SP Sustainable Prosperity

Policy Brief September 2011

FOR A LOW CARBON ECONOMY

Carbon Pricing in Australia[1]

Lessons for Canada

Key Messages

- Australia and Canada are similar in many respects. They are both physically large, but sparsely populated countries, with resource-intensive and export-dependent economies. They are also both among the highest per capita greenhouse gas emitters in the world, and are both expected to be strongly affected by the physical and economic impacts of climate change.
- Despite these similarities, Australia and Canada have followed different paths to generating policy responses to climate change. Australia's experience has been – despite vigorous political debate and changes in government – an incremental move toward carbon pricing at the national level. Canada, by contrast, has seen a number of plans proposed (but never forcefully implemented) by the national government, ranging from a "made in Canada" plan to the current one which emulates policy action in the United States. Canada's federal approach to climate change policy has been characterized by its changing focus, uncertainty, and lack of commitment, and most significantly by a move from a preference for a market-based policy to a regulatory approach.
- Currently, Australia's federal government has committed to putting in place a national carbon tax (by July 2012) that will transition to a national cap-and-trade system in a number of years. Canada's current policy approach is to develop regulations that limit emissions from various sectors, notably transportation and coal-based electricity generation.
- This Policy Brief provides a high-level overview and analysis of the political, social and economic drivers behind the development of Australia's national carbon pricing policy, with a view to informing the ongoing evolution of Canada's national climate change policy.

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The Issue

Australia, a country with broadly similar economic, social and political conditions to those of Canada, has been able to table a national carbon pricing policy, though not without challenges. Economists have highlighted this type of market-based approach as the most efficient means of achieving emissions reductions targets, and of spurring the transition to a low-carbon economy. Australia's policy choices are the result of a number of key drivers, which will be explored in this Policy Brief.

The Knowledge Base: Australia and Canada

Broad Similarities

Similarities between Australia and Canada abound (as shown in Figure 1[2]). Both countries are among the world's largest in terms of land mass – Australia is ranked sixth and Canada second. Both have small, urbanized populations with high living standards concentrated in a few geographic areas. Though they have different climates, both are subject to extreme weather, which necessitates higher energy use for heating and cooling. Both countries are federal parliamentary democracies, though Australia has compulsory voting, and an elected Senate with proportional representation.[3]

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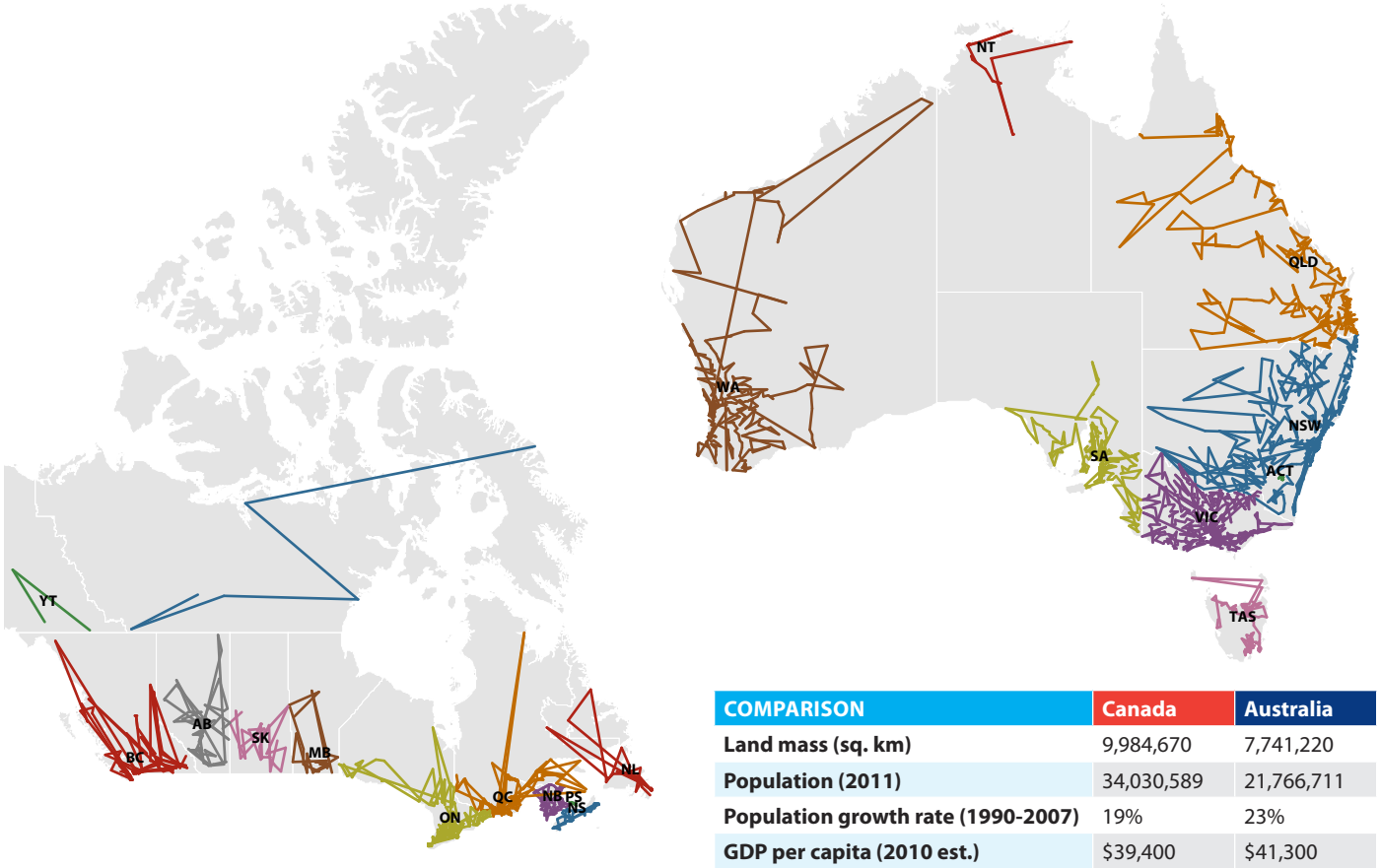
2 The 'scribble' lines are based on postal codes, and represent population concentration.

3 Australian Government: Department of Foreign Affairs and Trade, *About Australia: Our electoral system*, http://www.dfat.gov.au/facts/electoral_system.html.

Figure 1: Canada and Australia: Context for Comparison (2011)



COMPARISON	Canada	Australia
Land mass (sq. km)	9,984,670	7,741,220
Population (2011)	34,030,589	21,766,711
Population growth rate (1990-2007)	19%	23%
GDP per capita (2010 est.)	$39,400	$41,300
GDP growth rate (2010 est.)	3.1%	3.3%
Federal parliamentary democracy	✓	✓

Source: Eagereyes, *More ZIPScribble Maps: AT, AU, CA, CH, DE, ES, FR, HU, IT, NL, NO, SE,* http://eagereyes.org/Applications/MoreZIPScribbleMaps.html; Central Intelligence Agency, *WorldFactbook: Australia,* https://www.cia.gov/library/publications/the-world-factbook/geos/as.html

Eagereyes, *More ZIPScribble Maps: AT, AU, CA, CH, DE, ES, FR, HU, IT, NL, NO, SE,* http://eagereyes.org/Applications/MoreZIPScribbleMaps.html; Central Intelligence Agency, *WorldFactbook: Canada,* https://www.cia.gov/library/publications/the-world-factbook/geos/ca.html.

