May 2016

Financing "One Million Climate Jobs"

GEN
GREEN ECONOMY NETWORK

Financing "One Million Climate Jobs": Who Will Pay for This?

The cost of inaction on climate change is astronomical. Climate change is not a distant threat; it is happening now and already imposing costs on the people of Canada. The impacts of climate change are already being experienced globally, which is why every other major country is investing in taking action. Canada has been a laggard, but this allows us the advantage of learning from any missteps so that Canada can use tried and true policy measures and technology to build a modern economy for tomorrow and be a leader on climate action.

Triple 'E' Challenge

Canada is facing three urgent challenges:

- **Economy and equity;**
- **Environment and climate change; and**
- **Energy diversification.**

The "One Million Climate Jobs" plan addresses all of these challenges.

Green Economy Network's "One Million Climate Jobs" plan will lower greenhouse gas (GHG) emissions by one-third in ten years, the amount required to achieve our nationally determined GHG reduction target several years early. Meeting and exceeding this objective is how Canada can do its part to limit climate change. The "One Million Climate Jobs" plan will also address current employment and economic challenges by boosting the economy and creating decent jobs for Canadians. In the first five years, the plan will create 1,052,600 jobs and position Canada to continue the transition toward a low-carbon economy.

Figure 1. Canada's Historical Greenhouse Gas Emissions and Projections to 2025 (Mt CO2 eq)

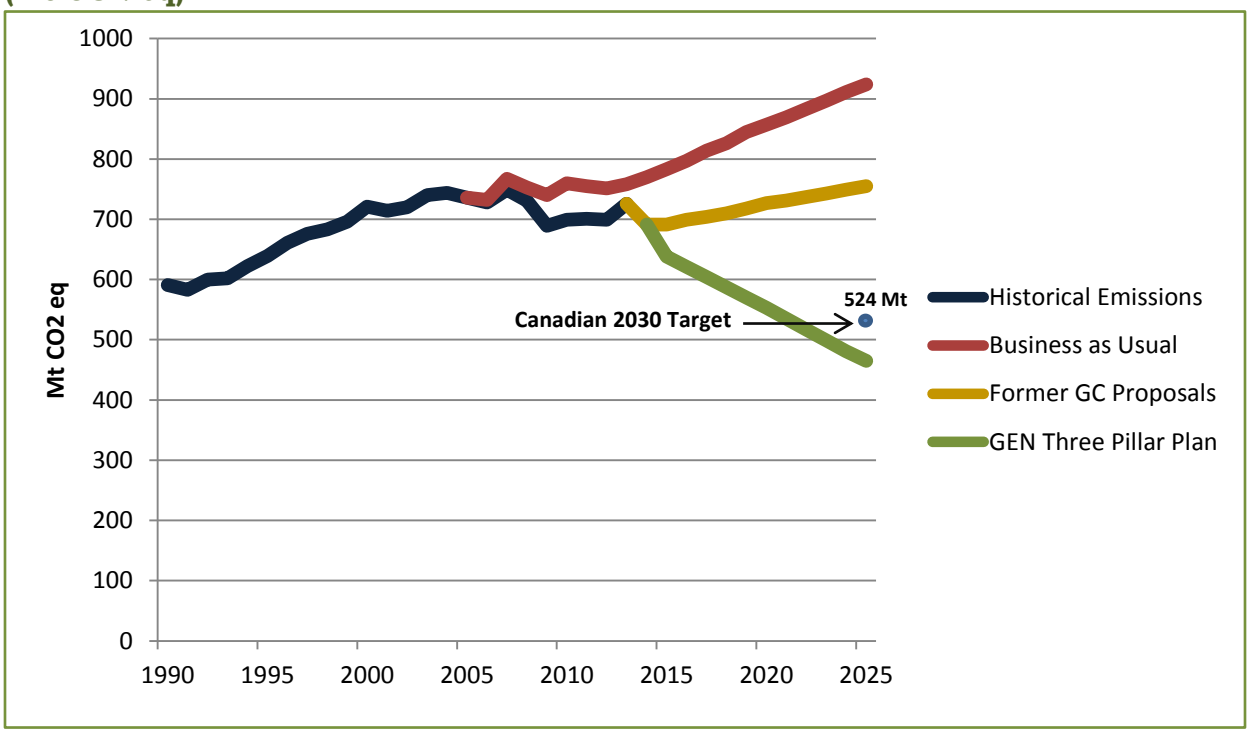


Table 1. Summary of "One Million Climate Jobs" Plan

	$Billions Invested Over 5-Year Period	Total Person Job Years Created	GHG Emission Reductions (Mt CO_2eq)
Renewable Energy	$23.3	290,000	44 – 110
Energy Efficiency	$30.0	438,000	32 – 126
Public Transit	$17.6	223,000	11 – 20
Higher Speed Rail	$10.0	101,600	1 – 5
5-Year Totals	**$80.9 Billion**	**1,052,600 Jobs**	**88-261 Mt Annually**

