CITIZENS FOR
PUBLIC JUSTICE

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A Public Justice Vision for Canada's Climate Action Plan

Submission to Environment and Climate Change Canada

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Citizens for Public Justice seeks human flourishing and the integrity of creation as our faithful response to God's call for love and justice.

We envision a world in which individuals, communities, societal institutions, and governments all contribute to and benefit from the common good.

Our mission is to promote public justice in Canada by shaping key public policy debates through research and analysis, publishing, and public dialogue. CPJ encourages citizens, leaders in society, and governments to support policies and practices which reflect God's call for love, justice, and the flourishing of Creation.

A Public Justice Vision for Canada's Climate Action Plan

Citizens for Public Justice (CPJ) is a national organization of members inspired by faith to act for justice in Canadian public policy. CPJ is supported by a broad, ecumenical membership across Canada and overseen by a national board of directors.

As Christians, we believe we are called to respect the dignity of every human being as image-bearers of God. We know that God gifts every person with both rights and responsibilities. A rightful claim to live in dignity, be respected by others and have access to resources needed to live out God's calling. At the same time, we have a duty to act justly, care for creation, and work for peaceful and just relations within society at all levels.

Public justice is the political dimension of loving one's neighbour. "As CPJ understands the teaching of Scripture, the role of government is to promote just relations between people within God's creation, correct injustice in a way that restores relationships, protect the environment, and foster conditions that enhance the common good."[1]

This spring, CPJ is asking Canadian Christians why they care about government action on climate change. Grandmothers, students, construction workers, nuns, and nuclear physicists from across Canada are telling us—and the Government of Canada—how they are taking personal action to reduce their greenhouse gas emissions, and how this is not enough: Canadian Christians want strong government action on climate change.

CPJ is calling for a Canadian climate action plan that establishes a new emissions reduction **target based on scientific estimates of the global greenhouse gas (GHG) emissions budget, and contributes equitably** towards the **1.5°C limit on global warming** aspired to in the Paris Agreement. To achieve this target, CPJ calling for the implementation of clear, quantifiable, time-bound measures to **(1) reduce GHG emissions**, **(2) develop a low-carbon economy**, and **(3) provide justice for those most directly impacted by climate change.**

[1] Public Justice: What does it mean for citizens, governments, and CPJ? 2007 (http://www.cpj.ca/sites/default/files/docs/PJ-for-Citizens-

Summary of Recommendations

CPJ Recommendation #1: Reduce GHG Emissions

1A: Set a responsible emissions reduction target

CPJ recommends a new Canadian target should be established that contributes equitably to global efforts to limit temperature increases, be expressed as an absolute budget, and be referenced to a more immediate time frame (i.e. 2025) with five-year increments to provide greater accountability for immediate action.

1B: Put a price on carbon pollution

CPJ recommends a coordinated carbon tax of at least $30/tonne $CO_{2\,eq}$ be implemented immediately, with planned regular increases to at *least* $160 by 2030.

1C: Regulate carbon-intensive sectors

CPJ recommends that strict GHG emissions standards be applied across the entire oil and gas sector (without exception for subsectors such as the oil sands) and transportation sector. Regulations on electricity generation, furnaces, boilers, transportation propulsion systems, and oil and gas production processes can address 75 per cent of Canada's energy-related carbon dioxide emissions.

CPJ Recommendation #2: Develop a Low-Carbon Economy

2A: Eliminate subsidies to fossil fuel industry

CPJ recommends the immediate elimination of all subsidies to the fossil fuel sector, by 2020. We also call for a review of financing provided by Export Development Canada (EDC), and a phase out of funds provided for overseas oil and gas development. These finances should be redirected to support export of Canadian clean technologies.

2B: Invest in low-carbon technologies, not high-carbon infrastructure

CPJ recommends that the Government of Canada set strict conditions on new pipeline development based on the principles identified in the Paris Agreement, Canada's obligations under the UNDRIP, and the long-term economic interests of the country.

CPJ recommends that over the next five years, Canada invest $1.35 billion to further develop renewable energy technologies (such as wind, solar, geothermal, tidal, biomass, and micro-hydro), $1.8 billion to enhance energy efficiency in Canadian homes and businesses, and $9 billion to improve and expand public transportation. Such investments would create jobs, reduce GHG emissions, and enhance Canada's competitiveness in emerging international green energy markets.

CPJ Recommendation #3: Provide Justice for those Most Directly Impacted by Climate Change

3A: Fund domestic adaptation, especially in Northern, First Nations, Inuit, and coastal communities

CPJ recommends that the federal government support adaptation measures to improve the resiliency of Canadian infrastructure. These measures should be targeted to areas where negative impacts are most severe, namely in Northern, First Nations, Inuit, and coastal communities.

3B: Provide social supports and retraining for those currently employed in carbon-intensive industry

CPJ recommends that as part of its commitment to climate action, the federal government develop a just transition plan to help workers. Specific measures should include: improvements to Employment Insurance; funding for skills development and retraining programs and for job creation in renewable energy, energy efficiency, building retrofits, green manufacturing, and public transit; and income supports to low-income Canadians to offset rising living costs.

3C: Increase international climate financing to $4 billion each year by 2020

CPJ recommends the timely delivery of the $2.65 billion already committed to the UN Green Climate Fund as grants to support adaptation and mitigation efforts in developing nations, as well as an increase in global climate financing to $4 billion per year (as of 2020) in line with Canada's fair share of multilateral funding under the Paris Agreement.

The Need for Action:

Carbon dioxide (CO_2) is the major greenhouse gas released as a result of human activity, accounting for about three quarters of human emissions (followed by methane and nitrous oxide). Cumulative emissions—that is, total emissions added up since the industrial revolution—of CO_2 largely determine how much the earth has warmed and will continue to warm.[2]

If humans emit more than 2900 Gigatonnes (Gt) (i.e. billion tonnes) of CO_2, we will almost certainly exceed a 2°C increase in global average surface temperatures (compared to the period 1861-1880).[3] In order to have a greater than 66 per cent probability of limiting this warming to 1.5°C, humans can only emit a total of 2250 Gt. [4]

Since 1870, humans have emitted around 1999 Gt of CO_2.[5] **This leaves us with around 250 Gt to emit within a 1.5°C budget or 900 Gt in a 2°C budget.** If we were to continue emitting at our current rate (a conservative average of around 36 Gt[6] per year since 2005), we would use up these budgets in less than 7 and 25 years, respectively.[7]

Climate models that result in a likely chance of keeping temperatures below 2°C require substantial action before 2030, with global emissions reductions of 40-70 per cent below 2010 in 2050, and 100 per cent by 2100.[8] Based on current pledges made for the Paris Agreement, and without enhanced ambition, the likely global average temperature increase will be between <3-3.5°C by 2100.[9]

Canadian policy-makers must now help our society set an appropriate level of ambition, and budget Canadian emissions wisely.

