



Making the Shift to a Green Economy

The Green Economy
Network's Common Platform

Prepared by
The Green Economy Network (GEN)
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The Green Economy Network (GEN) is a coalition of labour, environmental, and social justice organizations working to build a green economy in Canada.



Introduction

As members of Canadian-based labour, environmental, faith and social justice organizations, we have come together to form a common front for the building of a green economy in Canada. We have done so recognizing that we are living in a critical moment where decisions made about the climate will profoundly affect our planetary future.

We maintain that, if the plan of action outlined below were to be fully enacted, Canada would be well on the way to creating good jobs across the country while de-carbonizing our economy. These initiatives would generate opportunities for the transition towards a more equitable as well as a more sustainable economy.

The time has come to chart a new economic model, one that requires a fundamental transformation in the way we produce, transport, and consume. We need a new industrial strategy for this country. We must rethink the way we construct buildings, manufacture products and generate energy. We must rethink the way we transport ourselves, move goods, fuel industries, and heat our homes and businesses while ensuring there is affordable green energy for all. We must foster local sustainable economies, provide equitable job opportunities and contribute our fair share to efforts that reduce environmental and social harm internationally.

Ultimately, we must build a green economy and society that transforms production and consumption, ensures energy is available and affordable, and makes the jobs we have more environmentally sustainable while simultaneously creating new decent paying climate jobs and providing Just Transition programs.

Canada finds itself at a crossroads. We must choose to either perpetuate our current unsustainable economic model or decide to embrace a new green economic strategy designed to foster a harmonious relationship between people and the planet while creating climate jobs and promoting green economic development. The foundation for each option is built on energy—the energy we use to fuel our industries, heat our homes, transport materials and ourselves. Ultimately, this new economy must be fueled by renewable forms of energy that are affordable for all Canadians.

Our Three Pillar Plan prioritizes public investment in renewable energy, energy efficiency, and public transit.

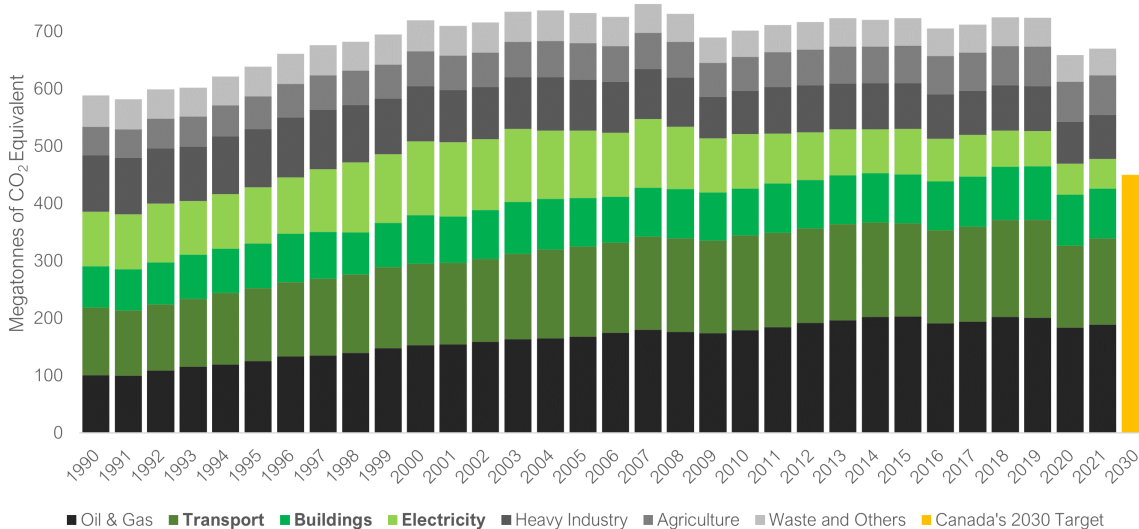
We have identified three priority areas for immediate action to stimulate the transition to a green economy future. These three program priorities are based on several factors including our current energy use and transportation patterns, greenhouse gas emission reductions per dollar invested, and job creation per dollar invested.

The three pillars are:

1. A renewable energy development strategy
2. Improved energy efficiency of homes and buildings
3. Expanded public transit and high-speed intercity rail transport

The transition to a green economy future must be just, sustainable, and participatory. In developing and implementing these program priorities, decision-making processes need to be democratized through community consultations and participation. All levels of government need to work together to deliver these program strategies in collaboration with the communities directly affected.

Chart 1 — Greenhouse Gas Emissions by Economic Sector, Canada, 1990 to 2021



Source: Environment and Climate Change Canada (2023) [National Inventory Report 1990-2020: Greenhouse Gas Sources and Sinks in Canada](#).

Pillar 1

A Renewable Energy Development Strategy

In recent decades, Canada has made progress in de-carbonizing its electricity systems. In 2021, 69% of Canada’s electricity production came from renewable sources, making its grids the fifth greenest in the world.¹ Taking into account both nuclear and renewables, 83% of electricity generated in Canada is emissions-free.²

However, there is still work to be done: a portion of Canada’s electricity still comes from non-renewable sources. More importantly, energy demand is set to double in coming decades, and Canada’s electricity systems are not up to the task of meeting future energy needs. Additionally, electricity grids in Canada remain largely disconnected between provinces, leaving regions that lack robust renewable generation capacity dependent on carbon intensive forms of energy production.

Canada’s Renewable Energy Development Strategy should therefore focus on two key priorities:

1. Expanding renewable energy generation and storage
2. Developing interprovincial grid integration

This strategy should also work to promote the public ownership of electrical generation, storage, and delivery to combat the increase in prices that comes with energy utility privatization.

Canada has enormous potential to harness the potential of renewable energy. Its coastal regions and inland areas provide major opportunities for wind power, and locations in this country rank amongst the best in the world in terms of direct sunlight for solar power production.

Although the implementation for such an initiative resides with provincial/territorial and municipal governments, the federal government has a key role to play in initiating, facilitating, and financing the strategic shift to a renewable energy future across Canada.

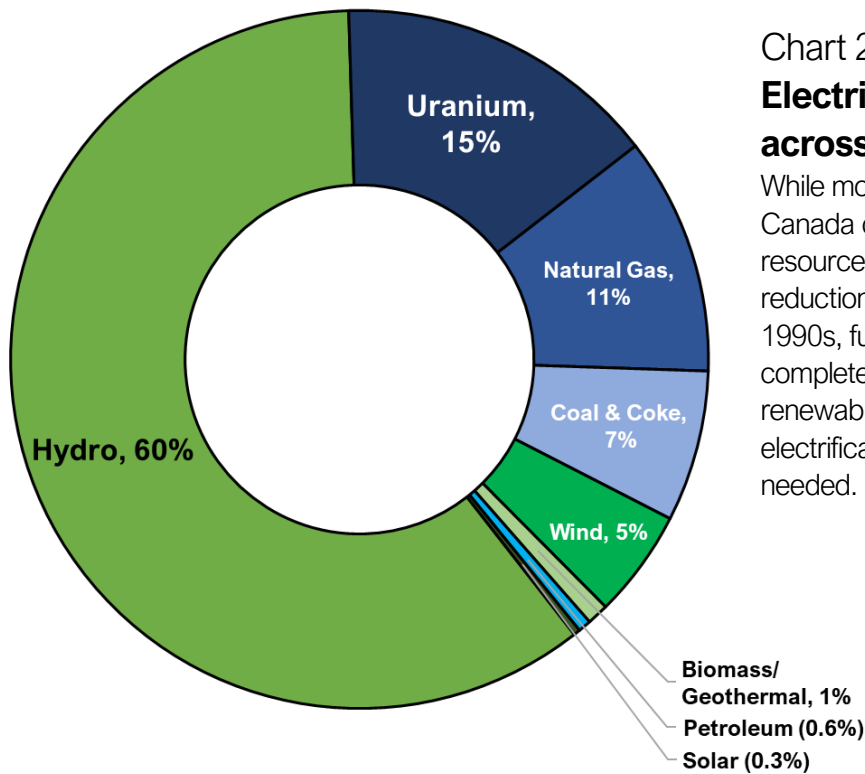


Chart 2
Electricity production across Canada in 2019⁴

While most electricity production in Canada comes from renewable resources with significant reductions in emissions since the 1990s, further investments to completely close the gaps in renewable generation as electrification intensifies are needed.

