

Green Stimulus

Pembina Institute principles and recommendations for a 2020 economic stimulus package

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Overview

With the COVID-19 pandemic at the forefront of our minds, we want to underscore the primary need to protect Canadians' health and livelihoods, and applaud the swift and ongoing response from all levels of government to keep Canadians healthy and safe. We extend our gratitude to the front-line and essential workers who are risking their own well-being to respond to this crisis.

We see this moment as one of paramount importance for ensuring the health of Canadians and future resilience of our economy. Investments made today will define our well-being, competitiveness and economic strength in a decarbonizing global market, insulate our workers against future shocks and disruptions, and determine the success with which Canada reaches its 2050 net zero commitment.

Undeniably, massive financial injections are needed to help Canadians weather the ongoing health and economic crisis, and to stimulate Canada's economy as we emerge from the pandemic. While financial relief for impacted Canadians should be immediate and wide-reaching, economic stimulus interventions, if designed with climate and economic resilience in mind, represent an extraordinary opportunity to simultaneously boost the economy in the short term and make a down payment on a prosperous, resilient future. Given public support for climate action, we strongly encourage staying the course on carbon pricing and gearing economic stimulus, including job protection and creation measures and funding, toward the clean energy transition.

While immediate financial relief is paramount for workers across all sectors of Canada's economy, the following principles are integral to a stimulus response that ensures the future resilience of our economy:

1. Priority should be given to funding that supports employment opportunities that are resilient to future economic shocks and disruption as the world seeks to limit warming to 1.5 degrees Celsius.

2. Investments that support the development of industries and businesses producing low- and zero-carbon goods and services should be prioritized to grow the foundation for Canada's low-carbon economy and secure our domestic supply chain.
3. Investments in industry should incent decarbonization efforts that go beyond existing regulatory requirements.
4. Where possible, all stimulus and relief decisions should be made through the lens of Canada's ability to meet its climate commitments.

In this document, we articulate the importance of maintaining carbon pricing, provide specific recommendations for economic stimulus that supports job maintenance and creation and climate action in the buildings, electricity, transportation (including zero-emission vehicles and batteries, hydrogen production and infrastructure, and transit), and oil and gas sectors. Finally, we offer suggestions on existing channels to quickly disburse funds across Canada's economy (including the Low Carbon Economy Fund, provincial energy efficiency agencies, Canada Infrastructure Bank, and others).

If acted upon, the following recommendations for a stimulus package will help steer economic recovery toward a cleaner, healthier, more resilient and prosperous future.

Key recommendations

On carbon pricing

- Stay the course on carbon pricing — do not defer or decrease — to ensure carbon emission reductions are delivered at the lowest possible cost and in a way that protects families through returned revenue and incentivizes behavioral changes and innovation.

For workers

- Along with immediate financial relief, make a significant funding investment in retraining for workers, including for:
 - building professionals, contractors and trades to design and construct high-performance buildings and retrofit existing building stock;
 - oil and gas workers to build expertise in clean technology that will lower carbon intensity in that sector, and to reposition them for careers in emerging low-carbon sectors like energy efficiency, clean technology, and renewable energy; and
 - auto workers to join the zero-emission vehicle manufacturing economy.

On buildings

- Make a major nation-wide infrastructure investment in retrofits for existing buildings by increasing the Greener Home retrofit target and expanding it to include multi-unit residential buildings, using grants and loans to cover a significant portion of the retrofit cost.
- Co-finance deep retrofits of public and commercial buildings with a focus on schools, hospitals and social housing.

On electricity

- Achieve deep decarbonization of Canada’s electricity system through investment in updated infrastructure, adoption of clean energy technologies, improved connectivity between provinces, electrification of end uses, and small-scale renewable energy generation (including in remote communities).

On transportation

- Provide financial support for “sunrise industries” involved in providing and refining raw materials required for electric vehicle production (such as lithium mining) and for domestic research and development, manufacturing and assembly in the battery technology sector.

