (Harrison, 2012). Which party was hurt more? The NDP's green credentials were tarnished in the opening days of the campaign by environmentalists' criticism of the axe the tax campaign, though the party's opposition to run-of-river hydro projects probably won back some environmental voters. In contrast, disaffected economic conservatives almost certainly returned to the Liberal fold with the onset of the recession. The Liberals were saved by the recession, and so was the carbon tax.

31. Soon after the 2009 election, NDP leader Carol James acknowledged that the "carbon tax is here to stay". When James resigned the following year, each of the NDP leadership candidates in turn acknowledged that the party's opposition to the carbon tax had been a mistake. The new leader has promised to maintain the tax if the NDP wins the 2013 election.

6. Future Prospects

32. It is challenging to evaluate the impact of any public policy given concurrent changes in other policies and in the economy. That is especially true in the case of the BC carbon tax, which was accompanied by a slate of other climate change mitigation policies and took effect just months before the global recession. Given the carbon tax's application to all fossil fuel purchases, it is encouraging that BC's consumption of every fossil fuel declined by significantly more than the national average between 2008 and 2011, with the sole exception of aviation fuel, which is largely exempt from the tax (British Columbia, 2008c; Sustainable Prosperity, 2012).

33. The most important study to date, by Rivers and Schaufele (2012), compared BC's and other provinces' monthly gasoline consumption, before and after the carbon tax, controlling for other variables, such as population, gasoline prices, and the fraction of compact vehicles in the provincial stock. At a carbon tax of CAD 25 per tonne in 2011, the authors found a 10% reduction in gasoline consumption due to the tax, compared to a 2% reduction from a comparable market price increase. They attribute the exaggerated impact to the salience of the carbon tax. In other words, the same visibility that provoked a political backlash may also have prompted greater efforts to conserve energy by consumers. Consistent with the salience effect, interviews with local government officials find a significant impact of the carbon tax on capital project decisions, even though municipalities receive a full rebate of their carbon tax payments (Pembina, 2012).

34. On the economic side, GDP growth in BC in the first four years of the carbon tax was virtually identical to the national average. BC has seen twice the national rate of investment in clean energy and hybrid vehicles, and now enjoys the lowest corporate and individual income taxes in Canada (British Columbia, 2008c). However, no studies of the impact of the tax on the competitiveness of particular sectors are yet available. Lee (2011) reports that the impact of the tax on lower-income households was initially offset fully by tax cuts and the low-income tax credit, but modest increases to the low-income tax credit have not kept pace with tripling of the tax. He concludes that the net impact of the tax is small but regressive, particularly when the incidence of corporate tax cuts is considered.

35. In anticipation of the final legislated increase, the BC government announced a review of the carbon tax in February 2012. The outcome of the review will be reflected in the February 2013 budget. Looking ahead, the BC carbon tax is threatened by three factors but reinforced by two others. The first threat is a change in the Liberal party leadership in 2011. Just as the Westminster system of government made it possible for Premier Campbell to pursue his personal commitment to a carbon tax, so too could it facilitate his successor revising or eliminating the tax. Premier Christy Clark did not reverse the remaining scheduled increases, but neither has she taken a position on the fate of the tax after 2013. It is noteworthy that Clark has less political leeway to follow her principles than did Gordon Campbell, with the Liberals now trailing the NDP in the polls, and a resurgent Conservative party on the right calling for elimination of the tax.

36. The second threat lies in other North American jurisdictions' failure to match BC's lead in pricing carbon. When BC introduced its carbon tax in 2008, it was in the context of a federal commitment to establish a national cap and trade program. With the election of US President Barack Obama in November 2008, it appeared that Canada's major trading partner also would embrace cap and trade. BC's commitment to the Western Climate Initiative was matched by the provinces of Ontario, Quebec, and Manitoba, and the number of US state partners also grew. Thereafter, however, voters rejected a national carbon tax in the national election in the fall of 2008. The US Congress failed to pass cap-and-trade legislation in 2010, and Canada retreated from its commitment to emissions trading soon thereafter. In response, all US states except California have withdrawn from WCI, and among Canadian provinces, only Quebec will join in trading in 2013.

37. BC has become increasingly isolated, even as the level of its carbon tax has increased. In response, the business community has raised growing concerns about competitiveness. The BC Chamber of Commerce cited impacts on greenhouse growers and cement manufacturers, and the threat of leakage via cross-border gasoline purchases (BC Chamber of Commerce, 2012). BC's one refinery argues that it is disadvantaged relative to imported gasoline from Alberta (Schick, 2012). The Business Council of British Columbia has called for measures to level the playing field for energy-intensive trade-exposed sectors, such as mining, oil and gas, pulp and paper, as well as cement (Business Council, 2012). The government's own "Jobs and Investment Board" recommended adjustments to the tax to improve the competitiveness of natural gas and transportation (Simpson, 2012). The government announced a critical first concession on competitiveness grounds in 2012, in the form of one-time grant of CAD 7.6 million to greenhouse growers.