Key gaps in Canada's electricity sector

Canada has made significant strides in decarbonizing its electricity grid. In 2021, GHG emissions from the electricity sector were 46% lower than they were in 1990, and 60% lower than their peak of 129 megatons in 2001.³ This is, in part, due to successful phaseouts of coal production and power generation in many regions across Canada.

However, Canada still has a long way to go to green its energy profile. Key gaps stem from an insufficient amount of renewable energy production to meet growing energy demand, a lack of interprovincial electricity grid integration, and an overreliance on the private sector.

Under-investment in renewable energy production

In 2021, the federal government committed to achieving net-zero emissions in Canada's electricity grid by 2035 through its Clean Electricity Regulations, which are currently under development as of mid-2023.⁵ However, Canada's current renewable energy capacity remains far below levels needed to achieve this goal, as are current levels of federal investment dedicated to expanding the sector. This is a dilemma compounded by the fact that energy demand is expected to double in the coming decades.⁶

The David Suzuki Foundation estimates that for the Canadian electricity grid to be powered by 100% zero-emissions energy by 2050, an average of over 2,200 new four-MW wind turbines would need to be installed each year, along with 160 new 10-MW solar farms

annually.⁷ Granted, this scenario assumes the phaseout of electricity production that is non-emitting, despite not meeting the “renewable” designation—namely nuclear power. Nonetheless, even maintaining assumptions that the current level of nuclear energy generation will hold constant despite refurbishment needs, projected public investments in renewable energy are insufficient to meet growing energy demand while greening the grid.

Moreover, current regulations contain a series of loopholes and exceptions that allow for the continued reliance on fossil fuel-powered electricity. For example, the proposed Clean Electricity Regulations contain provisions that allow gas plants to continue emitting greenhouse gases beyond 2035.⁸

A lack of interprovincial transmission

Canada’s renewable electricity systems are largely disconnected from each other and to regions that lack access to renewable electricity sources. This is due to the patchwork nature of provincial energy transmission lines, which can run north-to-south across the border with the United States from provinces like Ontario, Québec, New Brunswick and British Columbia, but rarely cross provincial borders. This situation leaves provinces that lack renewable capacity dependent on non-renewable energy sources, while provinces with excess capacity sell their energy surplus to buyers in the US as they lack the infrastructure to power their provincial neighbours.

This lack of east-to-west grid connectivity stems from the fact that electricity generation and delivery is managed at the provincial level. If one province were to invest in a transmission line to another, it would have to pass the costs of the project onto its existing customers. Because many provinces with excess grid

capacity are already oriented to US buyers due to the overwhelming power of the American economy over domestic energy interests, there are a lack of political and economic incentives for these governments to invest in interprovincial connectivity.⁹

Provinces who have the benefit of having largescale renewable energy generation plants have been able to green their electricity grids by phasing out carbon intensive power generation plants. For example, Ontario, which has 7,480 megawatts of installed hydroelectric capacity, was able to phase out its coal-fired generation plants in 2014. Meanwhile, provinces that are not endowed with renewable energy capacity or have not built the infrastructure to harness renewable power, continue to produce high emissions electricity generation. Nova Scotia, for instance, which has just 365 megawatts of installed hydroelectric capacity, relied on coal for 51% of its electricity generation in 2019.¹⁰

The David Suzuki Foundation estimates that more than 6,000 km of new or upgraded cross-jurisdiction transmission lines will need to be built by 2050 to fully harness the green potential of interprovincial connectivity and to transfer renewable electricity surpluses from provinces with the production capacity to those who do not.¹¹

Over-reliance on the private sector

Increasingly the maintenance of Canada’s current energy capacity and the development of new electricity generation has been made through the private sector. This often leads to higher electricity bills for Canadians and a limited ability of the sector to provide good jobs.

Recent decades have seen provinces sell-off of public energy utilities and infrastructure. For example, in 2015 the government of Ontario partially privatized the province's energy transmission agency, Hydro One. Earlier, in 1992, Nova Scotia's Conservative premier privatized the Nova Scotia Power Corporation, the province's sole power utility.¹²

Privatization of Canada's energy systems has taken place not just through the privatization of already-existing assets, but also through public investment in private sector-led development of new energy infrastructure. Typically, investment in new wind and solar energy generation in Canada is made through public subsidies towards the private sector. According to the Canadian Union of Public Employees, this formulation has "enabled the rise of private ownership of electricity generation."¹³

Often, provinces will privatize public goods on the basis this will shore up funds and increase efficiency in the sector. However, these promises often fail to live up to expectations. In the case of Ontario, the privatization the province's electricity system has correlated with rising costs: retail electricity prices increased 4.3% between 2018 and 2021.¹⁴ This should come as no surprise: private companies—unlike publicly owned agencies—are obligated to maximize profits, meaning they must prioritize their shareholders' interests over the public's by keeping costs low and their customers' fees high.

Bottom Line

Canada's renewable energy systems are underdeveloped due to under-investment in renewable energy production, an electricity grid that is largely un-integrated, and the outsized role of the private sector.

A Plan for Renewable Energy in Canada

To achieve a net-zero energy economy, Canada must do more to de-carbonize its electricity profile. To do so, significant public investments in renewable energy and grid integration will be required. We call on the federal government to invest \$40 billion over a five-year period to support the full decarbonization of Canada's electricity production.¹⁵

Investments should be dedicated to the following:

- **\$20 billion** for investments in cross-province electricity transmission.
- **\$15 billion** dedicated to investments in renewable energy generation and storage, as well as interregional grid integration to facilitate cross-provincial electricity transmission.
- **\$5 billion** for investments in Indigenous and rural communities.

To ensure that the jobs to be created by a renewable energy development industry go to Canadians, it is imperative that this plan also contains provisions for domestic procurement.¹⁶ Provisions should also be included to promote the construction of energy infrastructure by unionized workers.

This development of renewable energy production could be financed in large part by withdrawing federal subsidies to the oil and gas industry. Annually, the federal government provides an average of \$4.8 billion in subsidies for oil and gas producers.¹⁷ Removing these would both shore-up resources for renewable energy development and stall fossil fuel industry growth, thus tackling the outsized impact oil and gas production has on Canada's emissions profile.

Government action may, and secular economic trends will, have disruptive impacts on workers and communities dependent on Canadian oil and gas production. A phase-out of the industry must therefore coincide with Just Transition programs that will ensure workers in the industry do not suffer financially through the extension of employment supports, re-training programs, and early retirement packages, as well as targeted economic investments aimed at job creation in affected regions.¹⁸ Moreover, investments renewable energy infrastructure should be targeted to regions that will be (or already have been) negatively affected by shifts in the energy economy, such as the transition away from coal or the move towards a more integrated grid.

In all cases, the development of renewable energy should involve proper participation with the communities affected. Equally essential are employment opportunities and measures to support the development of Indigenous-led energy development on Indigenous lands. The federal government already deploys programming to help Indigenous, rural, and remote communities transition away from diesel-reliant electricity generation.¹⁹ However, larger scale investments are still required to meet established clean electricity targets.

Benefits of improving Canada’s renewable energy systems

Fully de-carbonizing, expanding, and integrating Canada’s electricity systems and providing financing through the removing of subsidies for the fossil fuel industry would reduce carbon emissions while creating good, green jobs.

Public investment in renewable energy development will generate thousands of new jobs in Canada. Over a five-year period, a \$40 billion investment towards greening the grid

could create between 177,200 and 240,000 jobs. This would partially offset the projected job loss that would result from removing fossil fuel subsidies, which create between 12,672 and 18,144 annual jobs on average, amounting to a total of between 63,360 and 90,720 annual jobs spread over five years.²⁰

Table 1
Economic impacts of proposed Renewable Electricity Plan²¹

Proposed spending (per year)

(\$ billions)	\$8.0
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Projected employment impacts (jobs created per year)

Low estimate	35,440
.....	
High estimate	48,000

Renewable energy development is proven to substantially decrease electricity emissions. Take, for example, the case of Denmark where carbon emissions from electricity production were reduced by 36% between 2005 and 2019, mainly because the country made a decisive move to increase reliance on wind power.²²

Similar results can be expected as the result of development of other renewable energy sources such as solar. The Netherlands has been steadily expanding its solar capacity since the 2000s, which has in part contributed to a reduction in greenhouse gas emissions from the country of 29% between 2005 and 2019.²³

One proposed method of funding—the removal of fossil fuel subsidies—would also positively contribute to reducing Canada’s emissions profile. Despite strides in de-carbonizing the electricity sector, oil and gas production in Canada has continued to grow, neutralizing gains made in energy emissions reductions.

