

Canada: The case for an urban green and just recovery



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As nations around the world plot a course for their pandemic recovery, new analysis from C40 Cities shows that **massive national investment in a city-led green and just recovery has the power to catalyze transformational economic, health, and climate benefits for Canadian cities** and put the nation on track to meet its commitments to the Paris Agreement.

This executive summary outlines the key findings of C40's new study, *Canada: The case for an urban green and just recovery*, which models the prospective outcomes of prioritising and investing in an urban green and just recovery. C40's report shows how cities can play a pivotal role in supporting Canada's national recovery, and demonstrates how stimulus funds directed toward climate solutions, such as building retrofits, clean energy, sustainable transport and urban nature-based solutions (NBS), can deliver millions of jobs and meet Canada's climate goals.¹

Without these bold interventions, Canada risks its own economic recovery, and its ability to meet its commitments to the Paris Agreement.

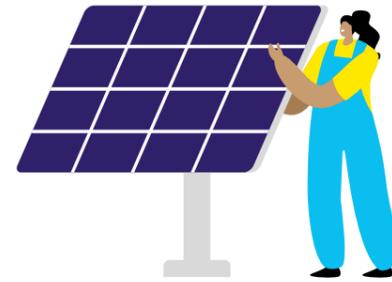
1. The study analyzed GHG emission, job and health benefits that could occur if Canada prioritized a green and just recovery across major cities, consistent with limiting global heating to 1.5°C. Lower-carbon (a decarbonized grid in 2020) and higher-carbon (a carbon-intensive grid in 2020) Canadian cities were modelled and then scaled up across 12 major Canadian cities to provide a high-level illustration of the potential benefits of a green recovery.



Key findings from the report show that a green and just recovery could:

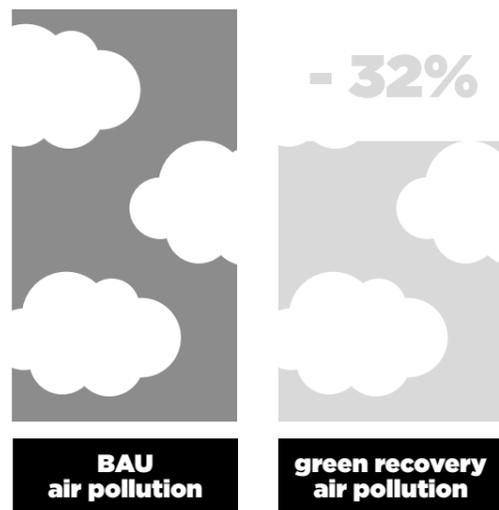


Reduce greenhouse gas (GHG) emissions by two-thirds by 2030 compared with a business-as-usual scenario, making it possible for Canada to deliver on its commitment to help prevent a global temperature rise above 1.5°C.



+ 2.9 million jobs by 2030

Support and create more than 2.9 million good, sustainable jobs by 2030 across 12 major Canadian cities and their supply chains.



Reduce air pollution by as much as 32% in major Canadian cities over the next 10 years, which could prevent up to 3,950 premature deaths.



+ C\$ 37 billion economy benefits by 2030

Deliver wider economic benefits of more than CAD 37 billion over the next 10 years from premature deaths averted by improving air quality and encouraging active mobility measures across major Canadian cities.

Canada's recovery plan and stimulus shows early promise in terms of its size and how much of it is projected to be spent on delivering a green and just recovery. However, to capture these enormous climate, public-health, and economic benefits, C40's analysis indicates that Canada must prioritize investment and action on a much larger and more rapid scale.

The COVID-19 pandemic has demonstrated that incremental policy measures and recovery packages are insufficient to meet the challenges ahead. An unprecedented paradigm shift is needed to fully tackle both the pandemic and the climate crisis. Delivering a better future for all Canadians necessitates historically significant investment and policy interventions along the lines of the post-war Marshall Plan or U.S. President Franklin Roosevelt's New Deal. As we move forward toward recovery, national governments must ensure climate, health and economic growth targets are properly aligned with their funding and policymaking priorities. Without ambitious efforts to address the twin crises of climate and COVID-19, Canada risks failing to deliver the emissions reductions needed to meet key scientific targets, specifically limiting global temperature rise to 1.5°C trajectory.

C40's report shows that **Canadian cities will be critical to delivering the transformative change needed for a low-carbon future. Around the world, cities are already leading on climate action and have the capacity to deliver fundamental change in tandem with bold national investment.** Investing in an urban green and just recovery has the power to create more jobs, improve air quality and promote the health of residents.

C40 mayors' ambitious [agenda for a green and just recovery](#) illustrates the transformative power of city-led climate action and sets out a collective vision that prioritizes:

- Jobs and an inclusive economy – creating new, good, green jobs fast, supporting essential workers and massively expanding training to facilitate a just transition.
- Resilience and equity – providing fundamental public services for all, underpinning a fair society and strong economy, resilient to future shocks.
- Health and wellbeing – giving space back to people and nature, rethinking and reclaiming our streets, cleaning our air and creating livable local communities.