Both possess abundant natural resources, resulting in resource- and energy-intensive, export-oriented economies. Australia's exports include a range of agricultural products, various minerals, and lastly, energy, mainly in the form of liquefied natural gas and coal, of which it is the world's largest exporter.[4] Canada's exports are mostly directed to the United States (US), and include a range of goods such as motor vehicles and parts, industrial machinery and telecommunications equipment, as well as a variety of natural resources, including energy in the form of crude petroleum, natural gas, and electricity. Australia boasts a stable and competitive economy with 17 years of consecutive growth since 1992 averaging 3.3 per cent per year.[5] Canada's real growth rate since 1992 has fluctuated, with

4 US Energy Information Administration, *International Energy Outlook 2010* (Washington, DC: 2010), http://www.eia.gov/oiaf/ieo/pdf/0484(2010).pdf.

5 Australian Government Department of Foreign Affairs and Trade, *Australia in brief: A stable and competitive economy,* http://www.dfat.gov.au/aib/competitive_economy.html

the 2010 rate estimated at 3.1 per cent.[6] The Australian and Canadian economies both proved relatively resilient during the global financial crisis in 2008.

While Australia's contribution to total global greenhouse gas (GHG) emissions is small at approximately 1.5 per cent of the world's total emissions, its per capita GHG emissions are among the highest in the world at 27.3 tonnes of CO_2-e.[7] Australia's energy-related emissions (i.e. stationary energy, transport and fugitive emissions from fuels) contribute 75.4 per cent of total emissions, primarily due to its heavy reliance on coal-powered electricity, as shown in Figure 2.[8] Similarly, Canada accounts for about two per cent of global GHG emissions, yet its per capita emissions are among the highest in the world at 22.4 tonnes of CO_2-e per person.[9] Canada's emissions breakdown is shown in Figure 3; more than half of emissions arise from transport and the energy sector.[10, 11] A difference between Australia and Canada and other developed countries, is that both their population growth rates are higher. Australia's population grew by 23 per cent between 1990–2007, while Canada's grew by 19 per cent over the same period.[12, 13] These large population increases make it more challenging for both countries to reduce overall GHG emissions.

Despite the numerous similarities between Australia and Canada in terms of economic structure and emissions profile, a significant difference is the varying experience of the respective populations with regard to the effects and direct impacts of climate change.

Despite the numerous similarities between Australia and Canada in terms of economic structure and emissions profile, a significant difference is the varying experience of the respective populations with regard to the effects and direct impacts of climate change. Australia has suffered from a long-lasting and devastating drought in some of its most important agricultural regions.[14] As shown in figure 1, Australians are concentrated along the coastline, where the decrease in precipitation has been the most pronounced. In contrast, the increase in temperature in Canada has been most pronounced in the Arctic region, far removed from the daily experience of most of the population which is concentrated in the South along the US border. This differentiated direct experience with climate change, and the public's reaction (or non-reaction) to that experience, goes some way to explaining the difference in political response to the issue.

6 Central Intelligence Agency, *The World Factbook: Canada,* https://www.cia.gov/library/publications/the-world-factbook/geos/ca.html (July 2011).

7 Australian Government, *Securing a clean energy future: The Australian Government's Climate Change Plan,* (Canberra, ACT: Commonwealth of Australia, 2011), http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/07/Consolidated-Final.pdf

8 Australian Government Department of Climate Change, *Australia's Fifth National Communication on Climate Change: A report under the United Nations Framework Convention on Climate Change,* http://www.climatechange.gov.au/~/media/publications/greenhouse-gas/Australia-fifth-national-communication.pdf

9 Government of Canada, *Fifth National Communication on Climate Change: Actions to Meet Commitments Under the United Nations Framework Convention on Climate Change,* http://www.ec.gc.ca/Publications/EB302ECB-BA4E-4387-A279-DFFD600EA3EE/CanadasFifthNationalCommunicationOnClimateChangeActionsToMeetCommitments2010.pdf; Environment Canada, *National Inventory Report 1990-2008 Part 1: The Canadian Government's Submission to the UN Framework Convention on Climate Change,* http://www.ec.gc.ca/Publications/492D914C-2EAB-47AB-A045-C62B2CDACC29/NationalInventoryReport19902008GreenhouseGasSourcesAndSinksInCanada.pdf

10 Note: in comparing the sectoral breakdown of Australia and Canada's GHG emissions for 2007, it must be noted that the second order breakdowns are not the same. For instance, Australia does not break down what is meant by 'stationary energy.'

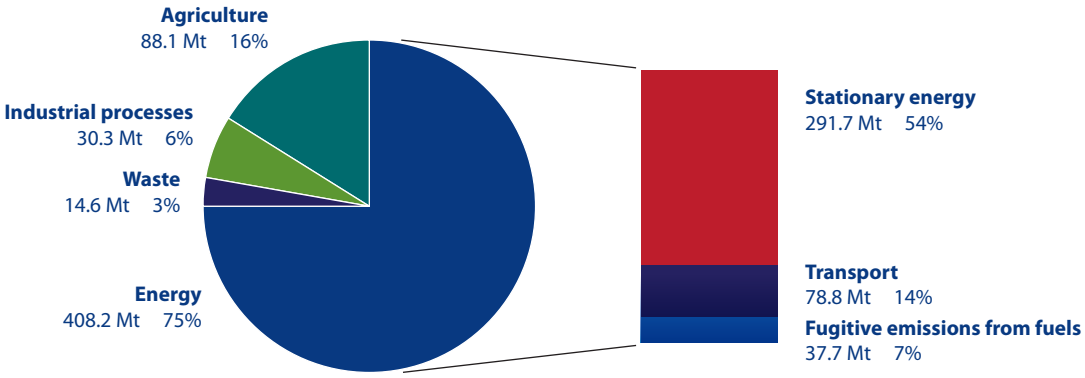
11 Noting that Canada has released more recent data for the year 2009 (please see: Environment Canada, *National Inventory Report: Greenhouse Gas Sources and Sinks in Canada 1990–2009,* http://www.ec.gc.ca/Publications/A07097EF-8EE1-4FF0-9AFB-6C392078D1A9/NationalInventoryReportGreenhouseGasSourcesAndSinksInCanada19902009ExecutiveSummary.pdf). However, for the purpose of comparison we have used the fifth national communication reports to the UNFCCC.

12 Calculated using data from Australia Statistics.

13 Government of Canada, *Fifth National Communication on Climate Change: Actions to Meet Commitments Under the United Nations Framework Convention on Climate Change,* http://www.ec.gc.ca/Publications/EB302ECB-BA4E-4387-A279-DFFD600EA3EE/CanadasFifthNationalCommunicationOnClimateChangeActionsToMeetCommitments2010.pdf.