National GHG emissions from the oil and gas sector increased by 88% between 1990 and 2021. During this same period, emissions from conventional oil production increased by 24% and oil sands emissions increased by 463%. The latter increase has been the primary factor leading to oil and gas production becoming the largest source of Canadian GHG emissions, accounting for 28% of total national emissions in 2021. Although the industry has taken steps to reduce emissions intensity on a barrel-by-barrel basis, GHG emissions from oil sands crude bitumen production are still 2.2 times higher than conventional crude production.²⁴

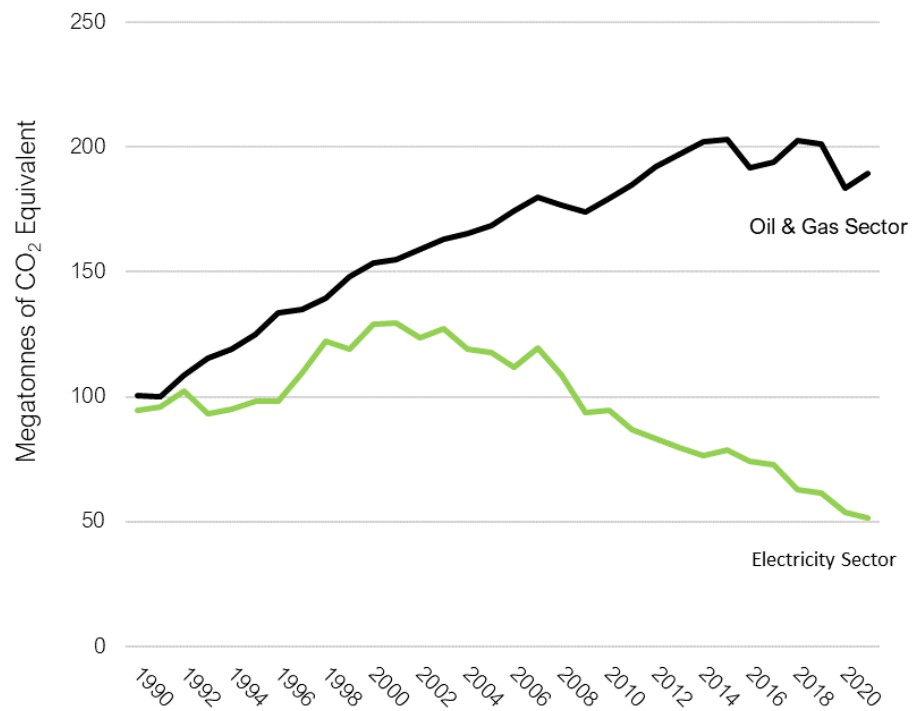
As such, strides made to de-carbonize Canada’s energy profile have been hampered, despite progress made in the electricity sector. In 1990,

both the electricity generation sector and the oil and gas sector each contributed to around 100 megatonnes of GHG emissions annually. In 2021, the former’s emissions had decreased to 51 megatonnes of annual GHG emissions, while the latter’s contribution had increased to 189 megatonnes.

Removal of subsidies, along with the government’s forthcoming oil and gas sector emissions cap, would contribute to winding-down the industry.

The transition from fossil fuel provides opportunities for introducing measures to ensure greater social equity and participation in our economy. These measures must include the establishment of Just Transition programs to assist workers in upgrading their skills for other employment, including employment in renewable energy production, energy efficiency, and public transit. These measures must also ensure that workers in marginalized urban and rural communities have new employment opportunities in these industries and others.²⁶

**Chart 3
Canada’s
Electricity Sector
Emissions vs.
Oil & Gas Sector
Emissions,
1990-2021²⁵**



Pillar 2

A Green Homes and Buildings Strategy

To meet its commitment to mitigating the impact of climate change, Canada must dramatically reduce its energy consumption. It must also adapt its buildings to cope with the increasing number and severity of extreme weather events. However, Canada's building stock was not designed to meet these new challenges.

Building energy use must be reduced substantially to meet mitigation and adaptation goals. Standards of new construction must be much higher, and the existing building stock must undergo deep retrofitting to achieve successful energy conservation objectives.

Our current housing and building stock result in an enormous amount of energy waste: when electricity-related emissions are accounted for, 18% of Canada's greenhouse gas emissions are attributable to the buildings sector.²⁷ It is even more when we include manufacturing, transportation and decommissioning activities associated with the construction process.

Energy efficiency and conservation are our cleanest, cheapest, and most productive energy sources: the cheapest energy is the energy you don't use. Investing in energy efficiency and conservation boosts productivity, reduces costs,

cleans our air and water, and creates jobs throughout the economy.

An energy efficient economy is a strong, competitive economy. It has lower electricity bills due to energy savings, freeing up capital for investment and discretionary income for personal spending. Energy efficiency is also unique among energy sources in that it pays for itself through savings over time. While we tend to think of energy savings in relation to our housing stock, there are major savings to be made in commercial and public buildings across the country.

Canada needs a bold plan to transform this country's housing and building stock. This means expanding the federal approach so it can adequately meet the climate challenge.

Improving Canada's approach to energy efficiency must focus on two key areas:

1. **Green Homes:** providing deep retrofits to Canada's existing residential dwellings and ensuring future homes meet net-zero standards.
2. **Green Buildings:** Making our current and future commercial and institutional building stock carbon neutral.

In both areas, Canada must improve its various building and energy codes to speed-up the process of decarbonizing Canada's physical infrastructure.



Photo by Narciso Arellano on Unsplash

Gaps in Canada's Green Homes and Buildings Strategy

Canada has committed to a net-zero economy by 2050. However, our current approach to energy efficiency falls short.

For the past decade, our annual retrofit rate has been below 1% for residential buildings and 1.4% for commercial buildings.²⁸ At that rate, it would take over 100 years for Canada to reduce its existing building stock to net-zero, even though the government has committed to a net-zero economy by 2050.

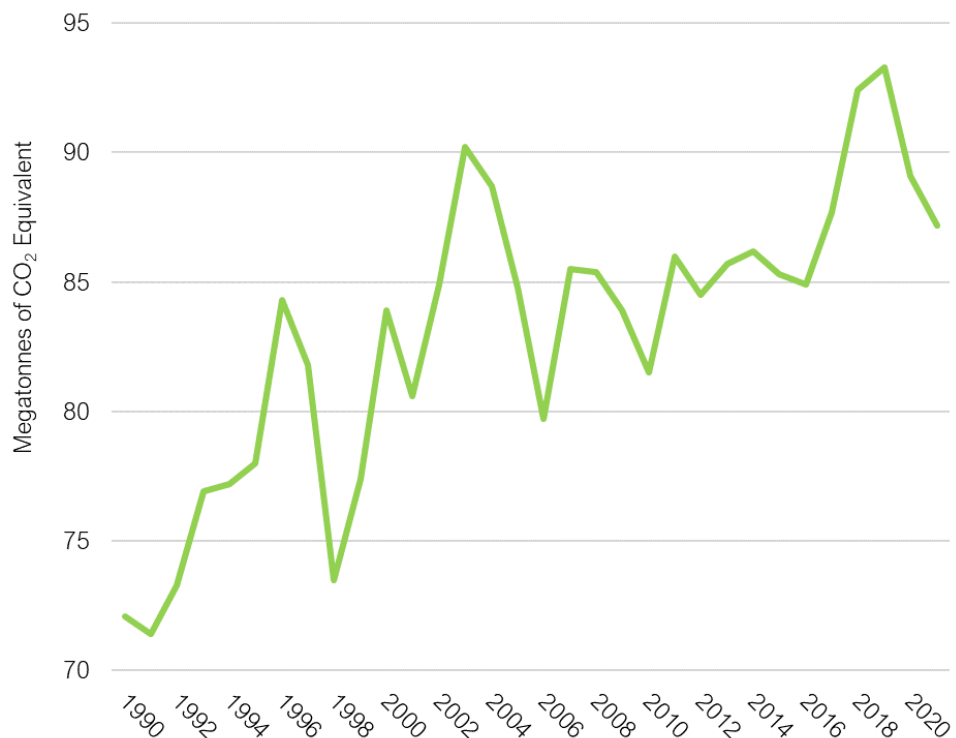
To reach net-zero emissions in the building sector on time, we will need to retrofit our building stock at a rate of 5% per year, at a minimum.²⁹

The federal government introduced plans for a Green Buildings Strategy in 2021. But the funding it has provided for its initiatives is not nearly enough to decarbonize our building stock to meet the government's ambitious climate targets.