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[2] Intergovernmental Panel on Climate Change (IPCC) Working Group 1 (WG1) Fifth Assessment Report (AR5) Summary for Policymakers (SPM), 2013 (http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf)
[3] IPCC WG1 AR5 SPM, 2013 (http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf)
[4] IPCC AR5 Synthesis report Table 2.2 (http://ar5-syr.ipcc.ch/topic_futurechanges.php)
[5] Global Carbon Project, 2015 Global Carbon Budget (http://www.globalcarbonproject.org/carbonbudget/)
[6] Average CO_2 emissions between 2005-2014 (excludes contributions from other GHGs). The Global Carbon Project predicts that growth in global CO_2 emissions from fossil fuels and industry will be near zero in 2015, resulting in global emissions of 35.7 ± 1.8 $GtCO_2$ in 2015). 2015 Global Carbon Budget
[7] Author's calculations
[8] IPCC WG3 AR5 SPM, 2014 (https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_summary-for-policymakers.pdf)
[9] United Nations Environment Programme (UNEP) 2015 Emissions GAP report

CPJ Recommendation #1: Reduce GHG Emissions

1A: Set a responsible emissions reduction target

Climate change will most negatively and most significantly impact those—in Canada and around the world—who have contributed the least GHG emissions, and are the least equipped to deal with the consequences of *any* increase in average surface temperatures. Canada should adopt a target that puts us on track to do our fair share to keep global warming to well below 2°C, while pursuing all efforts to limit this warming to 1.5°C.

Because Canada emits about 1.6 per cent of global emissions, we could limit ourselves to 1.6 per cent of the remaining global carbon budget (i.e. 4000 or 14,400 megatonnes (Mt) CO_2 for a 1.5 or 2°C carbon budget, respectively).[10] Or, more equitably, because we represent 0.49 per cent of the global population, we could limit ourselves to 0.49 per cent of the remaining global carbon budget (i.e. 1,123 or 4,410 Mt CO_2 for a 1.5 or 2°C carbon budget, respectively). However, Canada's economic development has been historically tied to growth in emissions which will contribute to warming for centuries to come. A target that is grounded in the principles of equity and responsibility as outlined in the Paris Agreement, therefore, would also account for Canada's historical emissions.

If Canadian emissions decreased linearly towards Canada's current Intended Nationally Determined Contribution (INDC)[11] target (30 per cent below 2005 GHG emissions by 2030; i.e. to 524 $MtCO_{2\,eq}$ annually by 2030), we would exceed 4000 Mt cumulative CO_2 emissions by 2023.[12] The current Canadian target, therefore, should be viewed as an unacceptably unambitious baseline: it is the weakest target in the G7[13] and it does not do Canada's fair share in the global effort to reduce emissions. Canada should, at the very least, align with the IPCC's recommended reductions of 25-40 per cent below 1990 by 2020 (to have a 50 per cent chance of preventing catastrophic warming). Our current INDC translates to only about 14 per cent below 1990 by 2030.[14] Climate Action Network Canada (CAN) suggests that "Canada's fair share contribution" to the Paris Agreement is[15] a 2025 target of at least 35 per cent below 2005, and targets in five-year increments thereafter in line with 50 per cent reduction by 2030 and decarbonization by 2050.

In sum, CPJ believes that a **new Canadian target** should be established that **contributes equitably** to global efforts to limit temperature increases, **be expressed as an absolute budget** (as opposed to a relative percentage), and **be referenced to a more immediate time frame** (i.e. 2025) with **five-year increments** to provide greater accountability for immediate action. Progress towards meeting this goal should be communicated to Canadian citizens on a regular basis.

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[10] For simplicity's sake, let's assume a baseline target that limits Canada to 1.6 per cent of the global carbon budget. If we divided Canada's share of the budget amongst our current population, we would each get 393.9 tonnes CO_2 to emit—*ever* (i.e. for us, our children, our grandchildren…). At current per capita emissions of over 16 tonnes a year, we'd use this up in just 25 years. For a 1.5°C budget, our personal allocation decreases to only 112.5 tCO_2—or seven years of current emissions.

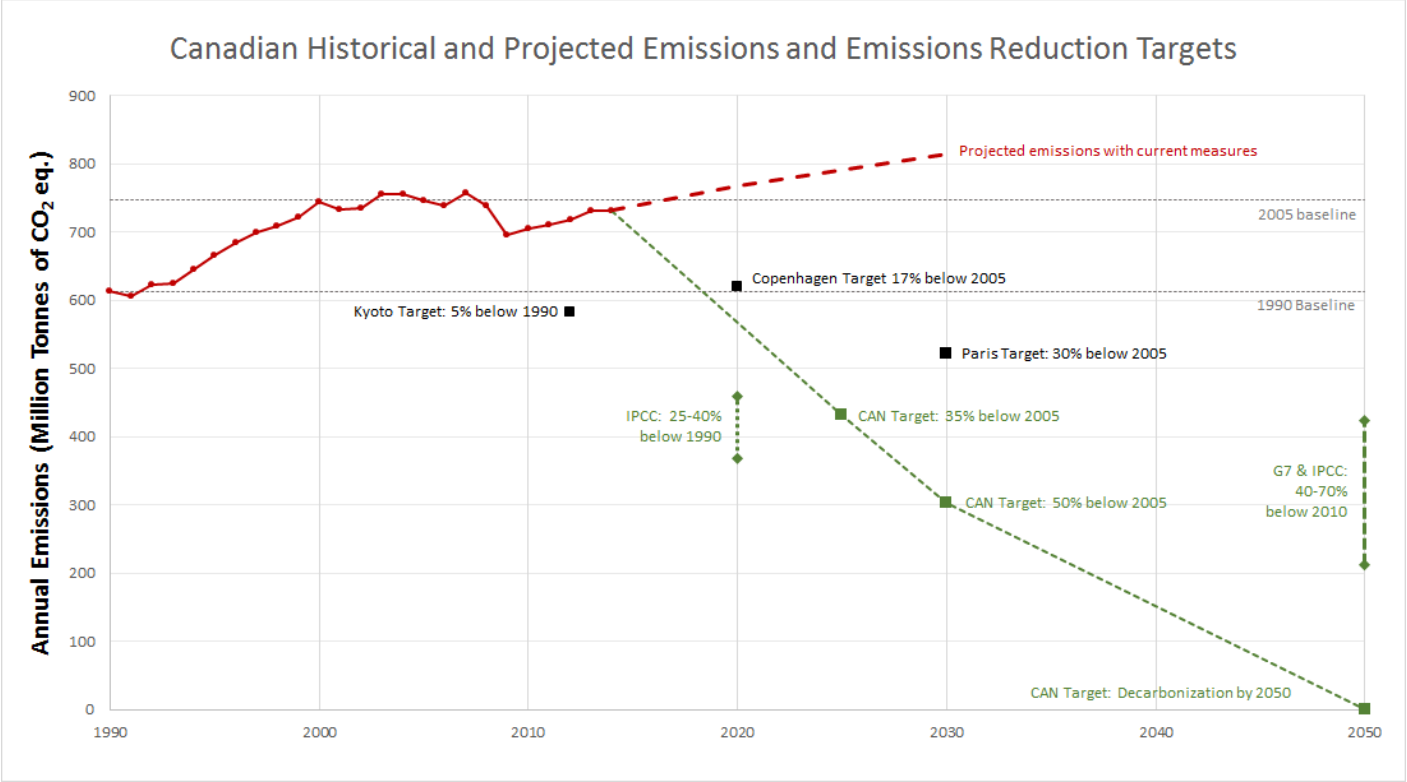
[11] The amount by which a country intends to reduce GHG emissions in a given timeframe, as communicated to international community via the UN Framework Convention on Climate Change.