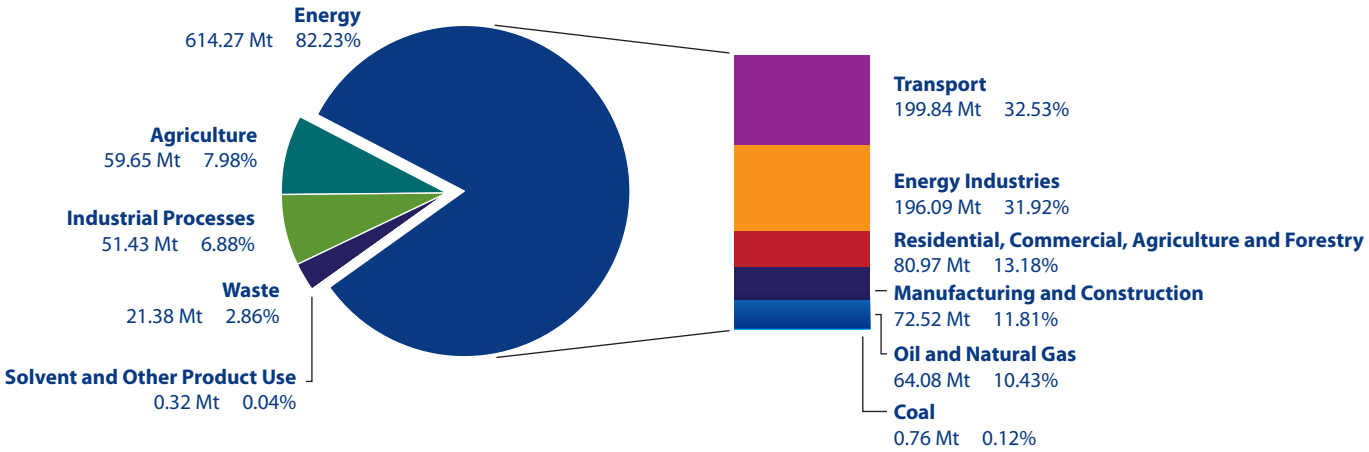
14 Commonwealth Scientific and Industrial Research Organization (CSIRO), *Fact Sheet: Our climate is changing,* http://www.csiro.au/resources/Climate-is-changing--ci_pageNo-1.html.

Figure 2: Sectoral Breakdown of Australia's GHG Emissions (2007)



Source: Australian Government Department of Climate Change, *Australia's Fifth National Communication on Climate Change: A report under the United Nations Framework Convention on Climate Change,* http://www.climatechange.gov.au/~/media/publications/greenhouse-gas/Australia-fifth-national-communication.pdf.

Figure 3: Sectoral Breakdown of Canada's GHG Emissions (2007)



Source: Government of Canada, *Fifth National Communication on Climate Change: Actions to Meet Commitments Under the United Nations Framework Convention on Climate Change,* http://www.ec.gc.ca/Publications/EB302ECB-BA4E-4387-A279-DFFD600EA3EE/CanadasFifthNationalCommunicationOnClimateChangeActionsToMeetCommitments2010.pdf.

Government Response to Climate Change in Australia

The response of Australia's political leaders to climate change has been steadily evolving. As Table 1 explains, Australia's political shifts and experiences with climate change can be divided into five distinct stages: (i) denial which gave rise to (ii) rhetoric, then (iii) panic, (iv) cautious optimism, and then (v) the current chapter of progress.

Table 1: A Historical Narrative of Australian Climate Change Politics and Policy (1997–present)[15]

STAGES OF POLITICAL SHIFTS WITH TIMELINE	Explained
Denial 1997–2005	While accepting climate change science and the need to reduce GHG emissions, Prime Minister Howard claimed "the jury is still out,"[16] on the link between climate change and the contemporaneous drought in Australia. He refused to ratify the Kyoto Protocol, partially due to industry pressure that it would lead to massive job losses and a decline in economic growth.[17]
Rhetoric January–May 2006	The Howard government used its membership in the Asian-Pacific Partnership on Clean Development and the Climate to placate supporters of climate action, although with little meaningful action. The media was rightly sceptical of this so-called 'bold new plan.'
Panic June 2006–November 2007	Prime Minister Howard began exploring the possibility of introducing nuclear power to slowly replace coal, commissioning a report to determine the merit of this approach. When public awareness on climate change increased with a record-breaking heat wave in 2005 and record-low levels of precipitation, Howard belatedly began to address these concerns in an attempt to be redeemed in the public eye, especially with a forthcoming election. In particular, his party election platform supported an emissions trading system (ETS) based on a report by the National Emissions Trading Taskforce.[18] But Australia rejected Howard in the 2007 election in favour of Kevin Rudd.
Cautiously Hopeful December 2007–April 2010	Rudd's first action as Prime Minister was to follow through with his campaign promise to ratify Kyoto. He also commenced work on the Carbon Pollution Reduction Scheme (CPRS), with its proposed ETS. The CPRS included a one-year fixed price period of AUD 10 per tonne of carbon before implementing an ETS and covered 1,000 big emitters. Yet in December 2009, the ETS failed to pass in the Senate, and Rudd's decision in April 2010 to delay its implementation resulted in severe criticism from many corners. This had consequences for Rudd as his approval rating fell to 33 per cent in May 2010.[19] Dismayed voters viewed Rudd as no longer credible and his party panicked, and for several reasons that included climate policy, Rudd was replaced by his deputy, Julia Gillard, in June 2010.
Ousting and Promises June 2010–present	The 2010 Australian election resulted in a hung parliament. After securing the support of one Green and three independent Members of Parliament (MPs), the new Labour leader Julia Gillard became Prime Minister (PM) of a minority government, with the Australian Greens holding the balance of power in the Senate. After the August 2010 election, Gillard started considering a carbon price, forming the Multi Party Climate Change Committee, finalizing the package in July 2011, with a plan to introduce legislation by January 2012 to commence July 1, 2012 (subject to the passing of legislation).

Source: Various, see footnotes.

Current Status

This section examines Australia's current approach to reducing GHG emissions, with both Australia and Canada's current policy approach briefly outlined in Table 2.

15 There is a wealth of literature on the Canadian narrative of climate change policy and politics including: Kathryn Harrison, "The Struggle of Ideas and Self-Interest in Canadian Climate Policy," in Kathryn Harrison and Lisa McIntosh, eds., *Global Commons, Domestic Decisions: The comparative politics of climate change* (Massachusetts Institute of Technology, 2010), 169-200.

16 Peter Williams and Colin Brinsden, "Howard refuses climate change link." *The Daily Telegraph,* April 19, 2007 (http://www.dailytelegraph.com.au/news/nsw-act/howard-refusesclimate-change-link/story-e6freuzi-1111113373483).

17 Initially, PM Howard took a progressive and pragmatic approach by discussing the implementation of a domestic ETS in his National Greenhouse Strategy. See: Australian Greenhouse Office, *The National Greenhouse Strategy: Strategic Framework for Advancing Australia's Greenhouse Response,* (Canberra: Commonwealth of Australia, 1998), http://australianpolitics.com/foreign/environment/ngs.pdf; See also: Mike Hinchy, Brian S. Fisher, and Brett Graham, "Emissions Trading in Australia." *ABARE* (1998), http://adl.brs.gov.au/data/warehouse/pe_abarebrs99000687/PC11982.pdf.

18 National Emissions Trading Taskforce, *Possible Design for a National Greenhouse Gas Emissions Trading Scheme,* (August 2006), http://www.climatechange.gov.au/government/reduce/~/media/publications/cprs/nett-discussion-paper.pdf

19 "Australia changes prime minister: Rudd on the tracks as Gillard takes over." *The Economist,* June 24, 2010 (http://www.economist.com/node/16438749).

Table 2: Current GHG emissions reduction strategies in Australia and Canada (2011)

DETAILS	Australia Current Climate Policy[20]	Canada Current Climate Policy[21]
Targets	**Short term:** 5 per cent from 2000 levels by 2020 irrespective of actions by other countries; up to 15 or 25 per cent depending on the scale of global action. **Long term:** 80 per cent below 2000 levels by 2050.	**Short term:** 17 per cent below 2005 levels by 2020. **Long term:** 60 to 70 per cent by 2050.[22]
Mechanism	Market-Based Instrument.	Command and Control.
Strategy	Fixed price period starting July 1, 2012 at AUD 23 per tonne, rising 2.5 per cent per annum in real terms. Then an emissions trading scheme (flexible price period) starting in 2015.	Regulation of emissions sector-by-sector.
GHG gases	Covers four of the six major GHG emissions counted under the Kyoto Protocol: carbon dioxide, methane, nitrous oxide and perfluorocarbons from aluminum smelting.[23]	Covers carbon dioxide.
Industries	Applicable to top 500 emitters; facilities that have direct GHG emissions of 25,000 tonnes of CO_2-e or more per annum.	Applicable to transportation, electricity sector, renewable fuels (biodiesel in gasoline); as well as upcoming regulation on agriculture and oil sands.