Gaps in Canada's green infrastructure policy stems from a lack of funding for its current retrofitting programs, inadequate focus on the needs of low-income Canadians, too little attention to workforce training and a lack of a universal building code that is up to the challenge of meeting net-zero emissions.

Meanwhile, building sector emissions will continue to grow, despite a momentary decrease in emissions in recent years due to the pandemic, if action is not taken. As the buildings sector continues to be the third largest emitter of greenhouse gases and the second largest consumer of energy across Canada's economic sectors, actions in this sector would have a substantial effect on emissions reductions.

Chart 4
Canada's Buildings Sector Greenhouse Gas Emissions, 1990-2021³⁰



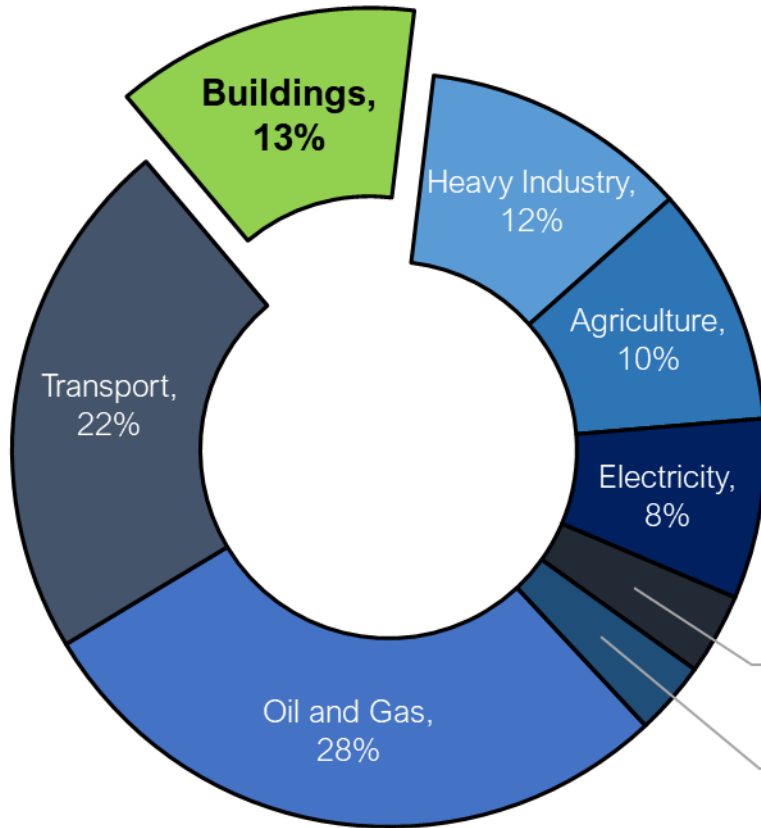
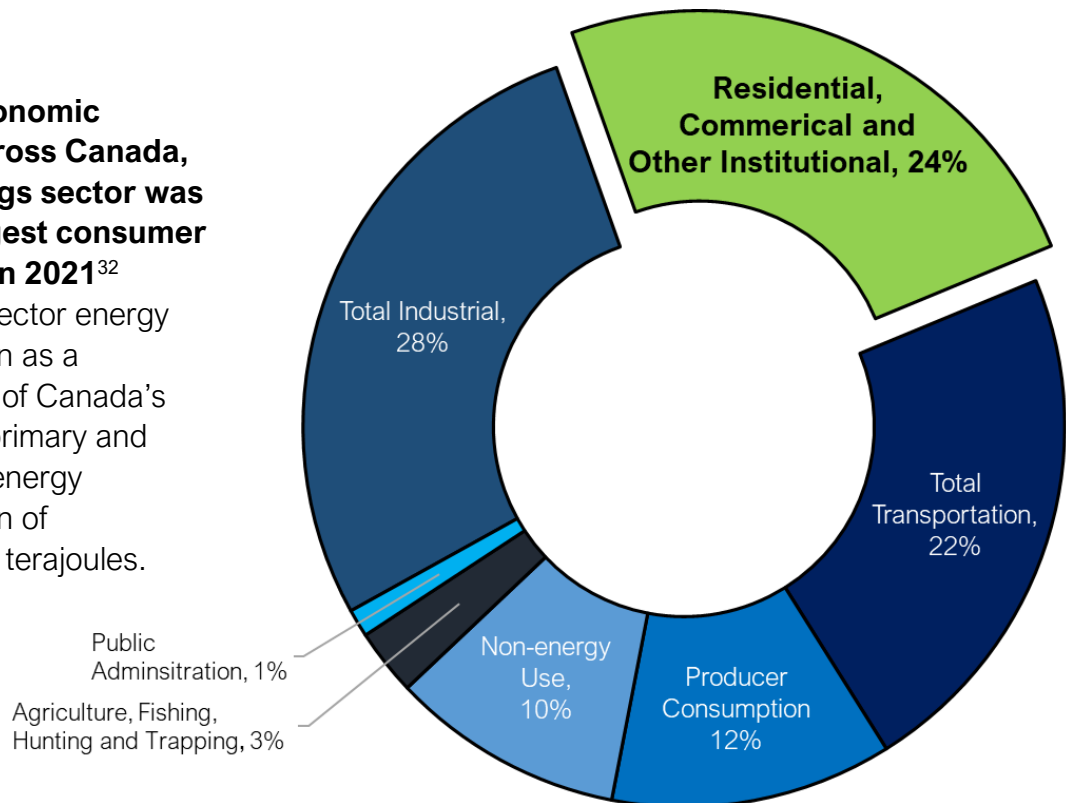


Chart 5
Among economic sectors across Canada, the buildings sector was the 3rd largest emitter of CO₂ equivalent emissions in 2021³¹

Economic sector emissions as a percentage of Canada's total 2021 greenhouse gas emissions of 670 megatonnes of CO₂ equivalent.

Chart 6
Among economic sectors across Canada, the buildings sector was the 2nd largest consumer of energy in 2021³²

Economic sector energy consumption as a percentage of Canada's total 2021 primary and secondary energy consumption of 10,452,604 terajoules.



Inadequate spending and standards

The federal government has made progress in recent years regarding its approach to decarbonizing the country's building infrastructure. However, these programs lack the funding and regulatory stringency needed to achieve net-zero emissions in the sector by 2050.

Over the next 5 years, the government plans to spend \$4 billion to retrofit Canada's housing and building stock. Part of this spending is allocated to the Greener Homes Initiative, which was introduced in 2021 and provides grants for homeowners making energy-efficient investments in their residences. The Canada Infrastructure Bank (CIB) has also allocated \$2 billion for large-scale buildings in both the private and public sector.

However, the amount of funding provided by the Greener Homes program and the CIB is inadequate, a fact acknowledged by Natural Resources Canada. The government estimates that retrofitting Canada's entire building stock by 2050 would cost between \$20 and \$32 billion per year, far more than the \$4 billion currently allocated.³³

Additionally, in 2023 the government introduced a sustainable jobs stream under its Union Training and Innovation Program, which provides resources to union-led job training programs for workers in the building sector.

However, this program currently only has tens of millions of dollars allocated to it, which pails in comparison to the funding that would be needed to meet the demand for new jobs in the industry. If Canada's building stock is going to see a successful decarbonization in the coming decades, funding must increase.³⁴

On the regulatory front, Canada's national building performance standards are not stringent enough. This means that many new buildings have suboptimal insulation, outdated HVAC systems, and limited energy conservation measures.