38. A third threat to the carbon tax arose, unexpectedly, from the commitment to carbon-neutral government. Although intended to demonstrate the provincial government's commitment and stimulate BC's carbon market, an unanticipated consequence of carbon-neutral government has been the transfer of increasingly scarce public sector dollars to the private sector. Parents have been outraged as public school boards struggling to balance their budgets have, via the Pacific Carbon Trust, subsidised projects undertaken by likes of the Whistler Resort and Spa and oil and gas company EnCana (Barrett, 2011; Lee, 2011). While the commitment to carbon-neutral government is distinct from the carbon tax, which is already refunded to both school boards and municipalities, the lay public does not appear to distinguish between the two "carbon prices". In the face of growing criticism, in 2012 the provincial government announced the creation of a CAD 5 million fund, equivalent to the value of schools payments' to the Pacific Carbon Trust, to support energy efficiency capital projects. Whether that will mollify critics will likely be determined in the next school board budget cycle.

39. Despite challenges to the tax, two critical factors are in its favour. First, voters' objections to the tax have subsided over time. In 2012, a majority of those polled supported the tax for the first time since the week of its introduction (Figure 1). Consumers may simply have gotten used to or forgotten the tax. The number of articles in the Vancouver Sun, the province's leading daily, that contain the words "British Columbia carbon tax" one month either side of the July 1 tax adjustment declined from 42 in 2008 to

between 7 and 10 in each of the next 4 years. Horne *et al.* (2012) report public support for continued increases to the carbon tax if the funds are earmarked for health care, education and public transit, but strong opposition to further increases if they are directed toward additional corporate tax cuts. Still, when British Columbians are asked what words come to mind in conjunction with the carbon tax, the three most common responses are still "unfair," "expensive," and "ineffective" (Horne *et al*., 2012)

40. Arguably even more important to the survival of the BC carbon tax is the provincial government's reliance on the revenues. Regardless of whether the tax reform was revenue-neutral or not, the elimination of the tax now would leave a 3% hole in the provincial budget that would have to be filled with unpopular increases to other taxes. The need to balance the budget may explain why the Liberals overwhelmingly voted to maintain the tax at their October 2012 convention, and the Chamber of Commerce and Business Council have called only for a freeze on further increases (MacLeod, 2012; Business Council, 2012; Winter, 2012).

7. Conclusions

41. The emergence of a carbon tax in British Columbia reflected a perfect storm of political conditions for carbon taxation: availability of untapped hydro potential, a surge in public concern for climate change, a right-wing government with the trust of the business community (the "Nixon goes to China" effect), and a committed leader with the institutional capacity to pursue his "good policy" preferences. Even then, the carbon tax soon elicited strong opposition, reflecting a combination of public misunderstanding of environmental taxation, consumers' disproportionate focus on the tax to the exclusion of tax cuts, and historical alienation of rural voters, all of which was fuelled by opportunistic political competitors. In the face of strong public disapproval, the carbon tax was "saved" by the chance timing of the global recession, which deflected public attention away from the carbon tax to an issue that favoured the governing party. With respect to both the carbon tax's adoption and its survival, the outcome is overdetermined. For instance, one cannot know whether the tax would have been adopted with one or more conditions absent, though comparison to other Canadian provinces suggests that public concern, supportive political institutions, and untapped hydropower (as in Manitoba and Quebec) were not sufficient.

42. Though its launch was rocky, the BC tax has had smoother sailing as time has passed. The BC experience suggests that the political economy of an established carbon tax is quite different from that of a new one. With lower public opposition and increasing government reliance on carbon tax revenues over time, it becomes easier to keep than abolish the tax. That said, as the government reviews the first 5 years of the tax, three critical questions loom. Will the Liberal government (or, potentially, an NDP government after the May 2013 election) schedule further increases to the carbon tax, as needed to meet the province's greenhouse gas targets for 2020? Will the government maintain its commitment to revenue-neutrality, as sought by business, or respond to environmentalists' and public preferences for earmarked spending on green infrastructure? Finally, will the government respond to business' concerns about competitiveness by offering concessions to vulnerable sectors? If it does, it is critical that concessions be based on clear principles and sound analysis, rather than strength of political objections, and carefully designed to maintain the carbon price signal. Experience with concessions granted to local governments and rural voters to date provide cause for concern.

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