Source: Various, see footnotes.

Understanding the evolution of Australian climate change policy necessarily runs through the seminal role played by the Garnaut Climate Change Review, commissioned by Australian Commonwealth, State and Territory Governments, which replicates the United Kingdom's Stern Review on the Economics of Climate Change. As an authoritative, independent and highly credible review conducted by Australia's most distinguished and prominent economist, Professor Ross Garnaut, the 2008 Review and its update in 2011, is crucial in providing the justification for *why* Australia should take action to reduce emissions. The Garnaut Review concludes that climate change is expected to have a severe and costly impact on agriculture, infrastructure, biodiversity and ecosystems in Australia, negatively impacting its economy. The Garnaut Review also examines policy options for Australia, such as the implementation of an ETS.

In June 2011, the Productivity Commission, by request of the Australian Commonwealth Government, released a study that provides an overview of the current cost and cost-effectiveness of carbon pricing policies in nine countries, concluding that market-based approaches, such as emissions trading schemes, are the most cost-effective.[24] This report is crucial in providing the roadmap as to *how* a reduction in GHG emissions can be achieved at the lowest cost.

20 Australian Government, *Securing a clean energy future: The Australian Government's Climate Change Plan,* (Canberra, ACT: Commonwealth of Australia, 2011), http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/07/Consolidated-Final.pdf

21 Government of Canada's Action on Climate Change, *Canada's Action on Climate Change,* http://www.climatechange.gc.ca/default.asp?lang=En&n=72F16A84-0

22 Government of Canada, *Turning the Corner: Regulatory Framework for Industrial Greenhouse Gas Emissions,* (Ottawa, ON: March 2008), http://www.ec.gc.ca/doc/virage-corner/2008-03/pdf/COM-541_Framework.pdf.

23 The other two gases, hydro fluorocarbons and sulphur hexafluoride and perfluorocarbons not from aluminium smelting will face an equivalent carbon price through existing legislation.

24 Please see the report on the Australian Government Productivity Commission webpage at http://www.pc.gov.au/projects/study/carbon-prices/report.

The carbon price is being framed by the government as being part of a larger agenda on economic reform, as is clear in the recent economic notes of the Treasurer.[25] Wayne Swan, the Treasurer, compared pricing carbon to other big reforms of the past, adding "Our economy and our exports will be at a competitive disadvantage if we don't make the critical transition to a clean-energy future." He stresses the need for Australia to decouple its economic and emissions growth, and that "Delaying action will only lead to higher eventual costs for households, businesses and industries."

An initial period with a fixed price of AUD 23 per tonne of CO_2-e for three years (like a tax), then transitioning to a fully flexible cap-and-trade mechanism on July 1, 2015.

On the political side, shortly after securing her role as Prime Minister in September of 2010, Julia Gillard established the Multi-Party Climate Change Committee (MPCCC)[26], commissioned an update of the Garnaut Climate Change Review, and established a policy advisory group to commence consultations with business and non-governmental organizations.

After weeks of robust MPCCC discussions, the Australian government unveiled final details of the carbon pricing package on July 10, 2011. Key elements include:[27]

- **Price:** An initial period with a fixed price of AUD 23 per tonne of CO_2-e for three years (like a tax), then transitioning to a fully flexible cap-and-trade mechanism on July 1, 2015 with safety valves to minimize price volatility;
- **Coverage:** Stationary energy, most business transport emissions (but not petrol or diesel for passenger cars and other light on-road vehicles), industrial processes, non-legacy waste, and fugitive emissions;
- **International linking:** After 2015;
- **Governance:** A new independent authority (the Climate Change Authority) will be established to provide advice and recommendations;
- **Revenue Recycling:** Households will receive 50 per cent of revenues generated to assist with increased costs, with approximately two in three households allotted to receive assistance that offsets their expected average price impact and with about nine out of ten households receiving some assistance;
- **Industry Support:** Allocation of approximately 40 per cent of carbon price revenue to help businesses and support jobs:

25 See: Treasurer's Economic notes, particularly from: July 3, 2011, July 10, 2011, July 17, 2011, July 31, 2011 and August 7, 2011 (http://www.treasurer.gov.au/Listdocs.aspx?doctype=4&PageID=000&min=wms).

26 Gillard currently acts as chair of the MPCCC.

27 Please see: The Australian Government, *Securing a clean energy future: The Australian Government's climate change plan,* (Canberra: Commonwealth of Australia, 2011), http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/07/Consolidated-Final.pdf. Also see: www.cleanenergyfuture.gov.au for more information.

- » Job and Competitiveness Program will provide AUD 9.2 billion in assistance over three years to emissions-intensive trade-exposed (EITE) industries to safeguard jobs;
  - › Steel Transformation Plan will provide assistance worth up to AUD 300 million over five years to encourage investment and innovation.
  - › Coal Sector Jobs Package provides assistance of AUD 1.3 billion over six years to the most emissions-intensive coal mines.
- » AUD 1.2 billion Clean Technology Program aimed at improving energy efficiency in manufacturing industries;
- » EITE industries will initially be eligible for 94.5 per cent shielding from the carbon price;

- **Investment in Technology:** Increased financial support for innovation in low-emissions and renewable technology; and,
- **Environmental Outcome:** The plan is expected to reduce 160 million tonnes of GHG emissions by 2020, the equivalent of taking 45 million cars off the road over that time.

Funding for the scheme originates from carbon price revenues, yet the Government's projected spending on the carbon pricing package will require an additional AUD 4.3 billion over four years. Despite this, Federal Treasurer Wayne Swan expects an overall budget surplus in 2012–13.[28]

This current policy differs from former Prime Minister Kevin Rudd's Carbon Pollution Reduction Scheme (CPRS). The new framework has a longer transition period (three years versus one year), with a higher starting price on carbon (AUD 23 compared to Rudd's AUD 10), and covers fewer big emitters (500 fewer companies instead of 1,000).[29]

Drivers of Climate Policy in Australia

In exploring the factors that influence policy action, it is clear that there are many factors that play a part in explaining the variation in policy responses to climate change in Australia and Canada; various political, social, and economic factors are discussed below.

Political Factors

Australia and Canada have similar political systems, though there are a few key differences. The constitution for each country makes no mention of the environment nor clearly defines

28 "Swan insists return to surplus on track." *Business Speculator,* July 12, 2011 (http://www.businessspectator.com.au/bs.nsf/Article/Swan-insists-return-to-surplus-on-track-JNVKE?OpenDocument&src=hp7).

29 The Australian Government Department of Climate Change and Energy Efficiency, *Carbon Pollution Reduction Scheme – overview and design features,* http://www.climatechange.gov.au/government/reduce/carbon-pricing/cprs-overview.aspx.

Box 1: Australia's Kyoto Protocol Target

Australia is on track to meet its Kyoto target to limit its emissions to 108 per cent of 1990 levels over the period 2008 to 2012. However, Kyoto Protocol accounting methods (namely, Article 3.7 and Article 3.3; colloquially called the "Australia Clause") allowed Australia to include deforestation emissions in the base year, and reductions in the rate of land use clearing has offset emissions growth. In fact, Australia's GHG emissions increased by 26 percent between 1990 and 2007 when deforestation is excluded, making Australia 18 per cent above its Kyoto Protocol target were it not for Kyoto Protocol accounting methods. Nevertheless, it will prove to be much more difficult to achieve the 2020 target, a 5 per cent reduction in GHG emissions below 2000 levels. This is what the newly proposed carbon pricing policy aims to achieve.