In 2022, the National Research Council published its latest National Model Building Codes for new buildings. This new code features a tiered performance model, with the highest tier of building being one that is "net-zero energy ready," meaning buildings can supply their own needs with renewable energy. Because codes are set at the provincial and municipal levels, it is up to these jurisdictions, voluntarily, to adopt the federal standard, meaning standards vary widely across Canada.³⁵

Moreover, Canada's current approach to building codes is primarily focused on ensuring new building stock will be net-zero. However, focusing on the low hanging fruit leaves out the challenge of our existing buildings, most of which will still be in use in 2050. Without a comprehensive retrofit program, it will not be possible to make Canada's total building stock truly carbon-neutral within the government's climate timeframe.

A lack of focus on low-income Canadians

Additionally, there are significant weaknesses in Canada's approach to giving persons on low-income access to its retrofit programs. Under the current federal Green Homes Program, homeowners are required to pay upfront for retrofitting upgrades to their properties before they receive any grants. This model is a barrier to low-income Canadians who do not have enough disposable income to cover these expenditures.³⁶ Lack of access to energy efficient upgrades for low-income households limits the government's ability to tackle energy poverty.

What is energy poverty?

Efficiency Canada defines energy poverty as “a condition where households face significant challenges meeting their essential home energy needs, paying for their energy costs or accessing other life necessities due to disproportionate spending on energy costs or obtaining energy efficiency upgrades necessary to reduce their energy costs.” It has been estimated that energy poverty affects 3.9 million Canadian households.³⁷

The government has made some strides in recognizing these barriers. In 2022, it announced \$250 million in federal funding over 4 years to help low-income Canadians switch from oil-based home heating systems to energy-efficient heat pumps. However, this pales in comparison to the amount needed to ensure all low-income Canadians have access to these cost saving technologies.³⁸

A Plan for Green Homes and Buildings in Canada

To reach net-zero carbon emissions by 2050, Canada must implement a unified Green Homes and Buildings program, expanding the progress it has already made through its recently implemented initiatives.

To ensure Canada’s approach to decarbonizing our housing and commercial infrastructure effective, we will need to spend big.

We call for a \$65.5 billion dollar investment in green homes and buildings across Canada over a 5-year period.³⁹

- \$10 billion per year for deep retrofits on Canada’s residential building stock **(\$50 billion total)**.
- \$2 billion per year for a Low-Income Housing Retrofit Grant Program retrofit program that would see the government cover 100% of upfront costs for eligible candidates upgrading housing units **(\$10 billion total)**.
- **\$1 billion** for a Non-Profit Sector Retrofit Grant Program to support the retrofitting of buildings and residences within the non-profit sector
- \$100 million per year to a federal agency dedicated to improving retrofitting productivity **(\$500 million total)**.
- **\$4 billion** to support the development of retrofits for large-scale commercial infrastructure and making our domestic supply chains for energy efficient
- **\$1 billion** for a program that would train the workers needed to provide the large quantity of retrofits needed to get to net-zero.

As appropriate, elements of this investment should also be used to improve Canada’s federal building code and to provide incentive mechanisms for provinces and municipalities to adopt these standards.

This program would aim to achieve the following objectives:

1. Expanding retrofit funding and improving financing mechanisms
2. Augmenting and universalizing Canada’s building codes
3. Enhancing industry-level training
4. Improving industry effectiveness by promoting public sector development

Expanding funding and improving financing mechanisms

One major barrier preventing households and businesses from purchasing retrofit upgrades is the high upfront costs associated with these projects, even when the government provides grants to home and building owners. Under current federal arraignments, retrofit grant programs require applicants to assume the full cost of the retrofit, then apply for grants to be partially reimbursed after the project has been completed. This is especially cumbersome for low-income homeowners, but also creates hesitation on the part of middle class and high-income earners, as well as firms who want certainty that they will not be stuck footing the whole bill.

This issue can be obviated if the government assume the costs of retrofits and pre-retrofit energy evaluations at the onset, thus lowering the financial burden on individuals. For low-income earners, this would mean that the government would cover 100% of the cost at no charge to the applicant. For everyone else, the government would also pay 100% of the costs at the onset, but 50% of the total cost would be paid by the applicant over the long-term.

Through a “pay-as-you-save”⁴⁰ program, this payback program would create no financial burden for the home/building owner. Energy efficient homes cost less to heat and cool. This means that when a person retrofits their property, the difference between what their monthly energy bill is post-retrofit versus what it was pre-retrofit is high enough that much of it can be used to pay back the government for the cost of the job, while still providing the owner with savings during the payback period. upgrades for low-income households limits the government’s ability to tackle energy poverty.

An example of “Pay as You Save”

On-Bill Repayments with Manitoba Hydro’s Home Energy Efficiency Loan provides financing of a minimum of \$500 up to \$7500 for energy efficiency improvements with no down payment required. The on-bill repayment system allows residents to pay instalments on their hydro bill for a maximum loan period of 5 years and starts at just \$15/month.

Improving building codes

Additionally, speeding up the retrofit rate can be driven by incentives through funding bonuses for provinces that have (1) a plan to adopt the upper performance tiers of the federal building codes, (2) a plan to achieve compliance with these standards, and (3) the introduction of mandatory energy performance labels and reporting for both residential and commercial buildings.⁴¹ Federal building performance standards would also be improved if they took into account “embodied carbon”—that is, the carbon emissions arising from the manufacturing, transportation, installation, maintenance, and disposal of building materials.⁴²

Once standards around embodied carbon are set at the federal government, funding incentives could be implemented to increase the rate at which those in the building and retrofit industry buy from domestic suppliers, since domestically-purchased building materials typically have lower rates of embodied carbon than their international counterparts.⁴³

Providing better industry-level training

Making it easier for home and building owners to access retrofitting funding by reducing costs will create demand for thousands of tradespeople associated with the buildings industry. These new jobs will require new forms of training, as retrofitting requires a high degree of knowledge, skills and competencies, given the significant variation in buildings across Canada. As such, funding for training should take the form of significant investments in vocational education and training programs, as well as the expansion of training centres.

The government should also more stringently regulate training standards in a push towards moving training away from a focus on narrow skills and towards one that provides workers with the tools they need to excel in their long-term careers in the industry. Training that focuses on theoretical knowledge and a broad range of on-the-job skillsets has been shown to be more effective in producing a workforce capable of developing infrastructure that is in-line with climate friendly building standards.⁴⁴

There should also be a focus on providing workers in the industry with an understanding of how their jobs connect with the fight against climate change.⁴⁵

Promoting public sector development

While the approach to retrofitting is currently reliant on the private sector to provide retrofitters and appraisers, the scope of upgrades needed to reach net-zero will require more active government intervention. In addition to providing funding for training for workers in this industry, the government should also create an agency dedicated to directly facilitating the providing of Canada's building stock with deep retrofits.⁴⁶ This agency would directly employ workers who would connect home and building owners with suppliers and contractors in the building retrofit industry in order to scale-up retrofit projects and make sure the industry runs as effectively as possible.

The power of public sector leadership: the EnergieSprong approach

EnergieSprong, which translates to “energy leap,” is a model of building retrofits developed in the Netherlands and is picking up steam globally.⁴⁷ Through this program, suppliers and contractors work collaboratively to provide deep retrofits in an integrated, large-scale basis. This collaboration is facilitated by an independent entity, which augments supply chain efficiency through demand aggregation: a large number of similar buildings are pooled into a single project, which increases the scale of demand and provides an incentive for previously atomized service providers and contractors to work together in an integrated fashion, rather than on a project-by-project basis. The program has proved highly successful in the Netherlands, where it is being implemented in the social housing sector to help the country fulfil its goal of making its entire housing stock net-zero by 2050.

Benefits of greening Canada’s homes and buildings

Achieving the target objectives for the Green Homes and Green Buildings Strategy will result in a substantial increase in the energy efficiency of Canadian buildings and ensure that our building stock gets to net-zero by 2050. An investment of this magnitude will result in thousands of jobs being created in the Canadian economy while saving Canadian money on their utilities bills.

By the government’s own admission, its current approach to greening Canada’s home and building stock falls short. To get Canada’s homes and buildings to net-zero by 2050, spending upwards of between \$580 and \$972 billion will be required.⁴⁸ This means that, GEN’s 5-year plan for Green Homes and Green Buildings will require renewal after its initial period of implementation. Nonetheless, the benefits of avoiding climate catastrophe will outweigh the costs of this spending programme in the long run.