The message is clear: **Canada is supporting the right recovery measures, but the federal government must raise its ambition. As we confront this critical crossroads, the Canadian government can lead the way by committing to bolder policy and greater investments,** inspiring other leaders around the world to support and invest in sustainable, healthy and equitable cities.

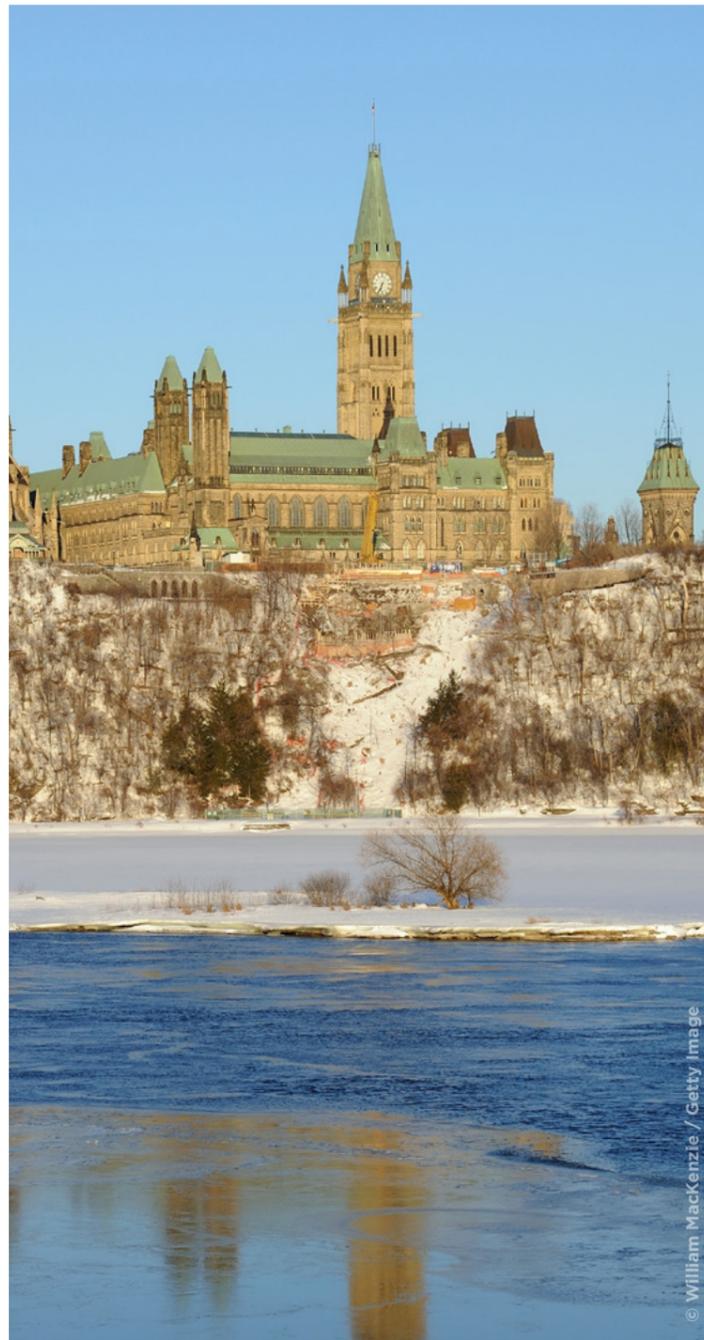


Efficient and resilient buildings

C40's research shows that investing to improve buildings' energy efficiency and prioritize electrification delivers clear climate, jobs, and health benefits for Canada and its cities. Building retrofits offer the greatest job potential, supporting and rapidly creating an estimated 1.7 million good jobs that could provide local opportunities by 2030. Upgrading buildings also delivers the largest air-quality gains by reducing total air pollution by 16-17% over the next decade. Furthermore, the analysis shows that in order to meet climate targets, retrofit work must go beyond efficiency toward incorporating a significant shift to decarbonize heating in buildings, by replacing natural gas-fuelled heating and hot water with heat pump-based electrification and, where appropriate, rooftop solar systems.

Greening buildings can also boost the resilience and adaptation of cities to the effects of climate change. Current building codes and public infrastructure systems in Canada are outdated and not designed to withstand the extreme weather events arising from climate change. Resilient and energy-efficient commercial and residential buildings play a crucial role in providing security, comfort and shelter, and they must be built to withstand harsh weather conditions and to improve resilience to floods, cold, heat and power outages.

Although the Canadian federal government has committed investment to fund energy-efficiency projects as part of its 2020 climate plan, BloombergNEF estimates that this current plan would only cover the costs to retrofit 0.2 – 0.3% of Canada's housing stock annually over the next seven years. C40 estimates that the rate of retrofits in major Canadian cities needs to reach 6.5% of the housing stock every year between 2020 and 2030 in order to remain 1.5°C compliant. It is clear that a much greater level of investment is needed to ensure healthy, climate-safe homes, generate jobs and reduce air pollution.