- Provide further tax cuts and other incentives for electric vehicle manufacturers and companies that develop and manufacture zero-emission technology.
- Invest in the commercial deployment of clean fuels and support for research and development and infrastructure (such as blender pumps and electric vehicle chargers).
- Invest in and help make financing available for hydrogen production and distribution, and invest in the science and technology required for the long-term build-out of affordable low-carbon hydrogen production from zero-carbon electricity, low-carbon feedstocks and water.
- Provide funding to ensure transit systems in Canada's municipalities aren't forced to reduce or suspend service, halt critical repairs, postpone green bus procurements and infrastructure, and/or raise fares to compensate for lost revenue during the pandemic.

On oil and gas

- Create a Green Transformation Program for the oil and gas sector, modelled on the 2009 federal pulp and paper transformation program, to help finance approved capital projects that would generate measurable environmental benefits in the area of energy efficiency and renewable energy, with criteria set by the federal government.
- Create a fund to support methane inventory work and mitigation measures that go beyond current regulatory requirements and with a preference for implementation of zero-emission mitigation measures (rather than incremental low-emission mitigation measures), backed by a requirement that companies prove methane emissions have been reduced and additional employment opportunities have been created.
- Provide loans with tight controls to those oil and gas companies with a proven ability to repay the loan to create employment opportunities to proactively address liabilities from abandoned wells.
- Provide funding to orphan well clean-up to address abandoned assets.

Recommendations in detail

Staying the course

Now is not the time to cede ground on hard-earned climate progress. Providing long-term economic incentives to shift investments for a resilient, low-carbon future is the very aim of climate policies like carbon pricing. Canadians understand the imperative to reduce greenhouse gas emissions to protect health, quality and way of life; carbon pricing ensures this outcome is delivered at the lowest cost possible in a way that protects families through returning revenues while maintaining a signal to promote behavioral changes and innovation. Carbon pricing is a symbol of progressive climate action in Canada and a critical tool in the climate toolkit. Rolling it back sends the wrong message to Canadians and the rest of the world. Providing economic relief to Canadians in a time of crisis will not be achieved by abdicating on carbon pricing.

A continuum of policies designed around a long-term vision to reduce Canadians' vulnerability to climate change and take advantage of economic opportunities in a decarbonizing world is needed to sustain and leverage the efforts described below. We encourage the federal government to hold the line and pursue the full implementation of Canada's national climate plan (including carbon pricing, the clean fuel standard, national building codes, light-duty vehicle regulations, etc.) and engage Canadians in articulating the path toward increased ambition for 2030 and to net zero by 2050.

By sector

What follows is a sector-by-sector set of recommendations. We are happy to provide more information as necessary on any of the ideas contained in this document.

Buildings

Eliminating carbon pollution from homes and buildings by mid-century, essential to meeting Canada's Paris target, opens important opportunities to save money for Canadians and strengthen communities through well-paying jobs. Investing in our buildings and the people that design, build, and maintain them is an investment in our safety from a range of vulnerabilities — from health emergencies like this one to the floods, fires, extreme heat events and other extreme events we have experienced and will continue to experience as a result of climate change.

We recommend the federal government invests in refurbishing existing buildings, with a focus on schools, hospitals, social housing, and residential buildings to (1) get them off fossil fuels, (2) improve energy efficiency, (3) make them more responsive to fluctuating demand on the electrical grid via storage, on-site generation, and load shifting, and (4) make them more resilient to climate impacts and health crises. The budget allocations for these programs should be commensurate with a major nation-building infrastructure investment.