Additionally, saving Canadians money on their energy bills will relieve the financial burden for millions at a time when cost-of-living has drastically increased on an economy-wide scale. Some estimates put the rate of energy poverty in Canada as high as between 18-19%.

⁴⁹Meanwhile, Canadians are experiencing all-time high prices when it comes to purchasing their other necessities. Reducing the cost of heating and cooling homes would counter-balance these trends and allow Canadians to spend more and spend on what matters most.

Spending on building retrofits and construction creates between 7.63 and 9.76 jobs per \$1 million. This means that a \$65.5 billion investment in greening Canada’s home & building stock could create between 499,765 and 639,280 jobs over a 5-year period (see Table 1). By attaching incentive mechanisms that ensure jobs in this sector are well-paying and unionized—as the government has done with investment tax credits for the clean energy industry⁵¹—the federal government can ensure that these green jobs are also good jobs.

Table 2
Economic Impacts of Proposed Green Homes and Buildings Plan⁵⁰

Proposed Spending						
	Year 1	Year 2	Year 3	Year 4	Year 5	Annual Average
\$ (Billions)	\$8	\$10.6	\$13.3	\$16	\$18.6	\$13.3
Projected Employment Impacts (Jobs Created)						
	Year 1	Year 2	Year 3	Year 4	Year 5	Annual Average
High Estimate	62,040	80,878	97,090	122,080	141,918	100,801
Low Estimate	78,080	103,456	129,808	156,160	181,536	129,808

Pillar 3

A National Public Transit Strategy

For Canada to make the much-needed shift to a green economy, major investments will be needed to enhance our public transit and intercity rail capacity to reduce our dependency on private automobiles.

The transportation sector was responsible for 21 percent of Canada's greenhouse gas emissions in 2021.⁵² Just over half of the energy used in this sector is specifically dedicated to transporting people.⁵³

Because buses and trains are more efficient at moving people than personal vehicles and airplanes, increasing investments in public transportation will significantly reduce fuel consumption rates and carbon emissions.⁵⁴

Transportation is also a quality-of-life issue. In comparison to transit passengers, those who get

around by personal vehicle are more likely to suffer from traffic congestion-related stress, property damage, and even death. In a single year, public transportation has been estimated to save Canadians about \$12.62 billion in vehicle operating costs and \$3.17 billion in collision costs.⁵⁵ There is an urgent need to rethink how we transport people.

Additionally, there are significant economic benefits that come with investment in public transit.⁵⁶

Public transit has also been shown to contribute to at least \$6.2 billion of economic output in Canada in a single year, all while reducing greenhouse gas emissions by 4.7 million tonnes. In 2017 alone, the transit industry directly employed 59,600 people, and investment in transit infrastructure created an additional 65,000 jobs.⁵⁷

In sum, public investment in transit is a cost-effective solution to improve lives, create good jobs, and reduce Canada's carbon footprint.



Photo by Jmeel Sonagara on Unsplash

Canada needs a national transportation plan designed to encourage Canadians to reduce their dependency on private automobiles as their main mode of transport. We propose a **National Public Transportation Strategy** that involves a two-pronged approach:

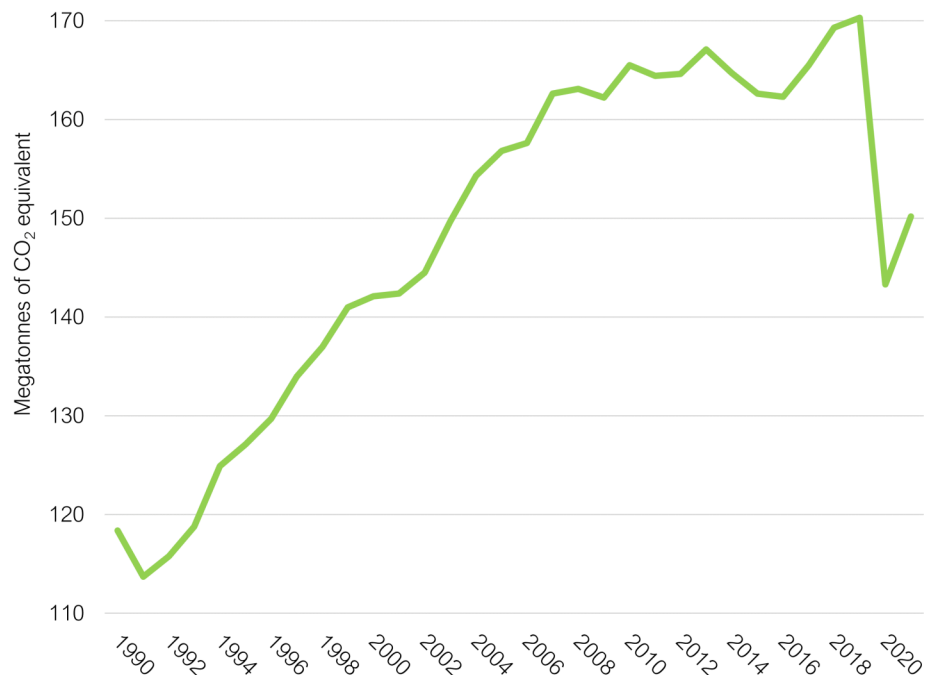
1. **Improving transit within communities:** the development and/or the expansion of public transit systems within municipalities across the country.
2. **Improving transit between communities:** the development of high-speed rail systems in urban corridors and inter-community transit between rural and Indigenous communities.

To be effective, the Public Transportation Strategy needs to be accessible, affordable, and accountable.

Transit within Canadian communities: key issues

Canadians are less satisfied with the current state of public transit in their communities when compared to other public services such as healthcare and education.⁵⁹ This should come as no surprise: for those who use public transit, average commuting times are nearly double what they are for those who use personal vehicles.⁶⁰ This has environmental implications, as GHG emissions from the transportation sector have increased significantly over the last three decades: between 1990 and 2021, transportation-related emissions increased by 27%, a change partially attributable to a growth in vehicles on the road.⁶¹

Chart 7
Canada's Transit Sector Greenhouse Gas Emissions, 1990-2021⁵⁸



These issues stem from underfunding, as well as Canada’s piecemeal approach to the development of public transit which is overly dependent on private sector actors that often fail to produce optimal results. Fixing these issues to increase public transit use within communities will be key to cutting emissions in the transportation sector.

Underfunding

Issues in underfunding stem in large part from under-capacity at the municipal level. Provincial and federal governments help municipalities pay for capital projects in public transportation, but municipal governments still end up bearing the brunt of operations costs. An average of 51% of operating costs are covered through ridership fees; the rest is covered by municipal property taxes. However, municipalities are limited in their ability to generate revenues, receiving just 10% of total tax receipts, which often puts a financial strain on public transit authorities.⁶²

In 2020, ridership declined because of the COVID-19 pandemic. To supplement the loss

of ridership revenues, the government established the Safe Restart Agreement, which provided funds for operations costs within municipalities in need. It renewed its support for the program in 2022 through an additional infusion of cash. However, that funding has since run out, and ridership remains below pre-pandemic levels, forcing many municipalities to enact service cuts.⁶³

In 2021, the federal government announced the introduction of a Permanent Public Transit Fund to help fund the building of inner-city transit.⁶⁴ However, this funding does not cover operations expenses. When public transit services’ operations costs are underfunded, it creates a vicious cycle whereby unreliable arrivals and long wait times incentivize users to opt for alternative options, which lowers revenues generated by fares.⁶⁵

Often, municipalities have the capacity to fund the development of public transit, but not to run these systems once they’ve been built. This capacity issue has been exacerbated by the growing tendency of provinces to download the costs of service delivery onto municipal governments.⁶⁶

Underfunding and the Public Transit Death Spiral

When public transit systems are underserved, it creates a vicious cycle. Unreliable public transit leads to lower ridership, which leads to lower fare revenues. When revenues decline, municipalities often cut services to make up the difference. However, service cuts lead to even more fare revenue declines by further exacerbating unreliability.