Clean energy

This report recognizes the commitment Canada is making to move to clean energy, but underscores the importance of rapidly phasing out the last of its remaining fossil fuels in order to meet net-zero targets. The research clearly shows that cities in provinces with higher-carbon electricity cannot meet 1.5°C targets without reducing grid emissions. The planned phase-out of the last of Canada's coal will have a huge positive impact in cutting carbon emissions. Importantly, this coal needs to be replaced by renewable energy, not natural gas, in order to stay on track for 1.5°C. Furthermore, transitioning directly to renewables avoids the risk of carbon lock-in, vulnerable infrastructure developments and stranded assets.

Our modelling shows that even with the switch from coal to renewables, maintaining a constant level of natural gas results in more than double the per capita emissions compared with exclusive use of renewables. More work needs to be done to address issues concerning grid resilience and at-scale storage solutions before natural gas can be fully phased out, but our analysis shows that Canada needs to start now. Crucially, gas from building heating and electricity grids must be phased out concurrently in order to reduce emissions over the next decade, if Canada is to stay on course for net-zero by 2050.

It is, therefore, vital that the Canadian federal government support the provinces in rapidly decarbonizing the whole electricity grid, providing sufficient policy and financial support to enable provincial and municipal governments to replace all fossil fuels with renewables over the next 10 years. This is critical if Canada is to achieve its climate ambitions.

To ensure that the investments made today are sufficiently resilient to withstand the impacts of extreme weather events, the move toward a cleaner and decarbonized grid needs to incorporate climate-adaptation. Thereby securing a sustainable energy supply and viable infrastructure now and for the long-run.



Sustainable transportation

The research outlines the importance of sustainable transportation, specifically that: supporting and expanding mass transit are not only critical to keeping cities moving, but to underpinning sustainable and equitable urban mobility; investment in walking and cycling creates active and healthy cities; and the electrification of most vehicles is needed to meet climate goals. Our modelling illustrates that such investments have significant potential benefits, supporting and creating 1.2 million jobs over the next decade, and improving health, preventing thousands of premature deaths and increasing the life expectancy of active commuters by 2.1 – 3.6 months by 2030.

Moreover, ensuring that transport systems are adapted to the impacts of climate change as part of these investments secures resilient, smooth running cities, even during extreme weather events.

The Canadian federal government has announced it will commit CAD 2.75 billion to procure 5,000 electric buses and CAD 14.9 billion to support transit over the next eight years.

This is a good start, but our research shows that a much greater scale of investment is needed. For instance, 5,000 electric buses is only about one-quarter of the total required over the next 10 years to ensure all major Canadian cities have low-carbon, resilient public transport. Cities around the world are already leading the way and showing the scale of potential action: Shenzhen already has over 15,000 fully electric buses in operation; London and Moscow have added 1,000 new electric buses between them over the past two years; and C40 is helping three Latin American cities to procure around 25,000 electric buses in the coming years.

Furthermore, federal government support for the electrification of cars, vans and trucks is needed. Our analysis indicates that 75% of all private vehicles in major Canadian cities in 2030 will need to be electric, requiring an average replacement rate of 5% per year. As Canada's current level of electric vehicles stands around 0.5%,² significant federal support will be necessary to accelerate change. With the right government policy and incentives, such a step-change is possible, as demonstrated by Norway, where more than 50% of all new car sales were electric in 2019.

2. According to [Statistics Canada](#) there were 35.7 million vehicles in the country in 2019, based on estimates from [Electric Autonomy Canada](#) 168,000 (roughly 0.5%) were zero-emission vehicles.

Urban nature-based solutions

Nature breathes life into cities, and cultivating and caring for urban nature creates opportunities for healthy and sustainable livelihoods, ranging from improving our physical and mental health to bettering employment and economic outcomes. Ecosystem service-related jobs can be created quickly and offer accessible, and long-standing employment at various skill levels. For instance, many of the jobs associated with nature-based solutions are long-term jobs in operations and management, such as park wardens and gardeners. As our research indicates, investing in nature has the potential to support and create 120,000 jobs over the next decade.

Urban nature-based solutions play a vital role in making cities more resilient and livable. For example, green spaces, trees and parks can serve as natural buffers and regulators of climate impacts by protecting residents, especially the most vulnerable and marginalized,

from severe weather conditions, such as extreme heat and flooding. Furthermore, green infrastructure can provide a cheaper solution to stormwater management, in addition to the added benefits increasing green spaces can have for residents.

The Canadian government has pledged to invest up to CAD 3.16 billion to plant 2 billion trees, as well as to conserve and restore natural spaces. It is key that cities are not forgotten in the allocation of funding for nature; not only can cities help deliver these goals, but investing in urban nature-based solutions means Canada's many city-dwellers can benefit from better climate resilience, health, and wellbeing. It is imperative to weave nature into the fabric of our cities to ensure equitable access to nature for all.

“The most significant test of any government’s commitment to climate action right now is where it is directing COVID stimulus funding for recovery”

C40 Global Mayors COVID-19 Recovery Task Force

“A green and inclusive recovery plan should respond to the socioeconomic inequities and environmental issues common to big cities. In that sense, it is imperative that governments and cities act as partners to ensure a successful ecological transition in support of a prosperous economy.”

Mayor Valérie Plante, Mayor of Montréal





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