



Accelerating the Transition to Zero Emission Vehicles (ZEVs)

Electric vehicles can dramatically lower emissions from cars and light trucks, which generate 11% of Canada's carbon pollution. The federal government's target is for all vehicles sold in Canada to be ZEVs by 2040. Regulated sales quotas aligned with the federal ZEV targets, along with financial support for purchasing ZEV vehicles and charging infrastructure, are the most effective ways to accelerate adoption, while also supporting jobs in the clean energy economy.

As recovery begins, there is an opportunity to accelerate the shift to zero-emission vehicles and to build up Canada's ZEV manufacturing capacity. Strategic investments in every aspect of the transportation value chain will create the benefits of stimulating the Canadian economy. 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%.⁸

Budget 2019 provided \$300 million for a consumer purchase incentive program (iZEV), \$130 million for charging infrastructure, and tax incentives for business investments in ZEV fleets. These programs can be refinanced and adjusted to contribute to rebuilding. In addition, major investments are needed to build out Canada's ZEV value chain, which includes raw material production and refinement, electric vehicle manufacturing and battery manufacturing. 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. *See also Just Transition recommendation, later in this document.*



Photo: Theodor Vasile



RECOMMENDED INVESTMENTS:

- **\$150 million** top-up to the iZEV incentive program [TC]. Though approved for three years in Budget 2019, uptake in Year 1 suggests the program could run out of money in Year 2 without additional funding.
- **\$300 million** [NRCan] top-up to the Zero Emission Vehicle Infrastructure Program, which supports deployment of ZEV charging stations, to increase the federal government's contribution from 50% to 80% of costs for projects initiated by August 2021, and scale up the program. NRCan should establish targets for each charging infrastructure stream (e.g., public places, multi-unit residential buildings, fleets, transit) and review program design with a view to meet these targets and fully realize job-creation potential. *See also Decarbonizing Fuel Supply, later in this document.*

⁸ Ben Sharpe, Nic Lutsey, Cedric Smith and Carolyn Kim. *Power Play: Canada's Role in the Electric Vehicle Transition* (International Council on Clean Transportation, 2020), i, iii, 5. <https://www.pembina.org/reports/canada-power-play-zev-04012020.pdf>



- **\$10 million** [ESDC] for ZEV automotive technician training program, modelled on the provincially-supported EV Maintenance Training Program at the British Columbia Institute of Technology.
- **\$250 million over five years** [NRCan, ISED, ECCC] to prepare for a sustainable and circular EV battery supply chain, including: developing standards, policies and incentives for sustainable and material-efficient battery recycling; expanding R&D in battery and EV recycling and waste processing; advancing traceability initiatives for minerals used in batteries and EVs; and leveraging private capital to expand battery recycling capacity in Canada. The average lifetime of EV components is approximately ten years and current battery “waste” streams are still too small to attract significant private investment.
- More favourable tax treatment to attract investments in EV manufacturing, including domestic innovation/development of ZEV technologies, manufacturing of more EV models, and driving adoption in the Canadian market to ensure Canadian competitiveness. 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, investor and financial risk remain barriers. Other financial incentives such as seed funding for projects and technology pilots and demonstrations, and employment-related or manufacturing subsidies and loans can also be considered to reduce production costs. This can then spur follow-on funding from the private sector. [Finance, ISED]

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