In 2023, the City of Toronto announced it would be hiking fares by 10 cents per ride, while at the same time cutting services 9 percent below pre-2020 levels. Despite justifying the decision on financial grounds, the city has acknowledged that this change will increase wait times and overcrowding. This negative feedback loop puts the city at risk from suffering from what critics call a public transit “death spiral.”

Additionally, under the federal government's funds-matching approach to transit project investment, cities and towns in provinces that do not want to match federal funding for transit development are unable to use federal assistance.

Over-reliance on the private sector

Paradoxically, the low capacity of Canada's municipal public sectors has in many cases raised project costs by making public authorities dependent on the private sector to complete transit projects.

In-part due to a lack of in-house capacity, municipalities across North America have for decades become increasingly reliant on public-private-partnership (P3) arrangements for transit development projects.⁶⁷ P3s are contracts in which one or more private firms assume responsibility for activities once undertaken by the public sector. They vary in private sector involvement: P3s often entail the private sector operating or maintaining public infrastructure; in other instances, the private sector may design, build, finance, own, and maintain said services.⁶⁸

P3s have been the preferred model of public infrastructure development for the federal government since the Harper era. In 2009, the government founded Public-Private-Partnerships (PPP) Canada, a Crown Corporation tasked with promoting P3 development. PPP Canada managed the "P3 Canada fund," which allowed provinces and municipalities to apply for funding from the federal government to finance projects that had "meaningful private sector involvement."⁶⁹ PPP Canada was dissolved by the Liberals in 2017 as the government reasoned that "with the P3 model now widely adopted across Canada, PPP Canada has effectively fulfilled its mandate." Indeed, by this time, there were more than 250

P3 projects either under construction or operational across the country.⁷⁰

PPP Canada has since been succeeded by the Canada Infrastructure Bank (CIB), which was given a mandate by the federal government to invest in "revenue generating infrastructure which benefits Canadians and attracts private capital."⁷¹ The CIB has been criticized by three of Canada's largest public sector trade unions for promoting privatization,⁷² as well as by academics for failing to achieve its objectives.⁷³

Proponents of P3s claim that this model save municipalities money and offload risk away from the public sector, while ensuring infrastructure is built in a timely manner. However, there is mounting evidence that the P3 model has significant downsides and often fails to meet these ends.

Regarding project timelines, a 2021 report by the Office of the Parliamentary Budget Officer on the CIB noted that when it comes to P3 projects, funding delays are "pervasive."⁷⁴ Moreover, despite their cost-saving aim, P3s often end up costing public authorities more than public approaches to infrastructure development. A 2014 report by the Ontario Auditor General analyzed 74 P3s in the province and found that they cost the government \$8 billion dollars more than if they had been completed through a public procurement model.⁷⁵

P3s also often lead to diminished quality of service and construction regarding much-needed expansions to inner-city transit infrastructure, as has been the case with inner-city light rail transit (LRT) development in Ottawa. Ottawa's LRT project has gained notoriety for construction delays and service failures.⁷⁶ In response to several breakdowns and derailments that occurred since the opening of Ottawa's Confederation Line

in 2019, the Ottawa Light Rail Transit Commission (OLRTC) was established to investigate the cause of and potential remedy for these issues. In 2022, the OLRTC released its Final Report of the Ottawa LRT Public Inquiry. The report noted that the project’s reliance on the private sector to build and maintain the system “led to a situation where the parties’ attention was diverted to protecting their legal rights instead of opening a reliable LRT.”⁷⁷

Bottom line

Canada’s public transit systems suffer from low public sector capacity to build and maintain major transit projects, as well a corresponding overdependence on private companies that are often ill-suited to meet the task of providing public goods. This diminishes the ability of public transit systems to provide Canadians with a viable alternative to performing day-to-day activities with a personal vehicle.

Transit between Canadian communities: key issues

Canada is behind the rest of the industrialized world in developing transit between communities. This gap can be primarily attributed to deficiencies that exist in our inter-community rail and bus services.

Inter-community rail

Regarding the issue of rail, Canada is currently the only G7 country without any high-speed rail (HSR) trains in operation. Meanwhile, Canada’s national passenger rail service provider, VIA, has become notorious for unreliability, boasting an on-time performance record of just 53%.⁷⁸ As is the case with transit within communities, few reliable and economical rail options between communities means more GHG emissions from cars on the road and planes in the air.

Table 3

High-Speed Rail in the G7 Compared⁷⁹

Country	Km of HSR Track in commercial operation, 2021	Km of HSR track under construction, 2021
Canada	0	0
France	2735	—
Germany	1571	147
Italy	921	327
Japan	3081	402
United Kingdom	113	225
United States	735	274

Nonetheless, there is a distant light at the end of the tunnel: we are currently on-track to towards the potential creation of three new HSR train lines in Canada’s busiest corridors.

However, persistent underfunding of VIA Rail and a lack of a mandate for the agency has left the private sector and other jurisdictions to take the lead in developing these projects, which could hamper their success.

Despite calls for VIA to develop HSR across the Canadian west coast’s two busiest passages (the Edmonton-Calgary and Vancouver-Seattle corridors), the agency is not involved in any of the proposed projects aimed at doing just that.

In Alberta, two projects have been proposed to see the private development of HSR between Edmonton and Calgary. The first is led by the Prairie Link Rail Partnership (PLRP), a joint initiative between two private firms. The project is projected to cost approx. \$9 billion as a P3 between the PLRP and the Alberta government. The second, being proposed by TransPod Inc., proposes the use of untested “hyperloop” technology to connect the cities. The project’s feasibility is highly questionable,⁸⁰ and thus risks delaying meaningful action on inter-city transit in the province. Meanwhile, in British Columbia, the provincial government is currently studying the feasibility of a high-speed rail line that would run between Vancouver, Seattle, and Portland in partnership with Washington State and Oregon.⁸¹

Without VIA Rail supporting the development of HSR projects in BC and Alberta, these projects risk being scrapped before construction begins, as is often the case with rail projects that lack federal support.⁸²

In the sole instance where the federal government is developing new infrastructure akin to what HSR advocates have been calling for, it is leaning heavily on the private sector and promising less-than-optimal solutions.

The government is pursuing a “High-Frequency Rail” project along the Windsor-Quebec City corridor. This will require building a new track linking Windsor, London, Toronto, Ottawa, Montreal, and Quebec City with a fleet of electric trains running on a regular basis. Rather than construct the project by public means, the government is pursuing a P3 contract and intends to outsource the financing, building, operation, and maintenance of the corridor to the private sector.⁸³

In December 2022, the government created a subsidiary of VIA to facilitate the project, and it is currently undergoing a procurement process to select a private firm that would lead in the line’s development. Construction is expected to begin in 2027, and the government is aiming to finish the project by the early-2030s.

Whether or not these trains will reach speeds that meet the “high-speed” designation remains an open question. When the project was announced in 2021, it proposed trains that would reach max speeds of 200 km/h, which is less than what is considered high-speed for new lines. However, the government is now “challenging” private partners to come up with a design that allows trains to reach 300 km/h, although additional funding has not been allocated to assist in meeting this goal.⁸⁴

Inter-community bus

The issue of rail systems along major corridors is only one piece of the inter-community transit puzzle. Canadians also lack access to viable bus services between municipalities, an issue that primarily impacts rural regions.

In 2018, Greyhound—once the largest inter-city bus service provider in the country—ceased operations in Western Canada. In 2021, the company fully ended operations nation-wide. Meanwhile, austerity policies have led to the shutdown of many publicly operated bus

services. This was the case in with the closure of the Saskatchewan Transportation Company in 2017.⁸⁵

A lack of access to bus service leaves people in rural areas with no choice but to commute between towns by personal vehicle. If this is not an option, many are forced to either hitchhike or use unregulated ridesharing. This issue particularly impacts Indigenous communities in Canada, as approximately 60 percent of Indigenous people live in rural regions.⁸⁶

Since Greyhound's departure, other operators have slowly begun filling in the gaps in Canada's inter-community bus service. However, it has been mostly private firms that have been investing in Canada's busiest and most lucrative corridors, such as the route between Montreal, Ottawa, and Toronto, leaving many small-town residents out to dry.⁸⁷

One expectation has been Ontario Northland, a crown corporation which provides inter-community bus and rail services. In response to a lack of service on the part of private companies in northern Ontario, as well as a partial shutdown of its own rail lines in 2012, Northland has expanded bus operations in the area in recent years: the organization introduced services between Ottawa and Sudbury in 2016, as well as additional routes for 20 northern communities in 2018. In 2020, the provider also expanded its operations to the Thunder Bay-Winnipeg corridor, and in 2022, it announced a \$140 million investment that would see the re-instatement of passenger rail service between Toronto and Timmins. However, Northland has faced threats of privatization in the past, as was the case in 2012.⁸⁸ If privatized, the corporation would be unlikely to provide services along many of these less-profitable corridors.