[12] Author's calculation, assuming CO_2 emissions continue to represent about 78 per cent of Canadian emissions. Based on latest Canadian GHG emissions data from Environment Canada's 2014 National Inventory Report (http://ec.gc.ca/ges-ghg/default.asp?lang=En&n=662F9C56-1)

[13] Statement by Environmental Defence's Dale Marshall on the Canadian Government's Weak Pledge for the Paris Climate Summit, May 2015 (http://environmentaldefence.ca/2015/05/15/press-releases-65/)

[14] Canadian Centre for Policy Alternatives (CCPA), "Canada's failure to reduce emissions: Unlawful or above the law?" November 2015 (https://www.policyalternatives.ca/publications/monitor/canadas-failure-reduce-emissions-unlawful-or-above-law)

[15] Climate Action Network Canada (CAN), "Looking for Leadership on Climate Change," February 2016 (http://climateactionnetwork.ca/2016/02/22/looking-for-leadership-on-climate-change/)



Government intervention is needed:

Current policies are not enough even to achieve Canada's existing target

As citizens who benefit from our carbon-intensive economy, Canadians have a responsibility to reduce our GHG emissions. We can and should each make an important contribution to the Canadian emissions reduction effort. However individual actions are not enough to achieve Canadian targets and limit global warming.

For example, to achieve Canada's current emissions reduction target (30 per cent below 2005 by 2030) via personal emissions reduction efforts, on average, every Canadian would need to reduce their annual emissions by 7.9 tonnes.[16] To put this in perspective, each Canadian vehicle emits, on average, 4.6 tonnes of GHG each year.[17] So even if we stopped driving completely, we would still fall short of the reductions needed to meet Canadian targets. Even though Canadian per capita emissions have declined by almost 2 tonnes since 1990,[18] national emissions have increased by 119 Mt CO_{2eq}.[19]

With current measures to address climate change, Environment and Climate Change Canada has projected that Canadian emissions will grow to 768Mt $CO_{2\,eq}$ in 2020 and 815 Mt $CO_{2\,eq}$ in 2030 – i.e. 3 per cent greater than

[16] Based on current Canadian per capita emissions of 20.6 tCO_{2eq}., assuming M1 (medium) population growth scenario for 2030 (Statistics Canada Publication 91-520-X http://www.statcan.gc.ca/pub/91-520-x/2014001/c-g/desc/desc2.1-eng.htm).

[17] Author calculations based on data from Natural Resources Canada (https://www.nrcan.gc.ca/energy/efficiency/transportation/cars-light-trucks/buying/16770; http://www.nrcan.gc.ca/energy/efficiency/transportation/cars-light-trucks/fuel-efficient-driving-techniques/7513): gasoline produces 2.3kg of CO_2. The average Canadian car uses 10.6 L of gasoline to go 100km. I.e. 0.24 kg of CO_2 per kilometre travelled. We emit one tonne of emissions when we drive the average Canadian vehicle 4100km

[18] ECCC, "Greenhouse Gas Emissions per Person and per Unit Gross Domestic Product" (https://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=79BA5699-1)

[19] ECCC, "Canadian Environmental Sustainability Indicators: GHG emissions," April 2016 (https://www.ec.gc.ca/indicateurs-indicators/)

2005 levels in 2020 and 9 per cent greater than 2005 levels in 2030.[20] Clearly further government action is needed.

The Government of Canada is seeking answers to a number of climate policy questions, including:

What are the main opportunities in different sectors for reducing emissions in the short, medium and long term?

How can carbon pricing mechanisms help Canada meet emission reductions targets?

How could these mechanisms be designed and interact to support clean economic growth?

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1B: Put a price on carbon pollution

Carbon pricing is the lowest cost way to achieve emissions reductions in Canada.[21] However, it is not politically feasible to introduce a carbon price stringent enough to achieve Canada's emissions reduction target in the short term. A carbon price must therefore be one part of a suite of policies designed to reduce Canadian GHG emissions, including—but not limited to—direct regulation of the oil and gas sector in the short and medium term. [22] [23]

CPJ recommends a coordinated carbon tax of at least $30/tonne $CO_{2\,eq}$ be implemented immediately, with planned regular increases to at *least* $160 by 2030.

A changing climate has many costs, including food insecurity, degraded environmental services, damaged infrastructure, poorer human health, lost economic opportunities (including future generations), and forced relocation.[24] Right now, we emit CO_2 "free of charge" because these costs are not reflected in the consumer price of carbon intensive products and services. [25]

A "carbon price" is a quantification of the economic cost of damage done by emitting CO_2. Adjusting the cost of carbon-intensive goods and services to reflect their true cost drives sustainable innovation and ensures that both businesses and consumers make more efficient use of our resources. A carbon price also provides a source of revenue to government, allowing for additional investments in an economy that is carbon-neutral and equipped to adapt to a changing climate.