Toward this goal, we recommend the government:

- Increase the Greener Home retrofit target and expand the program to include multi-unit residential buildings.
- Increase loan maximums from \$40,000 to up to \$100,000 and provide grants to cover a significant portion of the retrofit cost, ranging from 20% for basic measures up to 40% of total costs for deep retrofits, similarly to the German KfW Bank programs.¹
- Provide top-ups to these measures for non-profit housing societies and low-income households, and create a dedicated channel for rental apartment owners.
- Create a top-up fund for retrofits and new construction projects, funded through the National Housing Strategy co-investment fund, that achieve deep carbon reductions. Right now, projects accessing NHS funding must achieve at least a 25% reduction in carbon pollution, a modest improvement that leaves many opportunities for carbon reduction unfunded. Adding a top-up fund to enable societies to go directly to deep retrofits (60-80% GHG reductions) would seize opportunities that would otherwise be missed for increased resiliency, carbon reductions, and economic activity in projects that are scheduled for design and construction in the coming years.

We also recommend the federal government increase the commercial retrofit rate by co-financing deep retrofits of public and commercial buildings. This could be achieved by instructing the Canada Infrastructure Bank to create a specific strategy for energy retrofits, and by endowing the four long-term funds to support retrofits in large buildings mentioned in the mandate letter to the Minister of Natural Resources. Providing grants and financing for retrofits will create jobs immediately and de-risk private sector capital at a time of reduced confidence.

This transition to low-carbon buildings, however, requires trained professionals, contractors and trades that understand best practices for the design and construction of high-performance buildings and retrofits. The current slowdown in various sectors provides an opportunity to provide distance education programs to upgrade and retool more workers with skills that are in high demand in the green building sector. We support the Canada Green Building Council and

¹ KfW Bank, “Existing Properties: Energy-efficient refurbishment.”
<https://www.kfw.de/inlandsfoerderung/Privatpersonen/Bestandsimmobilie/>

Efficiency Canada’s recommendation to provide \$500 million for training for Canada’s low-carbon building workforce.

Electricity

Despite significant progress toward decarbonizing the grid, electricity remains the fourth-largest source of GHG emissions in Canada. With built-in targets to phase out coal by 2030 and the broader goal of achieving net-zero carbon emissions by 2050, this is the ideal time to deepen decarbonization of Canada’s electricity systems with updated infrastructure, adoption of clean energy technologies, improved connectivity between provinces, and electrification of end uses. Economic stimulus in response to the pandemic must avoid unnecessary lock-in of fossil fuels in the near term, and instead support the decarbonization of Canada’s electricity grids and unlock mitigation opportunities in transportation, buildings and industry.

Renewable energy is not only the cheapest option for generating electricity, but is one of the fastest growing employment sectors and a valuable source of revenue for local communities. Canada is well positioned for a massive growth in renewable energy development. However, in addition to removing restrictive regulations, key investments will help build the resilience of our clean energy system.

Investment in transmission infrastructure

Allowing clean electricity to be shared between regions is a key to decarbonizing our energy supply. Commitments similar to the recent federal funding of \$18.7 million announced for the Saskatchewan–Manitoba transmission line (capacity of 215 MW) can provide a strong signal to renewable energy developers while providing a direct job creation opportunity. The federal government has already had a series of consultations as part of the RECSI study for Atlantic Canada and Western Canada that highlight opportunities for transmission build and further studies.²

We recommend governments strongly consider the economic opportunity in increasing our export capacity to the USA to support the jurisdictions south of the border in achieving their stated renewable energy goals. The renewable electron is a viable export opportunity that can grow Canada’s economy.

² Natural Resources Canada, *Regional Electricity Cooperation and Strategic Infrastructure Atlantic Region Summary For Policy Makers*, https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/clean/RECSI_AR-SPM_eng.pdf; *Western Region Summary For Policy Makers*, https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/clean/RECSI_WR-SPM_eng.pdf

Investment in small-scale renewable energy generation

We recommend the federal government invest in community and micro generation, to make it easier for communities and individuals to develop their own renewable energy projects, which will reduce greenhouse gas emissions, spur investment, diversify local economies and support local jobs. Investment in micro or on-site generation in particular has high labour demand associated with it. We suggest, for example, an investment of \$400 million over five years in Alberta which could be administered by Energy Efficiency Alberta.

