



A Healthy, Green and Just Recovery

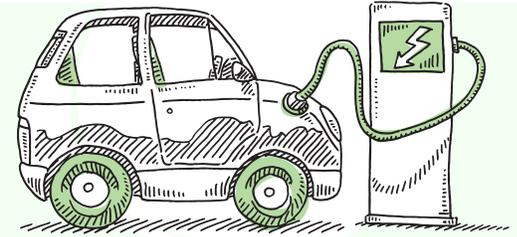
Zero-emission Vehicles

FACTSHEET

March 2021



Invest in zero-emission vehicles



IN THE COMING YEARS, CANADIAN GOVERNMENTS WILL BE INVESTING IN PROGRAMS AND POLICIES TO KICK START OUR ECONOMY AND GET PEOPLE BACK TO WORK. THE ELECTRIFICATION OF CANADA'S TRANSPORTATION SECTOR (THAT IS RESPONSIBLE FOR ONE QUARTER OF CANADA'S GREENHOUSE GAS (GHG) EMISSIONS) NEEDS TO BE A PIVOTAL PART OF THAT PLAN.

Zero-emission vehicles are good for us, our communities and our planet.

By putting regulations in place and investing in zero-emission vehicles (ZEV) – including plug-in hybrid electric vehicles, vehicles that run on electric batteries or hydrogen fuel cells – Canadian governments can dramatically reduce GHG emissions and air pollution, while creating hundreds of thousands of jobs, and significant fuel savings for consumers.

CLIMATE CHANGE IS ALREADY HARMING PEOPLE IN CANADA

The physical and mental health of Canadians is already being harmed by climate change. In different parts of the country, climate change has contributed to an increase in the frequency and intensity of floods, wildfires, hurricanes, ice storms, and heat waves, over the last several decades. These events have exposed millions to extremely high levels of toxic air pollution, forced hundreds of thousands of Canadians to evacuate their homes,

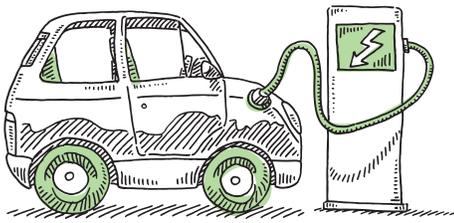
and left hundreds of thousands without power for extended periods. Climate change is also melting permafrost in the far north, increasing sea levels on three coast lines, and extending the range of vector-borne diseases such as Lyme disease.

While climate change affects everyone, it has a greater impact on some. Young children, older Canadians, and people with pre-existing health conditions are more sensitive to heat waves and wildfire smoke. Indigenous Peoples in northern communities can experience greater food insecurity as melting permafrost and changes in animal populations disrupt their access to traditional food sources. In addition, people who live on lower incomes may not have the resources to protect themselves or recover from extreme weather events such as heat waves and floods.

ZEVs REDUCE CLIMATE EMISSIONS

In order to avoid catastrophic levels of global warming, the international community has concluded that all countries must reduce climate emissions by 45% by 2030 and to net zero by 2050. The transportation sector is the second leading source of climate emissions in Canada, responsible for more than one quarter of Canada's GHG emissions.

ZEVs emit 34-98% fewer GHGs than gasoline- and diesel-fuelled vehicles depending on the source of electricity. The cleaner the electricity grid, the greater the reductions. A recent study estimated that Canadian climate emissions could be reduced by 63 million tonnes (Mt) if all new cars and SUVs and 75-80% of all new trucks sold by 2030 were electric. These reductions represent one third of all climate emissions from the transportation sector in Canada.



Increasing the proportion of ZEVs on Canadian roadways is expected to produce significant air quality health benefits as well as climate benefits

TRAFFIC-RELATED AIR POLLUTION IS A SIGNIFICANT HEALTH CONCERN

Air pollution across Canada is responsible for approximately 14,600 premature deaths each year from heart disease, strokes, lung cancer and chronic obstructive pulmonary disease. It is also responsible for a much higher number of hospital admissions, emergency room visits, asthma days, and sick days each year.

Highways are a major source of air pollution. Many studies have found that people who live within 50-1,500 metres of major roads and highways can be exposed to significantly higher levels of air pollution. In the Greater Toronto and Hamilton Area (GTHA) alone, traffic-related air pollution is responsible for about 700 premature deaths, 2,800 hospital admissions, and \$4.6 billion in health-related costs, each year.