[20] Canada's Ecofiscal Commission, "Carbon Gaps: Emissions, Policy and Prices," February 2016 (http://ecofiscal.ca/2016/02/03/carbon-coordination-gaps-emissions-policy-prices/) and ECCC, "Canada's Emission Projections in 2020 and 2030," January 2016 (http://ec.gc.ca/ges-ghg/default.asp?lang=En&xml=8BAAFCC5-A4F8-4056-94B1-B2799D9A2EE0)

[21] Canada's Ecofiscal Commission, "The Way Forward," April 2015 (http://ecofiscal.ca/wayforward/)

[22] Sustainable Prosperity, "Carbon Pricing in Canada," February 2016 (http://sustainableprosperity.ca/blog/carbon-pricing-canada)

[23] David Suzuki Foundation, "Backgrounder: BC Carbon Tax," October 2011 (http://www.davidsuzuki.org/issues/climate-change/DSF%20Backgrounder%20BC%20carbon%20tax_Oct2011.pdf)

[24] For more information, see publications by the IPCC's Working Group II on Impacts, Adaptation, and Vulnerability, 2014 (https://www.ipcc.ch/pdf/assessment-report/ar5/wg2/ar5_wgII_spm_en.pdf)

[25] Macleans, "Econ 101: What you need to know about carbon taxes and cap-and-trade," September 2012 (http://www.macleans.ca/economy/business/why-the-difference-between-carbon-taxes-and-cap-and-trade-isnt-as-important-as-you-think/)

CPJ recommends the following key design parameters for a Canadian carbon pricing mechanism:

Broad: A carbon price must be economy wide; otherwise, exempted carbon-intensive sectors will have an advantage over low-carbon producers, which would skew the market in favour of these high-carbon sectors.[26] The more sources and emitters covered by the carbon price—upstream and downstream—the more effective and efficient it will be.[27]

Stringent: A carbon price must be high enough to achieve intended emissions reductions. Internally, the federal Ministry of the Environment and Climate Change has valued the social cost of carbon (SCC—a monetary measure of the damage expected worldwide from the emission of each additional tonne of CO_2) at $40/tonne for 2016, $55/tonne by 2030, and $75/tonne by 2050 (C$2,012/tCO_2, discounted at 3 per cent).[28] This is a very conservative estimate of the social cost of carbon. A recent study published in *Nature* accounts for slowed economic growth due to climate change, adaptation to climate change, and differentiation between high and low-income countries, resulting in an estimate of the social cost of carbon that is $220/tonne.[29] In order to achieve Canada's 2030 target, a carbon price implemented in 2017 would need to increase regularly to reach at the very *least* $160 per tonne by 2030 (that would raise gasoline prices by about 40 cents per litre).[30]

Equitable: Revenue from a carbon tax should be reinvested to prevent regressive effects to low-income households and stimulate further carbon reductions in the economy. The income from a carbon tax should be divided equally, with:

- half passed on to low-income families in the form of a rebate to help cover the carbon tax's impact. We recommend an initial rebate level of $300 per adult and $150 per child, clawed-back as family income levels rise and ending after reaching a ceiling of $100,000;[31]
- and half funding programs that will reduce Canada's GHG emissions, such as investments in research and development, energy efficiency, and renewable energy, as outlined in recommendation 2B below.

To ensure transparency, reporting on the allocation of carbon tax revenue should be a part of regular climate action plan communications with Canadian citizens.

Cost-Effective: Canada's carbon price should incentivize the most carbon emissions for the least cost. To achieve these cost-effective emissions reductions, the price should be:

- implemented as either a cap-and-trade system or a carbon tax.[32] For price certainty and administrative simplicity, a carbon tax is preferable, and for greater certainty over emissions control, a cap-and-trade

[26] Ecojustice, "Essentials of a Carbon Tax for Canada," 2015 (http://www.ecojustice.ca/wp-content/uploads/2015/01/Essentials-of-a-Carbon-Tax-for-Canada.pdf)
[27] Canada's Ecofiscal Commission, "The Way Forward," April 2015
[28] Environment and Climate Change Canada have adopted the U.S. SCC (calculated by modeling the damages caused by an additional tonne of CO_2). This SCC is what is used in mandatory government cost-benefit analyses of regulatory proposals (like the LNG project, recently). ECCC, "Technical Update to Environment and Climate Change Canada's Social Cost of Greenhouse Gas Estimates," March 2016. (http://www.ec.gc.ca/cc/default.asp?lang=En&n=BE705779-1)
[29] Stanford News, "Estimated social cost of climate change not accurate, Stanford scientists say," January 2015 (https://news.stanford.edu/2015/01/12/emissions-social-costs-011215/)
[30] Policy Options, "Want an effective climate policy? Heed the evidence," February 2016 (http://policyoptions.irpp.org/magazines/february-2016/want-an-effective-climatepolicy-heed-the-evidence/)
[31] Citizens for Public Justice, "Fulfilling our Collective Responsibility," August 2013 (www.cpj.ca/content/fulfilling-our-collective-responsibility-cpj-advocates-price-carbon-emissions)

system is best.[33] Because our priority is the immediate introduction of a carbon price in Canada, CPJ recommends the introduction of a carbon tax.

- coordinated across Canada: The current patchwork of different prices between provinces results in lost opportunities for inexpensive emissions reductions. Coordination is more cost-effective because it stimulates inexpensive emissions reductions across Canada rather than allowing low-cost pollution in one province while other provinces with higher carbon prices pay higher costs for deeper emissions cuts. Coordination is also fairer, because it provides a level playing field for businesses and consumers. These benefits of coordination aren't yet apparent because current carbon prices in Canada are ineffectively low—but they would soon become obvious if one province were to introduce a robust carbon price.[34]

1C: Regulate carbon-intensive sectors

What policy or policies could help achieve the reduction opportunities you've identified?

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The most significant emissions reductions in Canada so far have resulted not from carbon pricing (because current prices are too low to be widely effective), but regulation: Ontario's ban on coal-fired power resulted in the largest national reductions and in BC, clean electricity regulation that required BC Hydro to cancel three power plants has resulted in the largest provincial emissions reductions. These regulations have resulted in implicit carbon prices (i.e. the hypothetical carbon price that would be required to achieve these same emissions reductions) [35]

While phasing in a carbon tax, CPJ recommends that **strict GHG emissions standards be applied across the entire oil and gas sector (without exception for subsectors such as the oil sands) and transportation sector**. Regulations on electricity generation, furnaces, boilers, transportation propulsion systems, and oil and gas production processes can address 75 per cent of Canada's energy-related CO_2 emissions.[36] [37]

Expansion of the oil and gas sector is the largest driver of growth in Canadian emissions. Canada's emissions have increased by 120Mt since 1990: 85 Mt of these emissions came specifically from expanded oil and gas production.[38] Emissions from the oil and gas sector have almost doubled since 1990 (driven mainly by oil sands expansion and the increased inefficiency of extracting conventional crude) and now represent more than a quarter of Canadian GHG emissions.[39] Emissions from the production of oil and gas specifically for export have increased by 270 per cent since 1990.[40] And emissions from the oil and gas sector are predicted to continue to increase by over 10Mt by 2020. [41] Exempting the oil sands sector from regulation (and pricing) increases the