Investments and policies designed to spur growth and create jobs in the low carbon economy must be paired with a Just Transition Strategy that is supported by workers, employers, and governments. The Strategy must embody social support, re-employment and compensation measures, advanced skills training programs, investment in apprenticeships, and be devised with the participation of workers and their representatives. A Just Transition Strategy must also include greater involvement and collaboration with Indigenous peoples, who have been disproportionately affected by climate change.

Show Me the Money

The total annual cost for the "One Million Climate Jobs" plan is $16.18 billion (just under 6% of the annual federal budget). The existing funding sources could potentially cover over half of these costs[iii] and the majority of the proposed revenue sources have already been identified as priorities by the federal government.

This plan for an economic, employment, and environmental transformation requires an investment of $80.9 billion in order to be fully implemented. Over five years, the annual expenditure is just over $16 billion (less than 6% of the annual federal budget).[i] This is an ambitious but viable financial commitment, given the magnitude of the challenges that we face. Several of the financing measures already exist, and the proposed financing measures have been identified as priorities by the Liberal Government.[ii]

Table 2. Total Annual Investment Required for GEN Plan ($ Billions)

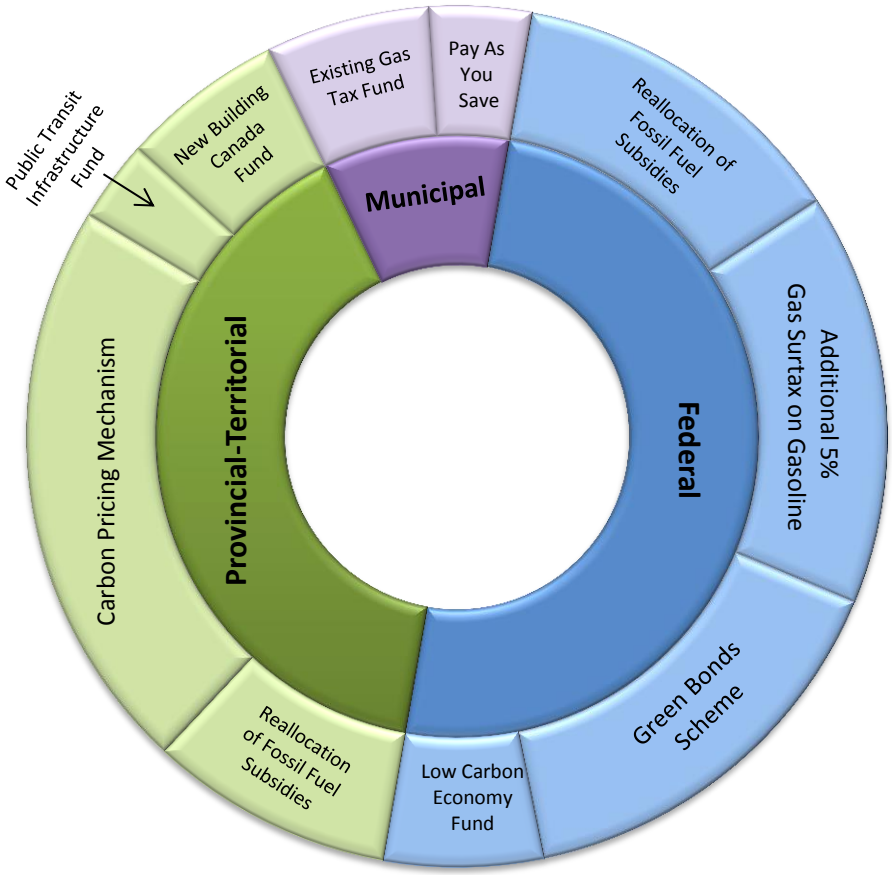
	Federal	Provincial-Territorial	Municipal	Annual Totals
Renewable Energy	$2.33	$1.864	$0.466	**$4.66**
Energy Efficiency	$3.0	$2.4	$0.6	**$6.0**
Public Transit	$1.76	$1.408	$0.352	**$3.52**
Higher Speed Rail	$1.0	$0.8	$0.2	**$2.0**
Annual Totals	**$8.09**	**$6.472**	**$1.618**	**$16.18**