Bottom line

Canada's transit networks fail to provide adequate rail and bus service between communities. This leaves Canadians with few options to traverse outside of their place of residence beyond personal vehicles and airfares.

A Plan for Clean Public Transit in Canada

Reducing air travel and personal vehicle use in Canada by expanding clean public transit is key to paving the way towards net-zero carbon emissions by 2050. However, Canada's current approach to public transit development fails to meet this challenge. Within communities, there is a lack of public sector capacity to fund transit projects and to finance their operations. Between communities, there is a lack of access to viable rail and bus service along Canada's metropolitan and rural corridors.

To address the deficiencies that exist in Canada's current approach to public transit, we propose:

\$30.75 billion over a 5-year period from the federal government.

- 63% (**\$3.9 billion annually**) of these funds would go to a new core stream in the federal Permanent Public Transit Fund. This stream would be earmarked to help cover public transit operating costs, as well as to electrify municipal bus and ferry fleets. This funding would be in addition to the \$3 billion dollars per year the fund has already earmarked for new infrastructure spending.
- 4% (**\$250 million annually**) would go to fund inter-city transit between rural municipalities and Indigenous communities.

- 33% (**\$2 billion annually**) would go to funding VIA Rail, alongside the passing of a National VIA Rail Act that gives the Crown Corporation a legislative mandate.⁸⁹

\$52 billion over a 5-year period from the federal government and other sources for the speedy implementation of three high-speed rail projects.

- 55% (**\$5.8 billion annually**) would go to building the Windsor-Quebec City corridor.
- 17% (**\$1.8 billion annually**) would go towards a HSR link between Calgary and Edmonton.
- 27% (**\$2.8 billion annually**) would go to the Vancouver-Seattle-Portland project.

Total cost over a 5-year period:
\$82.75 billion.

Additionally, improvements to public transit should be developed alongside other efforts to make major cities more accessible without the use of a personal vehicle, such as paths dedicated to walking, cycling, or wheelchair use. The federal government should expand and make permanent the Active Transportation Fund, which is aimed at assisting municipalities in doing just that.⁹⁰ Accessibility can also be enhanced by improving municipal by-laws and legislation surrounding zoning, allowing for denser housing development around transit routes, as well as through increased public support for non-profit housing development.

These funds should also coincide with the passing of a Transit Worker & Pedestrian Protection Act that would require transit agencies to work with unions and frontline workers to implement transit safety improvements.⁹¹

While GEN favours a public development model for these projects, it is assumed that the private sector will continue to play a role in the

P3 projects that are already locked in. The federal government must be ready to step in and take a leading role if these projects fail in achieving their goals. Moreover, in instances where the government is pursuing P3 projects in the early phase of development, there should be a long-term vision that positions public authorities and employees to control and maintain these projects once they are in operation.

We also call on governments at all levels to develop a long-term strategy that would usher a move away from P3 contracts that create the potential for private firms to operate and/or maintain transit services.⁹² At a time when it is paramount to create high-quality public transit infrastructure quickly, it is irresponsible to pursue a model where project delays are common, and results are often sub-optimal. Investing in building public sector capacity to undertake public infrastructure development will pay off in the long-term through improved transparency and quality of service.

Restructuring the Canada Infrastructure Bank to be a public bank, rather than one legally required to attract private finance, would also promote the creation of publicly led green development strategies.⁹³

Benefits of enhancing Canada's approach to transit within communities

Investments in public transit would lower the cost of living at a time when this issue is of pressing importance.

Canadians living in and around metropolitan areas often face an “affordability paradox” whereby they must choose between affordable housing in suburban outskirts (where a lack of public transit means costly personal vehicle ownership is a must) or expensive housing in

the urban core (where access to public transit renders automobile ownership unnecessary).⁹⁴ On top of this, in 2022 Canada saw levels of inflation unseen since the 1980s. As the cost of fuel and other vehicle related expenses have risen, it has become untenable for an increasing amount of Canadians to own a car. It is more important than ever to ensure public transit alternatives are reliable and affordable for those who need it most.⁹⁵

Establishing a core funding stream in the Permanent Public Transit Fund to help cover operations costs would improve affordability by allowing transit authorities to provide discounted fare rates.

This would also allow municipalities to expand transit service with the comfort that they will be able to cover costs once projects are completed. Relatedly, this funding would ideally empower local transit authorities to build up the institutional capacity needed to plan and implement transit projects without over-relying on private contractors, thus lowering capital costs in the long run.⁹⁶

Table 4
Economic Impacts of Proposed Clean Transit Plan⁹⁷

Proposed Spending (per year)	
(\$ billions)	\$16.55
Projected Employment Impacts (jobs created per year)	
Low estimate	153,750
High estimate	217,964

Additionally, implementing these measures would mean more good jobs in the place of low-paying, precarious ones. When public transit is unable to meet the demand for fast, dependable service, that need is filled by the private sector. In recent years, private sector transit service supply has increasingly taken the form of platform ridesharing apps such as Uber, which are notorious for providing their drivers with low pay and denying them the benefits that come with traditional employment status.⁹⁸ Filling the demand for reliable transit would thus mean more good jobs in the place of precarious “gig-economy” work.

Lastly, implementing this vision for public transit would improve the experience of navigating metropolitan areas by lowering traffic congestion, which would improve public safety. When commuters use personal vehicles, ridesharing apps, and taxis instead of public transit, it contributes to traffic gridlock.⁹⁹ Incentivizing municipalities to invest more in public transit would decrease the number of private automobiles on the streets, improving congestion issues and thus lowering the instances of vehicular collisions. Increased operations funding could also be used by municipalities to improve safety measures for transit operators and riders at a time when this has become an increasing concern.

Benefits of enhancing Canada’s approach to transit between communities

Dedicated funding for rural inter-community transit would empower local transit authorities to develop collaborative projects that provide bus services between municipalities.

Ramping up funding and creating a mandate for VIA Rail would unlock the potential for the public sector to take the lead in cross-community transit development. This would allow the agency to build in-house knowledge

In the long run, this approach would bring down costs, timelines, and improve quality of service.

While there exists a potential roadmap towards reliable HSR lines across Canada’s major corridors, none of these projects are expected to be completed earlier than 2030. In the meantime, there must be a focus on ensuring VIA Rail can provide adequate service on its existing passenger rail systems.

It is estimated that the building of HSR lines across Canada’s busiest corridors would lead to emissions reductions of 23.5 megatons over a 30-year period.

Table 5
Projected GHG impacts of High-Speed Rail in Canada ¹⁰⁰

Corridor	GHG Reductions Over 30 years (Megatons)
Windsor-Quebec City	10
Vancouver-Seattle-Portland	4.5
Calgary-Edmonton	9

Conclusion

Canada is at a crossroads. The choices we make today will determine whether our future will be a sustainable or an unsustainable one. GEN and its member groups have proposed a plan of action designed to put us on the road towards a green future. This three-pronged framework calls for public leadership and investment in national initiatives for renewable energy development, energy efficiency through building retrofits, and public transit along with high-speed rail.

GEN’s Common Platform outlines a foundation for Canada to make the transition to a green economy future and puts us on track to meet our climate change obligations. Our plan is not meant to be a panacea. Even if these three priorities were to be fully developed and implemented, there would be other initiatives that would be required to overcome the challenge we face as a society in terms of our economic, environmental and energy future.

The clock is ticking, and we don’t have time to waste. If we delay acting, we will find ourselves paying a much heftier cost, economically, socially, and environmentally. Canada has the 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.

We will work with our members and concerned citizens in communities across the country to build a strong base of popular support for the three pillars we have proposed—renewable energy development, green building retrofits, plus a national public transportation strategy — to ensure a more equitable and sustainable economy.

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