[32] Ecojustice, "Essentials of a Carbon Tax for Canada," 2015
[33] Canada's Ecofiscal Commission, "The Way Forward," April 2015
[34] Ecojustice, "Essentials of a Carbon Tax for Canada," 2015
[35] Policy Options, "Want an effective climate policy? Heed the evidence," February 2016
[36] Policy Options, "Want an effective climate policy? Heed the evidence," February 2016
[37] David Suzuki Foundation, "Backgrounder: BC Carbon Tax," October 2011
[38] ECCC, "National Inventory Report 1990-2014: Greenhouse Gas Sources and Sinks in Canada – Executive Summary," (https://www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=662F9C56-1)
[39] ECCC, "National Inventory Report 1990-2014: Greenhouse Gas Sources and Sinks in Canada – Executive Summary,"
[40] Canada's 2015 National Inventory Submission to the United Nations Framework Convention on Climate Change (UNFCCC)
[41] Note that this projection was done in 2014, before the Alberta plan was announced.

carbon price and related costs in all other sectors. It is not fair for a sector of the economy to pollute the atmosphere for free while others pay the costs.[42]

If it is politically impossible to impose a carbon price high enough and soon enough to achieve Canadian emission reduction targets, regulations can be used to raise the implied price of carbon *right away*. Regulations can complement and reinforce the effect of a carbon tax and can be very effective in closing gaps between emissions and targets in sectors of the economy that are less responsive to a carbon tax.[43]

CPJ Recommendation #2: Develop a Low-Carbon Economy.

> "Canada can both protect the environment and grow the economy. These goals are not incompatible—they go hand in hand. Supporting a clean growth economy will help Canada take advantage of new global opportunities. It will diversify our economy, open access to new markets, reduce greenhouse gas emissions, and create good, well-paying jobs for Canadians."
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The science is clear and a broad-based consensus is emerging: we must reduce—and ultimately eliminate—our use of fossil fuels to avoid catastrophic climate change. The Intergovernmental Panel on Climate Change (IPCC)[44] and the International Energy Agency[45] have clearly stated that in order to limit global warming to 2°C above pre-industrial levels most known fossil fuel reserves must stay underground. The implications for Canada, according to a 2015 study published in *Nature*,[46] are that 75 per cent of Canada's known oil reserves and 24 per cent of gas reserves must not be burned.

At their April 2015 Climate Summit, premiers agreed to "implement measures to reduce GHG emissions; strengthen pan-Canadian climate change cooperation; and make a transition to a lower carbon economy." Then in June 2015, Canada (under Prime Minister Harper) was party to the G7 leaders' agreement acknowledging the urgency of the climate crisis and committing to "decarbonize the global economy in the course of this century." And finally, at the COP21 climate talks in December 2015, Environment and Climate Change Minister Catherine McKenna expressed support for "including reference in the Paris Agreement to the recognition of the need to striving to limit global warming to 1.5."[47]

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[42] Pembina Institute, "Key Questions for a Canadian Cap-and-Trade System," September 2009 (http://www.pembina.org/reports/cap-and-trade.pdf)

[43] For example, middle class suburban commuters will not change behaviour for a moderate carbon tax, so require higher efficiency in cars, and investment in urban transportation – Ecojustice, "Essentials of a Carbon Tax for Canada," 2015

[44] IPCC WG1 AR5 SPM, 2013

[45] International Energy Agency, World Energy Outlook 2012 (https://www.iea.org/publications/freepublications/publication/english.pdf)

[46] Nature, "The geographical distribution of fossil fuels unused when limiting global warming to 2°C" January 2015 Vol. 157 (http://www.nature.com/articles/nature14016.epdf?)

[47] National Observer, "Canada shocks COP21 with big new climate goal," December 2015 (http://www.nationalobserver.com/2015/12/07/news/canada-shocks-cop21-big-new-climate-commitment)

Our current governments clearly recognize the need for decarbonization of the Canadian economy. At the same time, however, there is a sustained interest in maintaining fossil fuel exploration and development.[48] It is time to establish a new approach to national energy development that is consistent with our Paris commitments and the goal of decarbonization.

2A: Eliminate subsidies to fossil fuel industry

In 2014, the Inter-governmental Panel on Climate Change (IPCC) indicated that "substantial reductions in emissions would require large changes in investment patterns."[49]

Still, the federal (59 per cent) and provincial (41 per cent) governments combined provide over $3.6 billion in annual subsidies and special tax breaks to the Canadian fossil fuel industry.[50] An additional US$2.5 billion of tax money funds petroleum companies abroad through EDC.[51]

Government currently subsidizes the oil and gas sector because companies need support to stay competitive in a high-risk exploration industry. For example, the Canadian Development Expense and the Canadian Exploration Expense allow companies to deduct expenses related to exploration of a resource from their income tax.[52]

The 2015 Liberal election platform included a promise to "fulfill Canada's G20 commitment to phase out subsidies for the fossil fuel industry" but identified a target of only $250 million in reduced subsidies in the short-term.[53] All that Budget 2016 says about these subsidies is that "the Government intends to maintain this tax preference—[accelerated capital cost allowance … currently available for certain liquefied natural gas facilities]—as currently legislated and allow it to expire as scheduled."[54] Contrary to Canada's stated climate change goals, these subsidies encourage the exploration and expansion, development, refining, and export of oil, coal, and gas—resources that we know should remain undeveloped.

In order to support the attainment of Canada's Paris Commitment and move towards an equitable contribution to climate change, CPJ recommends the **immediate elimination of all subsidies to the fossil fuel sector.** We also call for a **review of financing provided by EDC**, and a phase out of funds provided for overseas oil and gas development by 2020. These finances should be redirected to support export of Canadian clean technologies.