Investment to support renewables in remote communities

Transitioning to renewable energy technologies in remote communities and providing the necessary local capacity support to these communities are critical to ensure energy security against disrupted supply chains of fuel. By supporting the transition to renewables, the federal government is also supporting local revenue generation, job opportunities and economic security for these communities with more money staying local. Remote communities, residents and local Indigenous governments also require support for investing in micro-generation and community-scale renewable energy systems. Most jurisdictions have net metering / micro-generation and IPP programs and policies, but capital is still required to develop these systems. We recommend a further investment of \$2 billion which is necessary to continue efforts to decarbonize remote community energy systems and facilitate economic and energy security for these communities.

Transportation

Large-scale investments to promote job creation and the development, deployment and integration of clean energy technologies in the transportation sector should be a central part of the federal government's stimulus plan. The strategic investments and incentives in every aspect of the transportation value chain will bring the benefits of stimulating the Canadian economy — providing a meaningful boost to economic output in years to come — while also accelerating a clean energy transition.

Investments in non-fossil clean fuels

Recent modelling has shown that, by 2030, a fully implemented Clean Fuel Standard would increase annual economic activity in clean fuels by \$4.9 billion to \$5.6 billion (2015 CAD) and increase employment through the net addition of between 11,000 and 16,000 direct and indirect jobs, in addition to delivering 30 Mt of GHG emissions reductions annually. Increasing the penetration of low-carbon fuel requires progress along a number of fronts, including: (i) increasing low-carbon fuel production capacity; (ii) investing in delivery systems to transport low-carbon fuels to markets and fuel terminals; (iii) increasing the availability of the fuels at

retail stations; (iv) increasing the market share of alternative fuel vehicles; and (v) increasing consumer demand for alternative fuels. To ensure these positive outcomes, we recommend the federal government invest \$15 million over five years in the commercial deployment of clean fuels and support for research and development and infrastructure (e.g. blender pumps, electric vehicle chargers).

Scaling up Canada's low-carbon hydrogen production and distribution infrastructure, and building on Canada's leadership in fuel cell manufacturing

Hydrogen has the ability to contribute to the ongoing decarbonization of Canada's energy systems. Given that hydrogen can replace fossil fuels for most applications, hydrogen fuel cell vehicles can play a role in its transition to a more sustainable on-road transportation future, according to *Power Play: Canada's Role in the Electric Vehicle Transition*.³ Canada is home to a significant concentration of hydrogen and fuel cell companies that cover all elements of the transportation-related supply chain — including hydrogen production and delivery, refueling stations, and fuel cell vehicle engineering and manufacturing, the report notes. Furthermore, while the largest cluster of hydrogen and fuel cell companies is in British Columbia, there are also companies based in Ontario, Alberta, New Brunswick and Manitoba. The report documents policies, incentive programs, and industry collaborations that have helped initiate hydrogen-related demonstration projects, research initiatives, and commercialization efforts in Canada.

According to Natural Resources Canada, the economic benefits to Canada from the domestic hydrogen and fuel cell sector was \$121 million annually. The domestic hydrogen and fuel cell sector employs 2,175 people with 86% of jobs being based in Canada. Since 2015, employment has increased by 22%.⁴ Demand for clean hydrogen to leading markets such as California, Japan, China and South Korea is projected to reach 100 million tonnes/year under moderate forecast assumptions by 2050, with significant upside potential. If British Columbia were to capture 5% market share in those regions, the export market could be \$15 billion annually.⁵ Greater development in other regions could increase Canada's export market.

The climate advantage of hydrogen, however, is highly dependent on how it is produced. Blended with fossil fuels, low-carbon (blue and green) hydrogen delivers convenient incremental reductions in carbon intensity that are needed in the short term. Unleashing the

³ International Council on Clean Transportation and the Pembina Institute, *Power Play: Canada's Role in the Electric Vehicle Transition* (to be published April 2020).

