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Progress Report on CLINATE ACTION & THE ENVIRONMENT

REACHING NET-ZERO EMISSIONS

PRICING POLLUTION

REDUCING OIL & GAS EMISSIONS

ZERO-EMISSIONS TRANSPORTATION

PRODUCING CLEAN ELECTRICITY

PROTECTING FORESTS & OCEANS

Going Further, Faster to Protect our Climate

Our community has seen firsthand the effects of climate change—from tornadoes, to windstorms, to devastating flooding along the Ottawa River floodplain. Extreme weather events we only used to see once every hundred years now happen regularly. As climate change worsens, dangerous weather events are becoming more frequent or severe.

The science has long been clear on the cause of climate change: it's carbon pollution. Each year, the world emits 47,552 million tons of greenhouse gases into the atmosphere. Those emissions will remain there anywhere from a few years to a few thousand years, continuing to heat our climate at a rapid rate.

Climate change is not only harming our environment; it's harming our health too. Heat-related deaths and health issues related to pollution are being recorded more frequently in Canada and all over the world.

Governments everywhere are acknowledging the need to reduce greenhouse gas emissions, and to do so rapidly. Under our government, Canada has committed to reducing our country's emissions by 45% below 2005 levels by 2030. We have also set an ambitious target to achieve net-zero carbon emissions by 2050. In order to reach these targets, goals, and commitments, governments at all levels must take real action and implement meaningful policy changes.

In this booklet, I outline the action that has been taken by the federal Liberal government since taking office in 2015, as well as the roadmap forward to continue the fight against climate change. There's a lot more work to be done, but I know our country is on the right track to become a world leader on fighting our climate crisis.



Contact Me

Constituency Office Address: 555 Legget Drive, Suite 121 Kanata, Ontario, K2K 2X3

Phone: (613) 592-3469 Email: Jenna.Sudds@parl.gc.ca

Jenna Sudds Your Member of Parliament for Kanata—Carleton

Reaching Net-Zero Greenhouse Gas Emissions by 2050

So long as emissions continue to be added to our planet's atmosphere, global temperatures will continue to rise. To avoid the worst impacts of climate change, scientists conclude that serious emission reduction actions must be taken on a global level by 2050. To that end, Canada has set its own ambitious targets: to reduce our greenhouse gas emissions by 40 to 45 percent below 2005 levels by 2030, and to achieve net-zero by 2050.

Reaching net-zero by 2050 isn't simply an arbitrary goal; our government made it the law last year. We have a legal obligation to reach this target, and to be transparent with Canadians on the progress that is being made to achieve it.

Putting a Price on Pollution

Most experts and economists agree that putting a price on greenhouse gas emissions is a vital strategy to reduce greenhouse gas emissions.

Under an effective carbon pricing system, every tonne of pollution comes at a cost, rather than being free. The dirtier the energy source, the more expensive it becomes. As of 2022, the current price on carbon pollution is \$50/tonne.



"If your objective is to cut greenhouse gas emissions, a carbon levy is definitely one of the most effective ways of doing that."

– Doug Porter, Deputy Chief Economist, BMO

Canada's approach is flexible: any province or territory can design its own pollution pricing system tailored to local needs, or can choose the federal carbon levy system. If a province or territory decides not to price pollution, or proposes a system that does not meet federal environmental standards, the federal carbon levy is put in place. This ensures consistency and fairness for all Canadians.

Pricing pollution empowers the market to identify and develop the most cost-effective solutions. Instead of building coal plants, we'll invest in greener sources of energy; instead of driving gaspowered cars, we'll choose electric vehicles powered by renewable energy.

How does the carbon levy work? Levies are charged on items that emit carbon dioxide, like gasoline, natural gas, and coal. Pricing these emissions creates an incentive to reduce them—such as incentivizing businesses to find greener ways to produce and deliver their products. For individual Canadians, that means using public transit where possible, investing in renewable home heating sources, and turning to electric vehicles instead of gas-powered vehicles.

Do carbon levies work? Yes. A carbon levy is "one of the most effective ways of cutting greenhouse gas emissions", said Doug Porter, Deputy Chief Economist for BMO. Carbon levies are efficient ways of incentivizing greenhouse gas emission reductions at a relatively stable price that producers can build into their investment plans.

Carbon levies are being implemented in 14 out of the 31 high-income OECD countries: Canada, Chile, Denmark, Finland, France, Iceland, Ireland, Japan, Norway, Portugal, Slovenia, Sweden, Switzerland, and the United Kingdom.