Table 3. Total Annual Funding from Existing and New Revenues ($ Billions)[iii]

	Federal	Provincial-Territorial	Municipal
Existing Funding			
Redirect Fossil Fuel Subsidies	$2.14	$1.46	
Public Transit Infrastructure Fund		$0.5	
New Building Canada Fund		$1.0	
Gas Tax Fund			$1.0
Proposed Funding			
Additional 5% Surtax on Gasoline	$2.5		
Pay As You Save Financing			$0.618
Green Bonds Scheme	$2.5		
Carbon Pricing Mechanism		$3.512	
Low Carbon Economy Fund	$0.95		
Annual Totals	**$8.09**	**$6.472**	**$1.618**

GEN Common Platform Liberal Election Platform or Budget 2016

Figure 2. Total Annual Funding by Each Order of Government



Existing Funding: No New Money

Redirect Fossil Fuel Subsidies

Canada's fossil fuel industries receive at least $3.6 billion in annual subsidies. The majority of the tax benefits are directed toward the oil and natural gas industries for exploration activities, field development, and resource extraction. At the federal level, these subsidies amount to $2.14 billion, and the actual value is expected to be higher due to a lack of availability of estimates for some subsidies. At the provincial level, annual subsidies to fossil fuel industries amount to $1.46 billion.[iv] The Liberal Government's election platform promised to fulfill Canada's G20 commitment to phase our subsidies for the fossil fuel industry.[v] These subsidies must be redirected toward renewable energy in order to create jobs and lower emissions while positioning Canada to be more competitive in the booming global renewable energy industry.

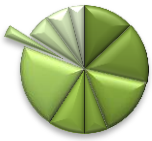
Why Should We End Fossil Fuel Subsidies?

Honouring our G20 commitment to phase out fossil fuel subsidies would free up over $3.6 billion, which must be redirected toward renewable energy in order to:

- **Remove barriers to the development and deployment of renewable energy technologies;**
- **Increase the cost competitiveness of renewable energy sources; and**
- **Foster a favourable investment climate for renewable energy technologies.**

Redirecting these subsidies to the renewable energy industry will contribute almost 80% of the funding required to decrease annual GHG emissions by up to 110 Mt and create 290,000 climate jobs over five years.

Public Transit Infrastructure Fund



In the 2016 Federal Budget, the Liberal Government committed to investing $3.4 billion over three years to upgrade and improve public transit systems across Canada. This funding will be provided through the establishment of a new Public Transit Infrastructure Fund.[vi]

New Building Canada Fund's Provincial-Territorial Infrastructure Component

In the 2016 Federal Budget, the Liberal Government committed to accelerating spending from the New Building Canada Fund's Provincial-Territorial Infrastructure Component (PTIC)[vii] in order to support infrastructure projects that contribute to objectives related to economic growth, a clean environment, and stronger communities. The $10 billion PTIC is divided into two sub-components:

- National and Regional Projects (PTIC–NRP): includes $9 billion for projects that are nationally and regionally significant, and are predominantly medium and large-scale in nature; and
- Small Communities Fund (PTIC—SCF): $1 billion for projects in communities with fewer than 100,000 residents.[viii]

Eligible projects include public transit, renewable energy, northern infrastructure (which could include more efficient buildings and renewable energy projects), and disaster mitigation infrastructure (which could include retrofitting buildings for climate resiliency as well as energy efficiency).

Gas Tax Fund

The Gas Tax Fund provides municipalities with funding to build and revitalize public infrastructure including public transit.[ix] The Gas Tax Fund provides $2.0 billion in funding annually to municipalities for local infrastructure projects.[x]

Proposed Funding: Additional Revenue Sources

Additional Gasoline Surtax

An additional $2 to 2.5 billion dollars in federal revenues[xi] will be generated annually with the inclusion of an additional 5% surtax on gasoline, which could be increased over time. This initiative will be coupled with a refundable tax credit to alleviate costs for workers and low-income earners.