⁴ Natural Resources Canada, *2019 Hydrogen Pathways report*. <https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-transportation/resource-library/2019-hydrogen-pathways-enabling-clean-growth-future-canadians/21961>

⁵ *British Columbia Hydrogen Study*. <https://www2.gov.bc.ca/assets/gov/government/ministries-organizations/zen-bcbn-hydrogen-study-final-v6.pdf>

full potential of hydrogen requires a strategy and build-out of low-carbon hydrogen production and distribution infrastructure.

We recommend the federal government make major investments and mobilize private sector financing to scale hydrogen use and production and bring down costs in the long term, as well as build on Canada's leadership in fuel cell manufacturing. These efforts would support the Pan Canadian Framework on Clean Growth and Climate Change.

- The federal government can make distribution and low-carbon hydrogen production and fuel cell manufacturing even more attractive to private investors by providing guarantees and contracts to reduce financial risks.
- Natural Resources Canada, along with other relevant federal and provincial ministries, should work with the Canada Infrastructure Bank to co-ordinate public and private sector investor partners to determine the infrastructure plan, financing, and delivery for low-carbon hydrogen projects.
- Through the Investing in Canada infrastructure plan, top up and launch a new phase of funding (Phase 1 was \$16.4 million; Phase 2 was \$80 million) for the Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative. Phase 3 funding should invest in science and technology to lower the production cost and support the build-out of hydrogen production over the long-term from low-carbon feedstocks or zero-carbon electricity and water.

Driving innovation in zero-emission vehicle technology and accelerating clean transportation supply chain

Globally, most electric vehicles (80%) are made in the region they are sold. However, Canada's auto industry lags behind other auto-manufacturing countries in its preparation for an electrified transportation future: Only 0.4% of the light duty vehicles produced in Canada are electric, which is 80% lower than the global average of 2.3%, according to the Power Play electric vehicle transition report. Major investments are needed to build out Canada's zero-emission vehicle (ZEV) value chain, which includes raw material production and refinement, electric vehicle manufacturing and battery manufacturing. Failing this, we are at risk of losing a major pillar of our economy.

We recommend the federal government make major investments along the ZEV value chain.

This includes:

- **Raw materials:** Consideration should be given to raw material producers as "sunrise industries" in the short term. Financial support to raw material producers and refiners will help them weather changes in global market prices, and become dynamically competitive in the longer term.

- **EV manufacturing:** Funding to support electric vehicle manufacturers to drive domestic innovation/development of ZEV technologies, manufacturing of more electric vehicle (EV) models, and driving adoption in the Canadian market.
 - The clearest path to boosting domestic ZEV manufacturing is increasing demand for ZEVs in Canada. ZEV mandates (e.g. all new light-duty passenger vehicles sold are zero-emission by 2040, 50% of new medium-duty trucks and buses are zero-emission by 2030, and 15% of new heavy-duty trucks and buses are zero-emission by 2030), emission standards and policies such as carbon pricing would aid this.
 - While there is already a commitment from the federal government to cut tax rates by 50% for companies that develop and manufacture zero-emission technology (e.g., manufacturing related to renewable energy, renewable fuels production, ZEVs, batteries for use in EVs, grid storage and EV charging systems), this is an area that could benefit from even greater tax cuts to minimize investor and financial risk and barriers.
 - Other financial incentives such as seed funding for projects, employment-related or manufacturing subsidies and loans can be considered to reduce production costs. This can then spur follow-on funding from the private sector.
- **Battery technology and manufacturing:**
 - Greater investment can be made for domestic research and development and manufacturing in the battery technology sector by increasing funding of existing NRCan programs such as the Program of Energy Research and Development and the Energy Innovation Program, as well as Transport Canada and Environment Canada's support of battery research and development.
 - Kickstart the Canadian battery manufacturing sector with subsidies that support the creation of domestic battery factories to manufacture and/or assemble advanced batteries for a wide range of applications. Investments in the science and technology needed to develop more efficient batteries can spur follow-on private sector investment.
- **Retraining workers:** Targeted support for the workers and communities that depend on the auto sector is needed in addition to policies to support industry. Retraining workers to have the knowledge and skill set to be a part of the ZEV manufacturing economy is critical to sustain and grow our jobs and maintain an automobile sector. According to the Power Play electric vehicle transition report, Canada was the fifth-largest auto-producing country in the world in 2000. Since then the country has lost five automobile assembly plants and produces only one plug-in vehicle model, the Chrysler Pacifica. However, Canada ranks sixth in the world in electric heavy-duty vehicle (HDV) production, despite its relatively small share of the global total (0.1%). While the transition to electrification in trucking is in the early stages, several Canadian-based companies and manufacturing facilities have emerged in recent years, and there are