Where do the proceeds go? Climate action can't come at the cost of affordability for individual Canadians. That's why revenues raised by the price on pollution go directly back into your pockets in quarterly payments through the Climate Action Incentive rebate



Fact: The federal government returns the proceeds from the carbon levy to Canadians through quarterly payments.

program. The federal government does not keep any of the direct proceeds from the carbon levy.

90% of the funds from the carbon levy are returned directly to Canadians through the Climate Action Incentive; the remaining 10% are directed to schools and businesses to offset the costs of energy efficient retrofits & upgrades.



In 2022, Ontario residents can expect to receive an annual Climate Action Incentive rebate of:

- \$373 for an individual
- \$186 for a spouse or common-law partner
- \$93 per child under 19 (or \$186 for the first child in a single-parent family)

Reducing Emissions in Canada's Oil and Gas Sector

The oil and gas sector accounts for 27% of Canada's emissions, more than any other sector in the Canadian economy. Any serious plan to reach Canada's emission targets requires a plan to substantially reduce emissions in this sector. The difficult reality right now is that oil and gas also play an integral role to the Canadian economy and in the lives of millions of Canadians.

Yet, heavy-emitting industries are the first ones to tell you that they recognize achieving net-zero emissions is the way of the future. Oil and gas companies are investing in clean-tech innovation. By acting collaboratively with industry stakeholders, we can ensure that all regions of this country are able to secure the jobs, economic opportunities, and prosperity that form the transition to a lower carbon future—if we act thoughtfully and early.

What we've achieved so far:

Roadmap to reducing methane by 45%: While you often hear about cutting carbon emissions, methane is another powerful and potent greenhouse gas.

Methane makes up approximately 13% of Canada's total greenhouse gas emissions. However, methane emissions remain in the atmosphere for a relatively short period of time,



Reducing methane emissions is an important issue—it's the air we breathe.

Tackling methane emissions has immediate climate & health benefits.

meaning that reducing methane emissions can have near-immediate benefits for our climate.

Canada has made real progress in reducing methane emissions in the oil and gas sector. We have introduced new regulations to cut methane emissions in the sector by 40-45% below 2012 levels by 2025.

Funding clean technology research and development: Innovative made-in-Canada solutions to reduce emissions from within the oil and gas sector are necessary for Canada to meet its targets. To encourage the development of these solutions from oil and gas companies, we have launched the \$750 million Emissions Reduction Fund. This program gives oil and gas companies funds to find green solutions, reduce their greenhouse gas emissions, and retain jobs in the sector.

Establishing Canada as a global leader in carbon capture: Carbon capture, utilization, and storage (CCUS) technologies compress captured carbon into solid form, and either store it back down deep underground, or repurpose it into entirely new products. Encouraging the development of these technologies is necessary to achieve net-zero, especially in sectors like oil and gas where other means to reduce emissions are limited. That is why we have developed an investment tax credit for capital invested in CCUS projects to encourage to development and deployment of CCUS technologies.

Canada is among the global leaders in this start-up carbon capture utilization and storage industry. We are fourth in the number of CCUS patents granted, behind the US, China, and the European Union. And while this technology is still only in its infancy, it employs thousands of Canadians.

Ensuring a just transition to sustainable

jobs: To ensure energy workers and communities can shape their own future, we introduced a Just Transition Act and Task Force, giving workers access to the training, support, and new opportunities needed for success in the clean economy.



Responsible planning for the shift toward renewable energy means ensuring that workers are equipped for success in the future net-zero economy.

To remain competitive internationally and drive economic growth over the long-term, we're building on the provinces' unique comparative advantages in a manner that will create economic opportunity and jobs.

Making our everyday fuel cleaner: The goal of the Clean Fuel Regulations is to significantly reduce pollution by making the fuels we use every day cleaner over time. The Clean Fuel Regulations require liquid fossil fuel (gasoline and diesel) suppliers to gradually reduce the carbon intensity – or the amount of pollution – from the fuels they produce and sell for use in Canada over time, leading to a decrease of approximately 15% (below 2016 levels) in the carbon intensity of gasoline and diesel used in Canada by 2030.

The Clean Fuel Regulations will deliver up to 26 million tonnes of greenhouse emissions reductions in 2030. This is equal to removing about two weeks of greenhouse gas emissions from the Canadian economy.