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[48] Materials from Natural Resources Canada suggest a preference for continued long-term fossil fuel use *and* investments in Carbon Capture and Storage technology to "avoid the potential for technology lock-in and stranded assets." – Natural Resources Canada, "The Way Forward on Carbon Capture and Storage," April 2016 (http://www.nrcan.gc.ca/publications/fossil-energy-future/1167)

[49] IPCC WG3 AR5 SPM

[50] These numbers include indirect subsidies like income tax cuts and royalty tax programs. – Oil Change International and Overseas Development Institute (ODI), "G20 subsidies to oil, gas and coal production: Canada," November 2015 (https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9988.pdf)

[51] Oil Change International and Overseas Development Institute (ODI), "Empty promises - G20 subsidies to oil, gas and coal production," November 2015 (http://priceofoil.org/2015/11/11/empty-promises-g20-subsidies-to-oil-gas-and-coal-production/)

[52] CBC News, "G20 countries spend $450B a year on fossil fuel subsidies, study says," November 2015 (http://www.cbc.ca/news/politics/g20-fossil-fuel-subsidies-450b-1.3314291)

[53] Liberal Party of Canada, Real Change: A New Plan for a Strong Middle Class, 2015 (https://www.liberal.ca/files/2015/10/New-plan-for-a-strong-middle-class.pdf)

[54] Her Majesty the Queen in Right of Canada, "Budget 2016: Growing the Middle Class," March 2016 (http://www.budget.gc.ca/2016/docs/plan/budget2016-en.pdf)

2B: Invest in low-carbon technologies, not high-carbon infrastructure

> How can all Canadians work together to make Canada a world leader in the development and use of clean technologies?
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Canada's way forward requires a just transition away from carbon-intensive energy and the development of a low-carbon economy. This means a move away from high-carbon infrastructure and a corresponding increase in investment in renewable energy (such as wind and solar power), energy efficiency, and expanded public transportation. Such investments would create jobs, reduce GHG emissions, and enhance Canada's competitiveness in emerging international green energy markets.

Energy Infrastructure

In April 2016, the Government of Canada signed on to the Paris Agreement[55] and clearly signaled its intention to ratify by late 2016. Canada's support for this Agreement represents a series of important climate justice commitments, including to:

- invest in low-emission, climate-resilient development (Art 2.1c);
- reach peak levels of GHG emissions as soon as possible (and by extension, to begin along the path of reduced emissions) (Art 4.1);
- establish economy-wide absolute emissions reduction targets (Art 4.4);
- promote environmental integrity (Art 4.13); and
- consider vulnerable groups, communities and ecosystems and to be guided by the best science, traditional knowledge, knowledge of indigenous peoples and local knowledge systems (Art 7.5).

It should follow then, that these principles would serve as conditions to the development of new energy infrastructure.

Set in this context, the concerns about new pipeline development raised by farmers, Indigenous people, environmentalists, and others take on new significance. It is imperative that questions about impacts on land and water use, the potential for spills, and risks of habitat destruction be carefully considered.

Of equal—or even greater—significance is Canada's unqualified support for the UN Declaration of the Rights of Indigenous Peoples (UNDRIP)[56, 56] which followed the historic report of the Truth and Reconciliation Commission.[57] Though far-reaching in scope, a fundamental principle relating to Canada's economic development path is that of "free, prior, and informed consent of Indigenous peoples."

And finally, one must consider the long-term economic implications. Pipelines are generally considered a 30-40

[55] UNFCCC Conference of the Parties Twenty-first session. Paris, 30 November to 11 December 2015, Adoption of the Paris Agreement (https://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf)
[56] CBC News, "Canada official adopts UN declaration on rights of Indigenous Peoples," May 2016 (http://www.cbc.ca/news/aboriginal/canada-adopting-implementing-un-rights-declaration-1.3575272)
[57] Truth and Reconciliation Commission of Canada, Truth and Reconciliation Commission of Canada: Calls to Action, 2015 (http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf)

year project.[58] And, pipeline development is inextricably linked to fossil fuel extraction. As stated previously, we know that in order to avoid catastrophic climate change 75 per cent of Canadian oil must stay underground. If the global community is to take its climate commitments seriously, there is a growing risk of stranded assets in the Alberta oil fields, making pipeline development an unwise investment over the long-term.

In light of these considerations, CPJ recommends that the **Government of Canada set strict conditions on new pipeline development** based on the principles identified in the Paris Agreement, Canada's obligations under the UNDRIP, and the long-term economic interests of the country.

As part of Canada's commitment to "a renewed, nation-to-nation relationship with Indigenous Peoples, based on recognition of rights, respect, co-operation, and partnership,"[59] First Ministers' Meetings (like the one planned for October 2016) to discuss Canada's climate action plan must also include First Nations', Métis, and Inuit representatives.

Public Infrastructure and Renewable Energy

The federal government has the opportunity to invest in infrastructure across the country in a way that meets the service needs of communities, while simultaneously addressing economic challenges and increased environmental imperatives.

Developing the renewable energy sector makes solid economic sense. Investing in carbon-free energy immediately is the lowest-cost option: the Organization for Economic Cooperation and Development estimates that every dollar we fail to invest in clean energy now will cost us more than four dollars down the road.[60] "Because a delay results in additional near-term accumulation of GHGs in the atmosphere, delay [also] means that the policy, when implemented, must be more stringent to achieve the given long-term climate target."[61]

Research by the Green Economy Network indicates that "by investing up to 5 per cent[62] of the annual federal budget in renewable energy, energy efficiency and public transportation over five years, Canada could create one million new jobs while reducing our annual GHG emissions by 25 to 35 per cent."[63] Other studies, including a 2015 report by the Global Green Growth Institute and the United Nations Industrial Development Organization, suggest that when compared to funds put into conventional energy, investing in renewables and energy efficiency creates more jobs.[64]

The simultaneous achievement of economic, employment, and environmental benefits of short-term investments to stimulate the transition to a low-carbon economy are compelling.

CPJ therefore recommends that over the next five years, **Canada invest $1.35 billion to further develop renewable energy technologies** (such as wind, solar, geothermal, tidal, biomass, and micro-hydro),[65] **$1.8 billion to enhance energy efficiency** in Canadian homes and businesses,[66] and **$9 billion to improve and**

[58] Pipeline & Gas Journal, "Economic Outlook Brightens For Pipeline Coating Developments," June 2010 Vol. 237 No.6 (https://pgjonline.com/2010/06/30/economic-outlook-brightens-for-pipeline-coating-developments/)
[59] Prime Minister of Canada Justin Trudeau, "Minister of Indigenous and Northern Affairs Mandate Letter," 2015 (http://pm.gc.ca/eng/minister-indigenous-and-northern-affairs-mandate-letter#sthash.5CGQOCsC.dpuf)
[60] Quoted in Canada's Ecofiscal Commission, "The Way Forward," April 2015
[61] World Economic Forum, "What is the cost of delaying climate action?" February 2015 (https://www.weforum.org/agenda/2015/02/what-is-the-cost-of-delaying-climate-action/)
[62] With a federal budget of $290 billion (Budget 2016), 5 per cent equals $14.5 billion.
[63] Green Economy Network : One Million Climate Jobs (http://greeneconomynet.ca/)
[64] United Nations Industrial Development Organization, Global Green Growth Report: Clean Energy Industrial Investments and Expanding Job Opportunities, 2015 (http://www.unido.org/fileadmin/user_media_upgrade/Resources/Policy_advice/GLOBAL_GREEN_GROWTH_REPORT_vol1_final.pdf)
[65] CCPA, Alternative Federal Budget (AFB 2016) (https://www.policyalternatives.ca/sites/default/files/uploads/publications/National per cent20Office/2016/03/AFB2016_Main_Document.pdf)
[66] AFB 2016

expand public transportation.[67] Such investments would create jobs, reduce GHG emissions, and enhance Canada's competitiveness in emerging international green energy markets.