The COVID-19 pandemic has further highlighted the impact of air pollution on health as new studies suggest that long-term exposure to air pollution results in increased death rates from COVID-19. One study estimated that air pollution could be contributing to 15% of the deaths from COVID-19 around the world.

ZEVs CAN REDUCE AIR POLLUTION

Increasing the proportion of ZEVs on Canadian roadways is expected to produce significant air quality health benefits as well as climate benefits. One study conducted in the GTHA estimated that over 300 premature deaths could be avoided each year if all of the cars and SUVs in the GTHA were replaced with ZEVs, while about 145 premature deaths could be avoided if all of the transit buses in the GTHA were replaced with ZEVs. This analysis used electricity emissions based on the relatively low emission power grid in Ontario in 2019.

While air pollution is unhealthy for everyone, it presents a greater risk for some. For example, young children, older people, and those with pre-existing health conditions are more sensitive to air pollution. In addition, a number of groups within Canada – such as lower-income populations, newcomers, racial minorities, Indigenous Peoples, and people with other health challenges – are more vulnerable to air pollution because they already experience higher rates of illness, chronic diseases, and premature death because of social disadvantages. These groups are also more likely to live near highways and major roadways

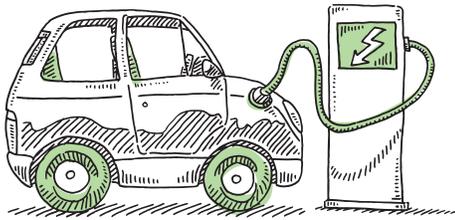
that expose them to higher levels of air pollution. Given their increased vulnerability, lower-income populations and those who live near highways will likely experience greater health benefits from the replacement of gas- and diesel-fuelled vehicles with ZEVs.

INVEST IN ZEVs FOR A HEALTHY, GREEN, AND JUST RECOVERY

While ZEVs are currently more expensive than many gasoline- and diesel-fuelled vehicles, experts in the field predict that they will become the least expensive choice in the next five years in many parts of the world as battery costs drop. Rebates and progressive taxes would help support this transition.

Investments in ZEVs have the potential to create many jobs in Canada. Over the last 20 years, vehicle manufacturing in Canada has fallen by 37% and jobs in the auto sector have fallen from 172,000 to 133,000. In California, where there are supportive regulations and rebates, there are now 275,600 jobs in the ZEV sector.

Energy analysts have estimated that Canada could create 474,000 jobs and produce about \$11.7 billion in fuel savings for drivers each year by requiring that by



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By 2030 all new cars and SUVs, and 75-80% of all new trucks sold in Canada be electric. The analysts suggest that the Government of Canada could foster this transition by investing \$12 billion over 5 years to:

- accelerate the installation of ZEV charging stations along highways and in urban centres;
- provide \$5,000 rebates to encourage the purchase of electric vehicles; and
- provide funding to municipalities and school boards to purchase 7,500 electric transit and school buses over the next five years.

To date, the federal government has taken several steps in the right direction. It has:

- invested over \$200 million, and promised another \$150 million, to support the installation of recharging and refuelling stations for ZEVs;
- offered Canadians up to \$5,000 towards the purchase of light-duty ZEVs with a 3-year budget of \$300 million since May 2019, and promised an additional \$287 million over two years starting in 2020-21;

- announced \$1.5 billion to accelerate the uptake of zero-emission buses by transit authorities, school boards and municipalities; and
- recently announced voluntary ZEV sales targets for light-duty vehicles sales of 15% by 2025, 30% by 2030, and 100% by 2040, and promised to align Canada's Light-Duty Vehicle regulations with the most stringent performance standards in North America post-2025.

In order to produce the health benefits, GHG reductions, jobs, and fuel savings identified by energy analysts, more significant investments will be needed along with supportive regulations and policies including:

- financial incentives for new and used ZEVs that target lower- and middle-income Canadians;
- building codes that include provisions for ZEV charging stations;
- ZEV sales targets for medium- and heavy-duty vehicles as well light-duty vehicles;
- mandatory Vehicle Emission Standards that require improvements in fuel

- efficiency and reductions in vehicle emissions for each model year;
- mandatory fuel standards that require suppliers to reduce the carbon intensity of the fuels they sell and provide credits for alternative fuels such as electricity and hydrogen; and
- funding and tax breaks to encourage ZEV and battery manufacturing plants to locate in Canada and for existing plants to re-tool.

Raise your voice to call for greater investments in zero-emission vehicles to create healthy, green and just communities.