Going forward:

Capping oil and gas sector emissions: Canada's oil and gas companies have proven repeatedly that they can innovate and develop new technologies and more competitive business models. Our government has pledged to cap and cut emissions in the oil and gas sector at the pace and scale required to reach net-zero by 2050. To design the emissions cap, we are consulting industry and other stakeholders on two options:



Changing the carbon pricing requirements for heavy emitters to create a price driven incentive to reduce emissions.



A cap-and-trade system that sets regulated limits on emissions from the sector, tied to a gradually decreasing emission level cap.

The design of the oil and gas emissions cap will be outlined in early 2023, followed by implementation in the coming months. Regardless of how the emission cap takes form, it will require the oil and gas industry to reduce their emissions to levels needed to reach net-zero by 2050 and to reach our 2030 targets.

The demand for oil and gas in a net-zero economy will be entirely focused on those jurisdictions which can produce oil and gas with increasingly lower and ultimately near-zero production emissions. That's why we will work closely with the oil and gas industry to lower emissions from Canada's oil and gas industry at a pace and scale that is compatible with a net-zero world.

Eliminating inefficient fossil fuel subsidies: Meeting our 2030 targets will also require us to quickly wind down new public investments in unabated fossil fuels and instead, take that money and invest it in the shift to clean sources of energy. To that end, our government has promised to eliminate inefficient fossil fuel subsidies and will develop a plan to phase out public financing for the fossil fuel sector.

Expanding Canada's methane reduction measures: To further reduce methane emissions in the sector, Canada will go beyond current methane emission regulations and will develop new measures to reduce oil and gas methane emissions by at least 75% below 2012 level by 2030.

Investing in Public Transport and Zero-emission Vehicles

Transportation is Canada's second largest emitting sector, accounting for 25% of Canada's emissions. Investing in cleaner transportation will create new jobs, help Canada be more competitive in the low-carbon economy, and ultimately improve our quality of life.

What we've achieved so far:

Three-quarters of emissions from the transportation sector come from just two sources: passenger cars and trucks, and heavy-duty vehicles. That's why we set a mandatory requirement that by 2035, all new light-duty cars and passenger truck sales must be zero-emissions.

Yet, I've heard from constituents that one of the largest barriers to owning or leasing an electric vehicle is the upfront cost. That's why the federal government has instituted a rebate of up to \$5,000 for Canadians to switch to electric vehicles or plug-in hybrid vehicles. Businessed can also receive an immediate 100-percent write-down for buying zero-emissions vehicles.

In addition to the federal subsidy, we continue to encourage provincial governments to offer additional electric vehicle subsidies—such as encouraging the Province of Ontario to reinstate its provincial electric vehicle subsidy, which was scrapped in 2018.

Since 2016, we've initiated work to build nearly 6,000 electric vehicle charging and refueling stations with partners across the country - with a goal of building 50,000 zero emission vehicle chargers across the country.

Investing in reliable and accessible public transit is also critical to reducing emissions from driving. We have provided almost \$15 billion in funding to support public transit infrastructure such as zeroemissions busses, new subway lines, light-rail transit, streetcars, and improved rural transit.

Going forward:

It's not just passenger vehicles that contribute to our emissions; medium- and heavy-duty vehicles make up nearly 10% of Canada's total emissions.

To tackle emissions in this sector, we have put Canada on track to reach approximately 35% of total medium-and heavy-duty vehicles sales being zero-emission vehicles by 2030. To reach this goal, we are launching a new purchase incentive program for medium- and heavy-duty zero emissions vehicles to help businesses upgrade their fleets.

Clean Electricity

As we move towards having more electric vehicles on our roads, ensuring our electricity is clean is crucial. Our target of 90% of Canada's electricity coming from non-emitting sources by 2030 is critical to that end.

What we've achieved so far:

Since 2015, we've accelerated the phase-out of coal, implemented natural gas regulations, and put a price on carbon pollution. Further, we have invested in new infrastructure to meet the rising demand for clean electricity.

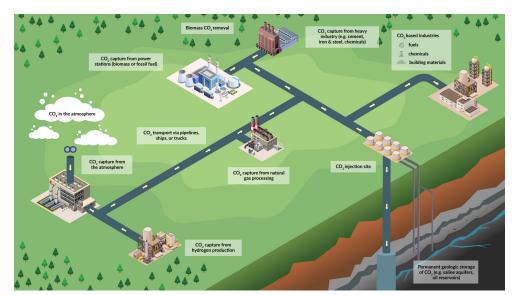
Nuclear energy plays a critical role in reducing greenhouse gas emissions and creating new middleclass jobs as Canada moves toward a low-carbon future. In the latest budget, the federal government announced new investments in small modular reactor technology. In provinces like New Brunswick and Saskatchewan—which are still dependent on coal—small modular reactors will be key to support their transition to low-carbon energy sources.