Detailed recommendations for the allocation of these funds have been ably outlined in the 2016 Alternative Federal Budget (to which CPJ is a contributor) and recommendations for the 2016 Federal Budget prepared by the Green Budget Coalition.

CPJ Recommendation #3: Provide Justice for those Most Directly Impacted by Climate Change

Along with the reduction and prevention of GHG emissions (mitigation), the fight against climate change must also include "adaptation" to the impacts of climate change that are already taking place.

Canada's Federal Adaptation Framework acknowledges that "the impacts of a changing climate are evident in every region and sector across Canada." Changes observed in Canada include: higher temperatures, declining sea and lake ice, diminishing glaciers, melting permafrost, more heat waves, more violent storms, and increased coastal erosion.[68] In Northern Canada, changes are even more extreme and more frequent, and communities are more vulnerable to their impacts.

The vision of the Government of Canada, as outlined in the federal adaptation framework, is as follows: "Canada is resilient to a changing climate by successfully adapting to the challenges and opportunities, and ensuring the health, safety, and security of Canadians and Canada's environmental, social, and economic wealth in a long term and sustainable manner."

[67] According to data compiled by the Green Budget Coalition (http://greenbudget.ca/wp-content/uploads/2016/01/GBC-Public-Transit.pdf) an annual federal investment of $1.8 billion would cover approximately one half of the funds required to update and expand public transit infrastructure; the remaining funds would be provided by the provinces and municipalities.

[68] Government of Canada, Federal Adaptation Policy Framework, 2011

3A: Fund domestic adaptation, especially in Northern, First Nations, Inuit, and coastal communities

What types of science, information, Traditional Knowledge, and decision-support tools are needed to help people decide when and how to adapt?

What specific policies, programs or other instruments would be most effective in supporting adaptation action?

Are there specific, innovative adaptation actions that will help build resilience in Canada?

How can we learn from Indigenous Peoples' Traditional Knowledge, best practices and adaptation strategies to help reduce the risks of climate change?

What climate change adaptation best practices, strategies, initiatives, or information would be most beneficial to help address climate impacts faced by Indigenous Peoples living in northern and remote communities?

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The federal government has jurisdiction over Indigenous peoples and the lands reserved for them."[69] This means that the federal government has clear legislative authority and responsibility to help First Nations and Inuit communities adapt their infrastructure. In Budget 2016, CPJ was glad to see funding allocated to much-needed waste and wastewater infrastructure in First Nations' communities. However, funding for green infrastructure in Indigenous communities needs to expand beyond wastewater immediately—not in ten years.

Specific federal measures should include investments in infrastructure vulnerable to melting permafrost and rising sea levels (buildings, roadways, water, and electrical systems) as well as upgrades to emergency preparedness and response systems.

Along with targeted funding, the government can lead by example by strategically mainstreaming adaptation into all federal assets, programs, services, policies, and planning. In this year's budget, we were happy to see the government allocate over two billion dollars to federal infrastructure repairs and retrofits over the next five years. This funding should be allocated only to projects that will achieve the greatest adaptation and mitigation outcomes.

To ensure the health, safety, and security of Canadians, **CPJ recommends that the federal government support adaptation measures to improve the resiliency of Canadian infrastructure.** These measures should be targeted to areas where negative impacts are most severe, namely in Northern, First Nations, Inuit, and coastal communities. Specifically:

[69] Section 91(24) of the *British North America Act, 1867.*

- Renew and increase funding for the Climate Change Adaptation Programs under the Clean Air Agenda, set to sunset in 2016, at $45 million per year over five years.[70]
- Provide funding for investments in ecosystems that function as natural infrastructure in the amount of $250 million per year over five years. [71]
- Provide $80 million over four years, part of which could be funded from the Low Carbon Economy Trust, to examine the impacts of climate change on Arctic communities and ecosystems and for investments in climate resilient infrastructure and adaptation funding to protect against changing weather in the North.[72]
- Provide funding of $244 million in Budget 2016 and $514 million per year over five years to Indigenous and Northern Affairs Canada (INAC) for First Nations green infrastructure.[73]

What are the most important priorities for Canada in building resilience? How can governments, Indigenous Peoples and stakeholders best work together to support adaptation to climate change?

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3B: Provide social supports and retraining for those currently employed in carbon-intensive industry

Reducing emissions to lessen the future impacts of climate change goes hand-in-glove with building resilience to the impacts that are already being felt. That is why Canadian economic resilience is closely linked to the transition to a low-carbon economy—and should be part of a plan to make a just transition to 100 per cent renewable energy by 2050.

Canada's resource-based and carbon-intensive economy has historically experienced cycles of boom and bust as global economic conditions shift and commodity prices rise and fall. Now, with the declining price of oil, and the devastating wildfires that recently ravaged Fort McMurray, the move towards a low-carbon economy offers a tremendous opportunity to rebuild towards a more robust, more sustainable, and healthier future. While presenting some challenges in the short-term, climate action has the potential to create more diverse well-paying jobs and assist in moving away from the devastating boom and bust pattern.

As Pierre Sadik, Ecojustice manager of legislative affairs rightly points out,

> With an economy-wide carbon tax, certain GHG intensive products will become less competitive in the marketplace compared to low carbon alternatives (as the tax rate increases). This is not undesirable, so long as transitional programs for business and labour are in place. Meanwhile, other low carbon products and services will gain market share and create business and employment opportunities.[74]

[70] Green Budget Coalition, "Recommendations for Budget 2016: Infrastructure and Climate Change Adaptation," 2016 (http://greenbudget.ca/wp-content/uploads/2016/01/GBC-Infrastucture-and-Climate.pdf)
[71] Green Budget Coalition, "Recommendations for Budget 2016: Infrastructure and Climate Change Adaptation," 2016
[72] Green Budget Coalition, "Recommendations for Budget 2016: Protecting our Changing Artic," 2016 (http://greenbudget.ca/wp-content/uploads/2016/01/GBC-Arctic.pdf)
[73] Green Budget Coalition, "Recommendations for Budget 2016: Green Infrastructure for First Nations Communities," 2016 (http://greenbudget.ca/wp-content/uploads/2016/01/GBC-FN-Infra.pdf)
[74] Ecojustice, "Essentials of a Carbon Tax for Canada," 2015

CPJ recommends that as part of its commitment to climate action, the federal government **develop a just transition plan** to help workers. The principles of a just transition are that "the burden of change that benefits everyone will not be placed disproportionately on a few; ... those most vulnerable to change will be protected; ... [and] the process of change will increase social justice for workers, women, the poor, and all oppressed groups."[75]

Specific measures should include:

Improvements to Employment Insurance. Less than 40 per cent of Canadians who contribute to Employment Insurance are eligible for benefits in the event that they lose their job. Though Budget 2016 included some initial reforms,[76] this long-standing discrepancy still needs to be remedied so that Canadian workers have security through the economic transition.