Source: Macintosh, Andrew, *Reducing emissions from deforestation and forest degradation in developing countries: A cautionary tale from Australia,* The Australia Institute (April 2010).

the scope of regulatory power over the environment. In Australia, environmental matters are left to the 'unexpressed residue' of powers retained by the states. Over time however, power has become increasingly centralized within the Commonwealth (federal government), and it has gradually assumed a larger role in environmental matters, thereby challenging the traditional authority of the state government.[30] This has at times led to conflict, although currently both levels of government tend to work together on key issues to increase efficiency and integration.[31, 32] The *Intergovernmental Agreement on the Environment* (IGAE, 1992), was a result of this 'cooperative federalism' movement, clarifying governance frameworks in Australia's federal system by providing an improved definition of the roles of the respective governments in an attempt to reduce duplication of functions between different levels of Government.[33] Environmental matters in Canada are also deemed to be of 'shared jurisdiction' and thus are subject to intergovernmental conflicts which are yet to be sufficiently addressed. While there are federal-provincial agreements on many issues of shared jurisdiction, including health care, environmental issues such as climate change have so far been excluded, which poses problems for climate policy integrity and efficiency. Also, where the powers of the Commonwealth of Australia are increasingly centralized, the federal government of Canada has become increasingly decentralized as a result of the evolution of the division of powers between the federal and provincial governments, as well as judicial interpretation.[34] This makes it more challenging to overcome competing provincial, or regional, self-interests to enable a national climate change policy for Canada.

It is important to note the unique electoral circumstance resulting from the 2010 Australian election, which gave rise to the carbon pricing package. The result of the August 2010 election was historic as it ended in a hung parliament. In order to form a government, Gillard negotiated the support of one Green and three Independent MPs, which led to the revival of the ETS. In addition, Australia's proportional electoral system for the Senate, whereby parties win seats roughly in proportion to the size of their vote, tends to make possible the emergence of parties that speak for smaller subsets of voters, such as the Green Party.[35] Indeed, the electoral system has given the Greens the balance of power in the Senate, meaning that no one political party, Labor or Liberal, can win a majority of votes in the Upper house without the Greens. And so, despite the apparent unpopularity amongst the public of the government's carbon pricing scheme, the legislation has a chance of passing both the Lower and Upper Houses.

It is important to note the unique electoral circumstance resulting from the 2010 Australian election, which gave rise to the carbon pricing package. The result of the August 2010 election was historic as it ended in a hung parliament.

30 Lee Godden and Jacqueline Peel, *Environmental Law: Scientific, policy and regulatory dimensions,* (South Melbourne, VIC: Oxford University Press, 2009), 406.

31 Ibid.

32 Robyn Hollander, "Rethinking Overlap and Duplication: Federalism and Environmental Assessment in Australia," *The Journal of Federalism* 40 (October 2009): 136–170.

33 Department of Sustainability, Environment, Water, Population and Communities, *Intergovernmental Agreement on the Environment,* http://www.environment.gov.au/about/esd/publications/igae/index.html.

34 Kathryn Harrison, "The Comparative Politics of Climate Change," *Global Environmental Politics* 7:4 (2007): 1–18.

35 Australian Government Department of Foreign Affairs and Trade, *About Australia: Our electoral system,* http://www.dfat.gov.au/facts/electoral_system.html; Kathryn Harrison, "The Comparative Politics of Climate Change," *Global Environmental Politics* 7:4 (2007): 1–18.

Social Factors

Recent polling data suggests that Australian attitudes towards carbon pricing and climate change have shifted dramatically over time.[36] Whereas in 2006, a majority of Australians (68 per cent) supported taking urgent action towards combating climate change, even if it involved significant costs, by 2011, less than half (41 per cent) still felt the same way.[37] Most Australians (58 per cent) are only willing to pay AUD 10 or less each month on their electricity bill to address climate change. The majority of Australians (75 per cent) feel that the current Federal government is doing a poor job addressing climate change.[38] Indeed, recent press suggests that the carbon pricing package is unpopular with the public, with a 53 per cent disapproval rating.[39]

Despite the apparent unpopularity amongst the public of the government's carbon pricing scheme, the legislation has a chance of passing both the Lower and Upper Houses.

On the other hand, 2011 data from Canada suggests that most (80 per cent) of Canadians believe in climate change[40] and think it is at least a 'somewhat serious' problem (91 per cent). They are also willing to pay to address it, with 51 per cent willing to pay at least CAD 50 per year to support the increased generation of renewable energy.[41] As well, most Canadians (over 50 per cent) support a cap-and-trade system or carbon tax, with associated costs of up to CAD 50 per month.[42] However, when voters were presented with an actual carbon pricing scheme in the form of Stéphane Dion's Green Shift in the 2008 federal election, they rejected it in large numbers.

Economic Factors

The initial refusal in Australia to ratify the Kyoto Protocol was in part to appease industry demands, in particular to defend the interests of the large and powerful coal and mining industries.[43] In the past year, through consultation with businesses, industry leaders have broadly acknowledged the need to put a price on carbon, yet voiced concerns about the price level and the amount of compensation for high-emitting industries that are subject to intense international competition from jurisdictions without a price on carbon (see table 3). Since the announcement on July 10, 2011 outlining the key elements of a carbon pricing mechanism, some industry leaders have repeated their stance; for example, the Australian Industry Group (an association representing various sectors including manufacturing, construction, automotive, food, and transport) disliked the 'excessively high' AUD 23 fixed price on carbon, saying that it would erode their competitiveness

36 Note: comparing different surveys across countries is challenging and not an ideal comparison of polling data as the questions and samples vary.

37 Daniel Flitton, "Record number oppose price on carbon: poll." *Sydney Morning Herald,* June 27, 2011 (http://www.smh.com.au/environment/record-number-oppose-price-on-carbon-poll-20110626-1glp4.html).

38 Fergus Hanson, "Australia and the World: Public Opinion and Foreign Policy". *Lowy Institute for International Policy,* http://www.lowyinstitute.org/Publication.asp?pid=660.

39 Burgess, Rob, "Fixated on carbon and carnal pleasures." *Business Spectator,* August 30, 2011 (http://www.businessspectator.com.au/bs.nsf/Article/Abbott-Labor-carbon-tax-asylum-seekers-WorkChoices-pd20110830-L7T4P?opendocument&src=rss).

40 The polling question referred to climate change as "global warming".

41 Christopher Borick, Érick Lachapelle and Barry Rabe, "Key Findings Report for the National Survey of American Public Opinion on Climate Change and Public Policy Forum – Sustainable Prosperity Survey of Canadian Public Opinion on Climate Change," *The Center for Local, State, and Urban Policy of the Gerald Ford School of Public Policy at the University of Michigan and The Muhlenberg College Institute of Public Opinion,* February 23, 2011 (http://sustainableprosperity.ca/article911).

42 Ibid.

43 Clive Hamilton, *Scorcher: The Dirty Politics of Climate Change,* (Melbourne, VIC: Black Inc. Agenda, 2007).

because there is insufficient support for trade-exposed businesses.[44] As table 3 shows, the high emitting industries – including cement and coal – and those exposed to international competition – such as aluminum – are basically against pricing carbon.