Pay As You Save

Energy efficient retrofits for homes can be financed through innovative Property Assessed Payments for Energy Retrofits (PAPER) programs and Pay as You Save (PAYS) programs. These programs are designed so that the energy cost savings exceed the loan repayments, saving homeowners money and improving the energy efficiency and resale value of their home.[xii]

Pay As You Save: It Just Makes "Cents"

Home and building energy efficiency retrofits can be financed through innovative on-bill loan repayments. The programs are designed so that energy savings exceed the loan repayment. Energy retrofits can be started now to create jobs everywhere, lower GHG emissions, and save homeowners money.

PAPER

- Municipalities utilize Local Improvement Charges (LICs) to facilitate energy retrofit programs that are revenue-neutral;
- Program is designed for major home retrofits and renovations and could also be applied to small businesses, multi-unit residential buildings, and commercial/industrial sectors;
- Innovative financing arrangements raise capital through financial institutions and the property tax system, as demonstrated by projects in the U.S. and the UK;[xiii]
- Financing stays with the property and is transferred with ownership. The new owner continues the payments and receives the energy cost savings;
- Program pays for itself and does not add operational costs to the municipality;
- Loan is repaid as a separate assessment on the property tax bill; and
- Repayments are designed to be less than energy cost savings.

PAYS

- Financing program for smaller retrofits run through financial institutions and utilities;
- Loan is repaid as a surcharge on the utility bill; and
- Repayments are designed to be less than energy cost savings.

The energy savings achieved through home retrofits offset the repayment installments and guarantee energy savings into the future, as well as insulation from energy price volatility. Utility-based on-bill financing could also harmonize with property tax-based financing programs to generate additional benefits.

Green Bonds Scheme: Invest in Canada

Green bonds are a way to finance projects that support environmental objectives, including lowering GHGs. Export Development Canada (EDC), a federal Crown corporation, has previously issued two green bonds of US$300 million.[xiv] The Liberal Government's election platform[xv] highlighted the potential for Green Bonds to support both large and community-scale projects including renewable energy projects, clean power storage, and building retrofits. The government's new initiatives for the transition to a low carbon economy must include a national Green Bonds scheme of $2.5 billion to leverage additional private investment to finance energy efficiency programs and renewable energy development. EDC's portfolio of investments currently includes more international than domestic projects.[xvi] Investments from the proposed national Green Bonds scheme of $2.5 billion must be made in domestic projects for the environmental and employment benefits outlined in the "One Million Climate Jobs" plan to be fully realized.

Carbon Pricing Mechanism

The First Ministers[xvii] have identified carbon pricing as a key element to transition Canada to a more resilient economy while reducing emissions. Putting a price on carbon emissions will enable governments to acquire the additional new capital needed to finance the transition to a low-carbon and climate resilient economy. Carbon pricing mechanisms also provide a clear price signal for business, organizations, and consumers.

Putting a Price on Pollution

Fossil fuel prices do not include negative externalities such as environmental degradation, climate change, air pollution and an increase in health care costs.

Carbon pricing mechanisms catalyze innovation and ingenuity, encourage energy diversification, and create revenues to support the transition to a low-carbon economy.

The federal government has initiated the Working Group on Carbon Pricing Mechanisms to build on the progress already undertaken by the provinces. A portion of the revenue generated from a carbon pricing mechanism should be used to finance the three priority areas of the "One Million Climate Jobs" strategy, and drive innovation and ingenuity.

A carbon pricing mechanism with a harmonized national carbon price of $30 per tonne would provide gross revenues of approximately $15 billion annually.[xviii]

Canada's Ecofiscal Commission (2016) estimated that a carbon price of $30/tonne would generate $1.4 billion in revenue for British Columbia; $5.9 billion in Alberta; $3.9 billion in Ontario; and $1.8 billion in Quebec. These revenues were calculated based on 2013 GHG emissions.[xix]

In addition to using these proceeds to support the transition to a low-carbon economy, revenues should also be used to alleviate the unintended consequences of carbon pricing, including adverse impacts on vulnerable populations.[xx] The Canadian Centre for Policy Alternatives (2014) recommends that a share of the revenues raised be used for a green tax refund, which would ensure that middle class and low-income families receive quarterly credits to offset the increase in expenditures.[xxi]

How Will This Affect Me at the Pump and at Home?