Going forward:

By 2050, federal investments in emerging technologies like geothermal, tidal, small modular reactors, carbon capture and storage, and electricity storage will allow Canada to be a world leader in these new technologies. Going forward, we will continue to make additional investments in renewable

electricity and grid modernization projects in order to connect Canada's different regions to clean power.

Right: The Carbon Capture, Utilisation and Storage (CCUS) value chain. Carbon dioxide already present in the atmosphere is captured from a direct air capture facility or naturally removed from the air, then permanently stored underground or used by industrial faciliities to create fuels, chemicals, or building materials.



Reducing Emissions from Buildings

Homes and buildings contribute 13 percent of Canada's emissions. Making Canada's building sector more energy efficient is a cost-effective way of reducing greenhouse gas emissions and saving households and businesses money.

What we've achieved so far:

We are helping every day Canadians reduce their own carbon footprint, starting with energy-efficient upgrades to their own homes. The Canada Greener Homes Initiative provides Canadians with up to \$5,000 in grants (or up to \$40,000 in loans) for home retrofits—home insulation, windows and doors, air sealing, and more. This Initiative helps homeowners save money and fights climate change.

Going forward:

The federal government is improving building codes and promoting the use of lower carbon construction materials for new construction projects. Additionally, the federal government is creating the regulatory and incentive framework needed to increase the uptake of non-fossil-fuel heating systems in buildings.

Investing in Clean Technology

Whether it's finding new sources of clean energy, or new ways to build homes, clean technology will help Canada reach our 2030 and 2050 emission targets. The federal government actively invests in the growth of clean tech solutions so that we can make immediate gains in moving towards a low carbon future. Our innovators, scientists, entrepreneurs, and engineers, with help from our government, are making rapid advancements in clean technology.

We are incentivizing Canadian innovators to make clean tech advancements by reducing by 50 percent the general corporate and small business income tax rates for businesses manufacturing zeroemission technologies. These tax rate reductions will enhance Canada's competitiveness in attracting investment in zero-emission technology manufacturing while supporting existing businesses in the sector. Future investments will include the creation of a federal investment tax credit for new netzero technologies, battery storage solutions, and clean hydrogen.

Protecting Canada's Forests and Oceans

From our oceans to our forests—the world is witnessing a biodiversity crisis that is threatening important species and uprooting the essential nature we need to absorb and store carbon.

What we've achieved so far:

In 2015, we set a goal of conserving 25% of our lands and 25% of our oceans by 2025. To date, Canada has protected over 14.66% of our oceans and marine life—an increase from just 1% protected when we took office in 2015.

In 2016, we created the Oceans Protection Plan to protect Canada's coasts and waterways and enable their safe and responsible commercial use. Under the Plan, the federal government has improved monitoring of marine traffic across Canada and restored the health of over 60 aquatic habitats nationally.

We have also taken major steps towards protecting ecosystems outside of designated protected areas. In 2016, we implemented a ban on oil and gas drilling in the Arctic— protecting Canada's Arctic ecosystem from future risks associated with offshore oil and gas activity.

We've also created three new National Wildlife Areas since 2015. Combined, these new areas now protect over 2,500,000 hectares of habitats for animals and plants.

Additionally, in 2019 we implemented a moratorium on oil tankers off the North Coast of British Columbia, helping protect one of the most pristine ecosystems in the world.

Going forward:

Banning Single-Use Plastics: No one wants to see plastic litter in our community parks, on our hiking trails, or in our rivers and streams. Yet, approximately 29,000 tonnes of single-use plastics—like plastic shopping bags and straws—find their way into our environment every year.

As of December 2022, the manufacture and import of single-use plastic checkout bags, cutlery, stir sticks and straws will be banned in Canada. In December 2023, the ban will extend to the sale of these items. Doing so will eliminate an estimated 1.3 million tonnes of plastic waste from polluting our environment in the future.

On top of the single-use plastics ban, we've gone further by pledging to require that all plastic packaging in Canada contain at least 50% recycled content by 2030.



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