Table 3: Australian Industry Responses to Pricing Carbon (2011)[45]

SECTOR	Australian Industry Response
Aluminum	**Australian Aluminium Council (AAC)** The AAC expressed concerns over competitiveness while there is uneven global implementation of carbon prices. It suggests that the carbon pricing scheme should ensure no disadvantages to the industry, including no increase in price during the fixed period, and no reduction in permit allocation until there is a comparable cost paid by producers in competing countries.[46]
Cement	**The Cement Industry Federation (CIF)** The CIF admits that it is one of the biggest carbon emitters, but a carbon tax would 'put us [the cement industry] out of business.' CIF Chief Executive Margie Thomson calls the proposed carbon price a 'fairy tale,' saying it will reduce the industry's revenue and result in job losses because the additional costs cannot be passed on to the customer.[47]
Coal	**Australian Coal Association (ACA)** Commissioned independent modelling of carbon pricing that warned of early mine closures and about 4,000 job losses. More research showed that no country that competes with Australia's exporting coal mines faces a tax on 'fugitive' emissions, highlighting concerns of competitiveness in an industry that represents over AUD 55 billion in exports.
Electricity / Energy	**Australian Energy Market Commission (AEMC)** The AEMC lashed out at Garnaut's electricity sector report stating that a carbon price could threaten the energy market as it is ineffectual, too bureaucratic and creates 'significant fiscal risks' for power companies.[48] **Energy Supply Association of Australia (ESAA)** Similarly, ESAA finds the transitional assistance proposed in the draft carbon pricing policy inadequate, and modelling demonstrated a premature closure of existing generation capacity, meaning loss of revenue and plant closures.[49]
Forest	**Australian Forest Products Association (AFPA)** While the AFPA broadly supports a price on carbon, it is concerned about competitiveness. Without markets for forest products, the skilled jobs would move overseas and Australia's demand for the products would be met by imports that do not include a market signal for carbon. However, a well-designed mechanism would prevent this and in fact the industry would thrive and contribute to abatement through carbon sequestration and storage.[50]
Mining / Minerals	**Minerals Council of Australia (MCA)** States that Australia is not a laggard, global action has stalled, pricing carbon is driven by revenue raising and not carbon reduction, and that jobs will be destroyed.[51] But the MCA acknowledges that sustained global action is required to reduce the scale of human-induced climate change.
Petroleum	**Australian Petroleum Production and Exploration Association (APPEA)** APPEA supports a national climate change policy that delivers abatement at least cost. However, there are concerns about industry's international competitiveness and the distortion arising from a carbon price in some countries but not others. Thus, APPEA desires measures to maintain competitiveness such as free permit allocations set at and remaining at 100 per cent.[52] Specifically, Chief Executive Belinda Robinson urged the MPCCC to look beyond Australia's trading partners to look at competitors.[53]
Railway	**Australasian Railway Association Inc. (ARA)** The ARA supports initiatives to reduce global carbon emissions and believes the transportation sector has a significant role to play.[54] The ARA even wrote an open letter to government supporting the inclusion of the entire transport sector in carbon policy.[55] However, the ARA states that Australia should be cautious and avoid poorly constructed policies which would negatively affect international competitiveness.
Steel	**Australian Steel Institute (ASI)** ASI did not comment on carbon pricing, but large company BlueScope Steel's Managing Director and Chief Executive Paul O'Malley says a carbon price would do irreparable damage to the Australian steel industry, and should only be implemented if China, the US, Japan, Korea, India, Russia, Brazil and other steel-producing nations were paying similar taxes. Also, One Steel Chief Executive Geoff Plummer stated that there would be no global environmental benefit if a similar tax was not imposed on other producers.[56]
Vehicle Manufacturer	**Australian Automobile Association (AAA)** Emphasized that any carbon tax on fuel must be accompanied with a cent-for-cent offset. The AAA argues that there are other less costly ways for struggling Australian families to reduce carbon emissions, such as reducing congestion, and improving new vehicle fuel efficiency.[57]

Source: Various, see footnotes

44 Emma MacDonald, "Get ready for cost rises, job cuts: industry." *The Canberra Times,* July 11, 2011 (http://www.canberratimes.com.au/news/national/national/general/get-ready-for-cost-rises-job-cuts-industry/2222062.aspx?storypage=0).

45 Please see: Sustainable Prosperity, *Canadian Business Preference on Carbon Pricing,* http://sustainableprosperity.ca/article758 for Canadian industry responses.

46 Australian Aluminium Council Ltd., *AAC submission on the proposed architecture and implementation arrangements for a carbon pricing mechanism,* http://aluminium.org.au/_webapp_849062/AAC_submission_on_the_proposed_architecture_and_implementation_arrangements_for_a_carbon_pricing_mechanism

47 Kerri-Anne Mesner, "Cement Federation against new tax." *The Observer,* March 12, 2011 (http://www.gladstoneobserver.com.au/story/2011/03/12/cement-industry-federation-carbon-tax/)

48 Dennis Shanahan, "Electricity tsar AEMC lashes Ross Garnaut." *The Australian,* June 16, 2011 (http://www.theaustralian.com.au/national-affairs/electricity-tsar-aemc-lashes-ross-garnaut/story-fn59niix-1226075995450).

Both Australia and Canada export emissions-intensive natural resource products to economically powerful trading partners, who do not face binding Kyoto Protocol commitments. Australia is closely integrated, especially economically, with its Asian neighbours, in particular China. China is Australia's top export market, with a 20.6 per cent share of total exports.[58] Energy and natural resources are a significant component of the trade relationship between Australia and China. For example, China was Australia's largest market for minerals and fuels, with over AUD 25 billion in iron ore and concentrates and over AUD 5 billion in coal exports in 2009–2010.[59, 60] Australia is a major supplier of raw materials to power China's economic growth, and its economy is highly tied to China's economic success.[61] China has recently taken significant action to reduce growth of carbon emissions and transform to a low-carbon economy, which has likely influenced Australian politicians' willingness to take action on climate change.[62]

Canadian politicians and business leaders look to the United States to take the lead on climate change. Canadian federal policy-makers have stated their preference for an integrated North American climate policy, since the US is the larger and more economically powerful country.[63] The fact that the US is now taking the approach of regulating carbon emissions under the *Clean Air Act,* rather than using a carbon price, has likely influenced the similar approach being taken by the Harper government.[64] Canada's economy is highly integrated with that of the US, with 77 per cent of Canadian exports in 2008 destined for the US market.[65] In particular, oil exports and natural gas exports now total more than CAD 40 billion and CAD 28 billion a year, respectively.[66]

49 The Energy Supply Association of Australia (ESAA),"Garnaut Climate Change Review Final Report 2011," *ESAA News* on June 6, 2011 (http://opinion.esaa.com.au.esaa.tempdomain.com.au/content/detail/esaa_news_6_june_2011).

50 Australian Forest Products Association (AFPA), *Submission on the Carbon Pricing Mechanism Including Links with the Carbon Farming Initiative,* http://www.ausfpa.com.au/AFPA%20Carbon%20Pricing%20Mechanism%20Submission%20May%202011%20final.pdf.

51 Seamus French, "The proposed Carbon Pricing Scheme (presentation at Minerals Week 2011)." *Minerals Council of Australia (MCA),* June 2011 (http://www.mineralscouncil.com.au/file_upload/files/speeches/Final_The_proposed_Carbon_Pricing_Scheme_Minerals_Week_June_20111.pdf).

52 Australian Petroleum Production & Exploration Association Limited (APPEA), *Proposed Architecture and Implementation Arrangements for a Carbon Pricing Mechanism,* http://www.appea.com.au/images/stories/steve_files/appea%20submission%20-%20mpccc%20100511.pdf.

53 Sid Maher, "Gas backs coal on getting ahead of the carbon game." *The Australian,* June 9, 2011 (http://www.theaustralian.com.au/national-affairs/gas-backs-coal-on-getting-ahead-of-the-carbon-game/story-fn59niix-1226071986246).