several zero-emission vehicle models and key components that are produced domestically. Efforts should be focussed on retooling workers to support the production of LDV and HDV electric vehicles.

Supporting public transit

With many agencies heavily dependent on the fare box to fund operations, ridership declines may mean unsustainable drops in revenue. As a result, many transit agencies operating in cities across Canada may be facing challenges in meeting their operating and capital costs. Stop-gap measures are needed to help cities continue to provide affordable transit service now and in the future. Without funds, a majority of transit systems will likely need to substantially reduce service or suspend service, halt critical state-of-good-repair investments, delay procurement of new green buses and infrastructure, and/or raise fares in the future to compensate for lost revenue.

We recommend that the federal government:

- Increase the amount of funding for public transit through the Investing in Canada Plan and related Public Transit Infrastructure Fund and remove the matching fund requirement for approved/eligible projects.
- Speed up the administration of funding so that municipalities and their transit agencies move forward with their planned public transit projects, including procurement of electric buses.

These measures bolster a clean economy in two ways: 1) by helping to get green buses on the roads faster; 2) supporting job creation and domestic bus production through Canadian content policies for the procurement of public transit vehicles with government funding (as currently exist in Ontario, at 25%, and Quebec).

Oil and gas

Oil and gas is a key economic sector in Canada and is facing increasing pressure from declining oil prices, uncertain demand, automation, disruptive technologies and the need to be competitive in a decarbonizing global market. The immediate focus of financial assistance for people employed directly or indirectly by this sector should be geared toward direct income support and health care for workers. Economic stimulus for this sector as a whole should take into account the fact employment opportunities have already decreased due to automation and shift in market demand, and will continue to decrease long-term as demand for non-emitting fuels increases as the world strives to limit warming to 1.5 degrees Celsius. Simultaneously, opportunities in Canada's low-carbon economy will grow over the medium to long term. With that in mind, stimulus directed to oil and gas companies must ensure a direct impact on the

economic health of workers in these regions and must be directed at improving companies' environmental performance above regulatory requirements.

Re-training for workers

Stimulus money should serve to diversify the economy by providing opportunities for training, education and employment for work that lowers carbon intensity in the existing oil and gas sector, and for work in emerging low-carbon sectors (including energy efficiency, clean technology, and renewable energy).

Provide low-interest loans to proactively address potential liabilities

While clean-up of existing abandoned wells is a priority (see next recommendation), avoiding the continued accumulation of liabilities, especially in uncertain economic times, must also be a priority. One option is to provide loans with tight controls to companies so they can address liabilities. It is our recommendation that this money must be accompanied by a requirement to prove that liabilities have been addressed, and that additional employment opportunities have been created. Loans should only be granted to companies that demonstrate their ability to pay the loan back. This funding should also be tied to regulatory change in Alberta to ensure the province puts in place a polluter-pays program so the public is not left with these liabilities in the future.