A carbon price of $30/tonne increases the cost of gasoline by $0.067 per litre and the cost of natural gas by $1.50 per gigajoule.[xxii]

Table 4. Estimated Impacts of a $30 per Tonne Carbon Pricing Mechanism

	Single	Couple	Couple with Two Children
Annual Consumption Assumptions			
Natural Gas (GJ)[xxiii]	72	106	128
Gasoline (litres)[xxiv]	2,000	3,000	4,000
Estimate Impacts			
Natural Gas ($1.50/GJ)	$108.00	$159.00	$192.00
Gasoline ($0.067/L)	$134.00	$201.00	$268.00
Total Increase			
	$242.00	**$360.00**	**$460.00**

The green tax refund, modeled after the existing GST credit, will ensure that middle class and low-income families receive quarterly credits to offset the increase in expenditures resulting from a carbon pricing mechanism.

Low Carbon Economy Fund

The Liberal Government has committed to establishing a $2 billion Low Carbon Economy Fund. The Fund is designed to support provincial and territorial actions that reduce GHG emissions and achieve significant reductions in order to facilitate the transition to a low carbon economy and meet Canada's nationally determined target in accordance with the Paris Climate Agreement.[xxv]

Conclusion

The "One Million Climate Jobs" plan lays the foundation for tackling climate change while creating jobs. It also provides a strategy to address poverty and inequality. The proposals outlined in the plan would not only serve displaced workers from polluting industries, but also workers from industries suffering the impacts of climate change, the unemployed, the working poor, as well as Indigenous Peoples and racialized communities.

The financing mechanisms for the "One Million Climate Jobs" plan either already exist or have been recommended by a wide variety of stakeholders to be implemented for the transition to a low carbon economy. If we, as a country, continue to procrastinate and delay taking action, we will find ourselves paying a much heftier cost for our inaction, both economically and socially, as well as environmentally. Climate change could cost Canada up to 6% of GDP by 2050 as a result of infrastructure damages, healthcare costs, reduced performance of Canadian industry, and lost labour hours.[xxvi] Canada has the fiscal capacity and tools to make this transition to a sustainable economic model for the future now. What is needed is the political imagination and courage to make this a national goal and priority. Let's act now to make "One Million Climate Jobs" a reality.

ENDNOTES

i Based on federal expenditures from the 2014-2015 fiscal year of $280.4 billion Department of Finance (2015). *Annual Financial Report of the Government of Canada Fiscal Year 2014–2015* http://www.fin.gc.ca/afr-rfa/2015/report-rapport-eng.asp#toc1

ii Liberal Party (2015). *Real Change: A New Plan for a Strong Middle Class* https://www.liberal.ca/files/2015/10/New-plan-for-a-strong-middle-class.pdf

iii Total Funding Available

	Federal	Provincial-Territorial	Municipal
Existing Annual Funding ($ Billions)			
Redirect Fossil Fuel Subsidies	$2.14	$1.46	
Public Transit Infrastructure Fund		$3.4 (total)	
New Building Canada Fund		$9.0 (total)	
Gas Tax Fund			$2.0
Proposed Annual Funding ($ Billions)			
Additional 5% Surtax on Gasoline	$2.5		
Pay As You Save Financing			$2.0 to $5.0
Green Bonds Scheme	$2.5		
Carbon Pricing Mechanism		$15.0	
Low Carbon Economy Fund	$2.0 (total)		

iv Touchette, Y. (London: Overseas Development Institute, November 2015). *G20 subsidies to oil, gas and coal production: Canada* https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9988.pdf

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xiv Department of Finance (2016). *Budget 2016: Growing the Middle Class* http://www.budget.gc.ca/2016/docs/plan/budget2016-en.pdf

xv Liberal Party (2015). *An Historic Investment Plan* https://www.liberal.ca/files/2015/08/An-historic-investment-plan.pdf

xvi Export Development Canada (2015). *EDC responds to demand for sustainable investment with new Green Bond* http://www.edc.ca/EN/About-Us/News-Room/News-Releases/Pages/green-bond-2015.aspx; and

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xvii Canadian Intergovernmental Conference Secretariat (2016). *Vancouver Declaration on Clean Growth and Climate Change* http://www.scics.gc.ca/english/Conferences.asp?a=viewdocument&id=2401; and

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xxvi National Round Table on the Environment and the Economy (2011). *Paying the Price: The Economic Impacts of Climate Change for Canada* https://www.fcm.ca/Documents/reports/PCP/paying_the_price_EN.pdf