54 Australasian Railway Association Inc. (ARA), *Communiqué: Policy Position on Climate Change,* http://www.ara.net.au/UserFiles/file/Communiques/11-05-23_ARAPolicyPositionOnClimateChange.pdf.

55 ARA, *Rail writes open letter to government: transport must be included in the carbon debate,* http://www.ara.net.au/UserFiles/file/Media%20Releases/11-06-03%20Rail%20Writes%20Open%20Letter%20to%20Govt%20Transport%20Must%20be%20Included%20in%20the%20Carbon%20Debate.pdf.

56 Laura Wilson and Siobhain Ryan, "Steel giants back Howes over carbon tax." *The Australian,* April 16, 2011 (http://www.theaustralian.com.au/news/nation/steel-giants-back-howes-over-carbon-tax/story-e6frg6nf-1226039943407).

57 Australian Automobile Association (AAA), *AAA Reiterates that any Carbon Tax on Fuel Must Have a Cent-For-Cent Offset,* http://www.aaa.asn.au/publications/media_releases.php?action=view&media_releaseId=476; and AAA, *AAA Policy Position: Carbon Price and Fuel,* http://www.aaa.asn.au/documents/reports%2F2011%2FPolicy%20Position%20on%20Carbon%20Price%20and%20Fuel%20FINAL.pdf.

58 Australian Government Department of Foreign Affairs and Trade, *Composition of Trade Australia,* http://www.dfat.gov.au/publications/stats-pubs/cot-fy-2009-10.pdf.

59 Australian Government Department of Foreign Affairs and Trade, *Composition of Trade Australia,* http://www.dfat.gov.au/publications/stats-pubs/cot-fy-2009-10.pdf.

60 These statistics of principal export from Australia to China of coal does not include Hong Kong. Coal exports to Hong Kong was over AUD 69 million. Also, the total Australian exports in 2009–2010 of iron ore and concentrates was AUD 35.1 billion and of coal AUD 36.4 billion.

61 "Australia China: Beyond Tomorrow," *Australia China Business Council,* 2011 (http://content.yudu.com/Library/A1qxhs/AustraliaChinaBeyond/resources/index.htm).

62 Greg Combet, "Australia and China: Joint efforts to address the climate change challenge," at the Australia-China Climate Change Forum in Canberra, March 30, 2011 (http://www.climatechange.gov.au/minister/greg-combet/2011/major-speeches/March/sp20110330.aspx).

63 National Round Table on the Environment and the Economy, *Parallel Paths: Canada-U.S. Climate Policy Choices,* (Ottawa, ON: National Round Table on the Environment and the Economy, 2011), http://www.climateprosperity.ca/eng/studies/canada-us/report/canada-us-report-eng.pdf.

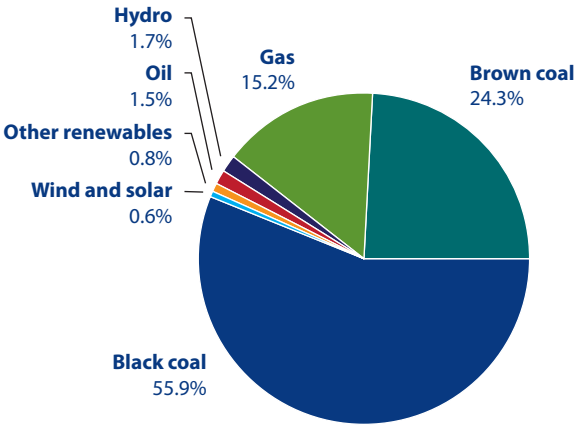
64 Peter Kent, "Climate Change Milestones Speech," The Economic Club of Canada (Toronto, ON), January 28, 2011 (www.ec.gc.ca/default.asp?lang=En&n=6F2DE1CA-1&news=CB8B1F09-BEC2-4700-82B2-7C59463FA4E4).

65 David McLaughlin and Bob Page, "The Canada-US Trade and Energy Relationship." *Institute for Research on Public Policy (IRPP),* http://www.irpp.org/po/archive/jun10/mclaughlin.pdf.

66 Ibid.

There is a difference in abatement cost between the two countries. It is (in theory) cheaper for Australia to reduce greenhouse gases through a shift in electricity generation from coal to gas and renewables. Coal-fired electricity generation composed 80 per cent of Australia's total power generation in 2007–08, as shown in Figure 4.[67] In contrast, a substantial portion of Canada's electricity generation (63 per cent) is derived from hydroelectricity, meaning there are fewer opportunities to exploit emission-reduction activities in the electricity sector.[68]

Figure 4: Fuel inputs to Australian electricity generation (2007–08)



Source: Australian Government Department of Climate Change, *Australia's Fifth National Communication on Climate Change: A report under the United Nations Framework Convention on Climate Change,* http://www.climatechange.gov.au/~/media/publications/greenhouse-gas/Australia-fifth-national-communication.pdf.

In both countries, high-emitting sectors receive substantial government subsidies, which undermine efforts to reduce GHG emissions. Recent research conducted by The Australia Institute stated that contradictory climate policies which artificially reduce the price of fossil fuels cost the taxpayer more than AUD 9 billion per year.[69] In particular, total energy and transport subsidies in Australia during 2005–06 were approximately AUD 10 billion.[70] Further, Australia's coal industry received substantial government subsidies of AUD 1.7 billion.[71] This is significant as it keeps the cost of coal artificially low, distorting the market and making it more challenging for renewable energy to compete, thus inhibiting efforts to reduce GHG emissions. Similarly, Canadian provincial and federal governments provide over CAD 2.8 billion annually in subsidies to the oil sector in Alberta, Saskatchewan and offshore Newfoundland and Labrador (which account for more than 97 per cent of oil production within Canada).[72] These subsidies have the similar effect of distorting efforts to reduce GHG emissions and distort price signals in the energy market.

67 Australian Government Department of Climate Change, *Australia's Fifth National Communication on Climate Change: A report under the United Nations Framework Convention on Climate Change,* http://www.climatechange.gov.au/~/media/publications/greenhouse-gas/Australia-fifth-national-communication.pdf.

68 Canadian Electricity Association, Canada's Electricity Industry: Background and Challenges, http://www.electricity.ca/media/pdfs/Electricity%20101/Electricity%20101%20Slide%20Deck_December%202010[1].pdf.

69 Richard Denniss and Andrew Macintosh, "Complementary or contradictory? An analysis of the design of climate policies in Australia." *The Australia Institute* (February 2011), https://www.tai.org.au/index.php?q=node%2F19&pubid=831&act=display. Note: some of the subsidy estimates are contested.

70 Chris Riedy, "Energy and Transport Subsidies in Australia: 2007 Update." *Institute for Sustainable Futures,* http://www.greenpeace.org/raw/content/australia/resources/reports/climate-change/energy-and-transport-subsidies.pdf.

71 Chris Riedy, "Energy and Transport Subsidies in Australia: 2007 Update." *Institute for Sustainable Futures,* http://www.greenpeace.org/raw/content/australia/resources/reports/climate-change/energy-and-transport-subsidies.pdf.

72 EnviroEconomics Inc., Dave Sawyer and Seton Stiebert, "Fossil Fuels – At What Cost? Government support for upstream oil activities in three Canadian provinces: Alberta, Saskatchewan, and Newfoundland and Labrador," *International Institute for Sustainable Development (IISD):* 2010, http://www.globalsubsidies.org/files/assets/ffs_awc_3canprovinces.pdf.

Response to Pricing Carbon in Australia

The recent debate and announcement of Australia's carbon pricing package has provoked a strong reaction from Gillard's political opposition, the business sector, and economists.