Funding for skills development and retraining programs and for job creation in renewable energy, energy efficiency, building retrofits, green manufacturing, and public transit. The federal government must provide income supports, advanced skills retraining opportunities, apprenticeships, and social supports to assist workers and their families move from traditional energy, manufacturing, and forestry sectors and integrate into the new, low-carbon economy.[77, 78] Additional measures should address traditionally marginalized and hard-to-employ workers, particularly among Canada's Indigenous peoples.[79]

Income supports to low-income Canadians to offset rising living costs. An important principle of a just transition is that vulnerable sectors—and vulnerable people—will be protected. Measures, such as carbon tax rebates, targeted retrofit programs, and public transit subsidies, must be integrated into the just transition plan. (See the Dignity for All National Anti-Poverty Plan for Canada[80] for a comprehensive review of policy options to address the needs of Canadians living in poverty or at risk of living in poverty.)

3C: Increase international climate financing to $4 billion each year by 2020

The Canadian Coalition on Climate Change and Development (C4D)—a network of international development organizations and environmental groups—states that "Climate change has the potential to roll back gains made on poverty reduction."[81] The World Bank has estimated that 100 million people could be forced into extreme poverty by 2030 due to climate change. [82]

CPJ recommends the **timely delivery of the $2.65 billion already committed to the UN Green Climate Fund as grants** to support adaptation and mitigation efforts in developing nations, as well as an **increase in global**

[75] Labor Network for Sustainability, "A Just Transition" (http://www.labor4sustainability.org/post/a-just-transition/)
[76] Fewer insurable work hours (420-700 hours) are now required for eligibility and benefit weeks are extended in 12 certain regions (extra five weeks to a maximum of 50). Still, there are regional restrictions on the benefit extensions. – Citizens for Public Justice, "Budget 2016: Significant Progress, Glaring Omissions," March 2016 (http://www.cpj.ca/budget-2016-significant-progress-glaring-omissions)
[77] CCPA, "Making a Just Transition," January 2015 (https://www.policyalternatives.ca/publications/commentary/making-just-transition#sthash.RKWkEyEH.dpuf)
[78] CCPA BC Office, "Just Transition: Creating a green social contract for BC's resource workers," January 2015 (https://www.policyalternatives.ca/sites/default/files/uploads/publications/BC%20Office/2015/01/ccpa-bc_JustTransition_web.pdf)
[79] Green Economy Network, "2016 Federal Pre-Budget Submission," February 2016 (http://greeneconomynet.ca/wp-content/uploads/sites/43/2014/11/PreBudgetSubmissionGEN2016.pdf)
[80] Dignity for All, "A National Anti-Poverty Plan for Canada," February 2015 (http://www.dignityforall.ca/en/national-anti-poverty-plan-canada)
[81] C4D (http://c4d.ca/) brief: "Funding Adaptation: Getting the most from Canada's climate finance." May 2016
[82] https://openknowledge.worldbank.org/bitstream/handle/10986/22787/9781464806735.pdf?sequence=13&isAllowed=y

climate financing to $4 billion per year (as of 2020) in line with Canada's fair share of multilateral funding under the Paris Agreement.[83]

CPJ supports C4D's recommendations that Canadian climate financing be both "new and additional" (i.e. funds should not be diverted from existing international assistance), and "directed to the poorest and most vulnerable." C4D recommendations for getting the most out of Canada's climate adaptation finance include: [84]

- "Focus on smallholder farmers, especially women farmers": Smallholder family farms are especially vulnerable to unpredictable precipitation patterns because they are almost entirely rain-irrigated. Support pre-existing successful practices.
- "Prioritize disaster preparedness and risk reduction strategies, and expand the social safety net": For example, target the careful development of communication strategies, increase access to affordable climate insurance, and invest in savings and loans programs like micro-finance to break the cycle of debt in vulnerable communities.
- "Align support with partner counties' national adaptation planning processes": Affected communities need to be full partners in adaptation planning processes, which are a key part of social and economic development.
- "Address deforestation": Deforestation solutions must be region-specific. C4D recommends the promotion of affordable and fuel-efficient household cook stoves.
- "Invest in sustainability of natural resource use and ecological services": Invest in water management, soil health, renewable energy, and protection of biodiversity.
- "Fund climate research and development within developing countries" because "research and development that responds to local issues and conditions has the greatest chance of success."

Conclusion

The Government of Canada has taken bold moves in recent months to promote social and environmental justice on the global stage. It is now imperative that these international commitments take root and are supported by concrete actions here at home.

As representatives of a broad, national, ecumenical movement of faithful citizens called by God to act for justice, CPJ encourages citizens, leaders in society, and governments to support policies and practices which reflect God's call for love, justice, and the flourishing of Creation.

We understand that as Canadians, living lives of relative affluence as participants in the global economy, we are part of the problem of climate change. And as people of faith, we know that we can be part of the solution. Canadian Christians from coast to coast to coast have pledged to do their part to reduce their personal, household, and community GHG emissions,[85] but we know that the scale of the problem requires vast, system-wide change that can only be achieved through ambitious government action.

CPJ therefore seeks a Canadian climate action plan that establishes a new emissions reduction target based on scientific estimates of the global GHG budget, and contributes equitably towards the 1.5°C limit on global warming aspired to in the Paris Agreement. To achieve this target, CPJ calling for the implementation of clear, quantifiable, time-bound measures to: (1) reduce GHG emissions, (2) develop a low-carbon economy, and (3) provide justice for those most directly impacted by climate change.

[83] Based on precedents where Canada has contributed 3 per cent to 4 per cent of multilateral funds, Canada's fair share of the US$100 billion promised in the Paris Decision document would require a contribution of $4 billion a year by 2020." CF/KAIROS / Environmental Defence.
[84] Canadian Coalition on Climate Change and Development, "Funding Adaptation: Getting the most from Canada's climate finance," May 2016 (http://c4d.ca/wp-content/uploads/2016/05/FINAL-C4D-Policy-Brief-Funding-Adaptation-May-2016-English.pdf)
[85] Citizens for Public Justice, "Add Your Voice to Canada's Climate Plan," April 2016 (cpj.ca/climate-consultation)