Orphan well clean-up

It is our recommendation that money for orphan well cleanup be administered by an independent fund with representation from Indigenous communities, local governments and landowners who can ensure it is used to reclaim wells where the company is bankrupt and its remaining assets have already been spent for this purpose. As with loans, it should also be tied to regulatory change in Alberta to ensure the province puts in place a polluter-pays program so the public is not left with these liabilities in the future.

Methane reduction

We recommend the federal government create a fund to support inventory work and mitigation measures that go beyond current regulatory requirements. Such a program had previously been implemented by Energy Efficiency Alberta; it could be re-established in Alberta and expanded to include B.C. and Saskatchewan. This money must be accompanied by a requirement to prove that methane emissions have been reduced and additional employment opportunities have been created. Companies should share in the cost for methane measures and funds should strongly favour the implementation of zero-emission vs incremental low-emission mitigation measures.

Oil and Gas Green Transformation Program

In recognition of the continuing role oil and gas plays in Canada's economy and our daily lives, support for the sector as the nation transitions to low-carbon energy is necessary. However, that public investment must serve Canada's climate commitments at the same time in recognition that we shouldn't solve the economic fallout of one global crisis by exacerbating another. We recommend the federal government create a fund to enable targeted capital investments that achieve decarbonization in the oil and gas sector, thereby improving the environmental performance of Canada's oil and gas products, with direct benefit to Canadian communities while increasing the carbon competitiveness of Canadian products. We recommend the Federal Government implement a Green Transformation Program for the oil and gas sector, modelled on the 2009 Government of Canada pulp and paper green transformation program. Under the 2009 program companies received credits based on current production that they used to finance approved capital projects that would generate measurable environmental benefits in the area of energy efficiency and renewable energy. This allocation mechanism was designed to enable the funds to be applied to the projects that make the most environmental and economic sense, thereby maximizing the long-term benefits of the government investment. Companies were given a fixed amount of time in which to access the credits, and projects were required to meet criteria set by the federal government in order to be approved. A similar program for oil and gas should include a GHG intensity performance criteria test to avoid a situation where the financial stimulus money goes toward companies that are very unlikely to be competitive in the future.

Using existing channels to effectively disburse funds

Numerous federal funding channels already exist to flow stimulus money through to spur economic activity throughout the Canadian economy in alignment with our climate commitments. We have listed some, but not all, below.

- The \$2 billion Low Carbon Economy Fund is a key component of Canada's climate plan. Both the Leadership and Champion components of this fund offer established vehicles for disbursing portions of the stimulus package and supporting existing and additional proposals that will leverage investments that will result in innovation, job creation, reduced energy bills for Canadians, clean growth, and emissions reductions.
- Energy efficiency agencies also offer effective channels for funds that can be delivered through provincial incentive programs (e.g. CleanBC, Energy Efficiency Alberta, Efficiency NS).
- Green economic stimulus can also be channelled to local governments through increased allocations for the Federation of Canadian Municipalities' Green Municipal Fund and Municipalities for Climate Innovation program.

- The stimulus package also offers an opportunity to accelerate and increase the number of approved projects at the Canada Infrastructure Bank, a critical financial tool for the deployment of large-scale clean technology, green infrastructure projects and clean electricity infrastructure in remote communities.
- The Canada Mortgage and Housing Company (CMHC) manages the National Housing Strategy co-investment fund, which currently requires projects to achieve a very modest 25% carbon reduction savings. This fund could be topped up to allow for retrofits achieving 60-80% greenhouse gas reductions for projects already in design or planning.
- The Investing in Canada Plan and related Public Transit Infrastructure Fund can be used to support Canada's public transit systems.
- The existing Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative can be expanded to lower production costs and support the build-out of low-carbon hydrogen production.
- Natural Resources Canada programs such as the Program of Energy Research and Development and the Energy Innovation Program can support domestic research and development and manufacturing for battery technology.