Political Opposition

Opposition Leader Tony Abbott rejected a spot on the MPCCC, as the Liberal Party of Australia under his leadership is currently opposed to putting a price on carbon.[73] While Abbott's Liberal Party supports 'strong and effective action to reduce carbon emissions,' it believes a price on carbon is a 'big new tax on everything' – a similar stance to that of the Canadian Conservative party in the 2008 election – that will increase costs for Australian households and businesses, without delivering environmental benefits. Instead, his Liberal Party's plan is a direct action approach to reduce emissions by five per cent by 2020 by planting more trees, encouraging better soil management and better clean technology, at a proposed cost of AUD 3.2 billion over four years.[74] In an address to the nation shortly after the release of the government's carbon pricing plan, Abbott continued to denounce a carbon price as a "bad idea" that will increase the cost of living by AUD 515 a year for an average household and export jobs overseas.[75]

In both countries, high-emitting sectors receive substantial government subsidies, which undermine efforts to reduce GHG emissions.

Business

There has been strong opposition to pricing carbon from industry associations that expect to be negatively impacted by the carbon pricing package. Their message has generally been to warn of the adverse impact on their competitiveness and the resulting damage to the economy in the form of lost jobs from the imminent closure of plants. Recently, an alliance of big industry organizations has agreed to spend a minimum of AUD 10 million on a campaign to build public opposition to pricing carbon.[76] In contrast, a diverse group of other sectors including finance, energy, technology and retail, signed a letter declaring its support for a carbon price, asserting that it can actually help Australia remain globally competitive.[77]

73 The Liberal Party of Australia supported an ETS in the past, as did Tony Abbott. Please see Dennis Shanahan, "Senior Liberals at odds on climate change strategy," *Perth Now,* July 24, 2009 (http://www.perthnow.com.au/business/business-old/senior-liberals-at-odds-on-climate-change-strategy/story-e6frg2qu-1225754229220)

74 The Liberal Party of Australia, *The Coalition's Direct Action Plan: Environment & Climate Change,* http://www.liberal.org.au/~/media/Files/Policies%20and%20Media/Environment/The%20Coalitions%20Direct%20Action%20Plan%20Policy%20Web.ashx.

75 See: Tony Abbott, *Address to the Nation,* http://www.smh.com.au/environment/climate-change/pollution-tax-wont-cut-emissions-abbott-20110710-1h8zt.html (July 11, 2011); see also: Julia Gillard, *Address to the Nation,* http://www.smh.com.au/environment/climate-change/transcript-gillards-address-to-the-nation-20110711-1h9gn.html (July 11, 2011).

76 Phillip Coorney, "Industry push to wipe out carbon price," *The Sydney Morning Herald,* July 1, 2011 (http://www.smh.com.au/environment/climate-change/industry-push-to-wipe-out-carbon-price-20110630-1gtae.html).

77 "Big business backs climate price," *ABC News,* July 6, 2011 (http://www.abc.net.au/news/stories/2011/07/06/3262109.htm?section=justin).

Economists

A group of senior economists in Australia united in May 2011 to write an open letter supporting the need for a carbon price, outlining five key design elements, including allocating revenues to compensate those negatively affected.[78] At the Australian Conference of Economists in July 2011, a survey of economists determined that a majority (59 per cent) agreed or strongly agreed that Labor's carbon price package was a 'good' policy.[79]

In summary, while much remains to be determined on the future of Australia's carbon pricing mechanism, it is clear that in the face of substantial opposition, the Australian government has taken large steps towards the implementation of a carbon pricing scheme. However, there were significant concessions made to big polluters and consumers in order to come to an agreement. For instance, Prime Minister Gillard has confirmed that the carbon tax will not apply to petrol on light on-road transport, keeping gas prices low for consumers.[80] Also, the carbon pricing scheme covers fewer of the nation's largest emitters and less of its total emissions than the previous CPRS proposal under Kevin Rudd, or than initially proposed in the general outlining of a carbon price in February 2011.[81]

At the Australian Conference of Economists in July 2011, a survey of economists determined that a majority (59 per cent) agreed or strongly agreed that Labor's carbon price package was a 'good' policy.

78 The list of senior economists include: Paul Brennan, Head of Economics, Citigroup Global Markets, Australia; Chris Caton, Chief Economist, BT Financial Group;Besa Deda, Chief Economist, St George; Saul Eslake, Director of the Productivity Growth Program, Grattan Institute, and former Chief Economist ANZ from 1995 to 2009; Bill Evans, Chief Economist, Westpac; Joshua Gans, Professor of Management, Melbourne Business School; Richard Gibbs, Global Head of Economics and Chief Economist, Macquarie Bank Limited; Stephen Grenville, visiting fellow, Lowy Institute for International Policy; Stephen Halmarick, Chairman Australian Business Economists; John Hewson, Economist and Former Leader of the Liberal party and the Federal Opposition; Raja Junankar, Professorial Visiting Fellow, School of Economics University of New South Wales and Emeritus Professor University of Western Sydney; Geoff Weir, Director, Financial Sector Services; Glenn Withers, Chief Executive, Universities Australia; WWF Australia, *Economists' Open Letter Supporting A Price on Carbon Pollution 2011,* http://wwf.org.au/publications/economists-open-letter/.

79 Michael Stutchbury, "PM trounces Abbott in economists survey." *The Australian,* July 14, 2011 (http://www.theaustralian.com.au/business/opinion/pm-trounces-abbott-in-economists-survey/story-e6frg9if-1226094172989).

80 "Carbon tax won't apply to petrol price – PM." *The Age,* July 3, 2011 (http://www.theage.com.au/environment/climate-change/carbon-tax-wont-apply-to-petrol-price--pm-20110703-1gwy6.html).

81 Siobhain Ryan, "Julia Gillard's scheme to cover fewer big pollutants," *The Australian,* July 6, 2011 (http://www.theaustralian.com.au/national-affairs/pms-scheme-to-cover-fewer-big-polluters/story-fn59niix-1226088387523).

Implications for Policy-Makers

This brief is meant as an overview of Australia's experience in implementing a carbon pricing policy. While there are many factors that influence a country's policy path, this Brief has focused on a few key drivers. Based on the overview, Sustainable Prosperity believes that the following conclusions are of direct relevance to policy-makers engaged in the development of carbon pricing policy in Canada:

1. Despite many similarities in economic, social and political factors, Australia and Canada have developed quite distinct approaches to addressing climate change, which are likely to yield very different results in terms of cost and effectiveness in reducing GHG emissions. Sustainable Prosperity believes that this distinction is explained by a number of institutional and political drivers that have characterized Australia's experience.

2. Australians have had much more direct personal experience with climate change impacts than most Canadians (except those living in the North). In Australia, this has translated into stronger general public support for action on climate change.

3. The Australian government has commissioned research on the economics of climate change (the Garnaut Review) and on the optimal policy choice (the Productivity Commission report), that have established the *why* and *how* for climate change policy in a highly credible and public way. This research promoted a very transparent and energetic public debate on the issue, and created the political space for the government to act. Given the importance of these factors, Canadian policy-makers should consider similar exercises in the Canadian context. This would help Canadians understand the economic risks associated with climate change, and would promote the adoption of more stringent GHG reduction targets and economically efficient climate change policies. It would also help create a sense of urgency and raise the prominence of climate change as an issue of national concern.

4. Finally, Australia's national carbon pricing policy will have an impact on its international climate change policy positions. Inasmuch as Canada and Australia have traditionally taken very similar positions in the context of international climate change negotiations, Canadian policy-makers need to carefully consider the implications of a prospective divergence in positions, and how that will affect the pursuits of Canada's interests.

While much remains to be determined on the future of Australia's carbon pricing mechanism, it is clear that in the face of substantial opposition, the Australian government has taken large steps towards the implementation of a carbon pricing scheme.