



**DAVID SUZUKI
FOUNDATION**
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EXECUTIVE SUMMARY

SHIFTING GEARS

CLIMATE SOLUTIONS FOR TRANSPORTATION IN CITIES

Metro Vancouver case study



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David Suzuki Foundation, Sustainable Transportation
Action Research Team (SFU) and Navius Research



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Metro Vancouver, British Columbia and Canada are at a pivotal moment to act on the climate crisis. Hundreds of thousands of people have been marching in the streets. More than 300 communities throughout the country, many in Metro Vancouver, have declared climate emergencies. Low-carbon transportation solutions are a vital part of meeting the public demand for effective climate policies.

Shifting Gears: Climate Solutions for Transportation in Cities presents evidence-based transportation solutions that could have a powerful effect in reaching Canada's Paris Agreement commitments and a proposed national target of net-zero carbon emissions by 2050.

Bold climate policy is needed to avert the most dangerous impacts of climate change. To do their part, B.C. and Metro Vancouver must implement policies that can achieve their goals of reducing greenhouse gas emissions by 40 per cent (relative to 2007) by 2030, and 80 per cent by 2050. This report focuses on the transportation sector, which represents about 40 per cent of B.C.'s carbon emissions and about 45 per cent of Metro Vancouver's.

Shifting Gears reviews the evidence for best practices for low-carbon transportation policy. The primary consideration is effectiveness in achieving 2030 and 2050 carbon-emission goals.

The analysis synthesizes available literature. Insights are prioritized according to comprehensiveness, rigour and applicability to B.C. The summary is organized around categories related to the “three legs of the stool” of transportation emission mitigation: low-carbon fuels, vehicle efficiency and travel reduction (vehicle kilometres travelled, or VKT). Ways to reduce emissions related to new mobility options (car-share, ride-hailing and vehicle automation), as well as heavy-duty vehicles, are also considered.

Recommendations are given for each policy category, accounting for carbon-emission reductions and secondary benefits. The assessments include:

- Complementary measures: can help prevent further emissions growth while providing important secondary social benefits, including improved health, social and equity impacts.
- Important mitigation measures: can have a minor to moderate impact on carbon mitigation, and should be seriously considered as climate policies.
- Priority mitigation measures: can have a major impact on carbon mitigation, where bold versions are likely necessary to lead the way to 2030 and 2050 goals to reduce carbon emissions in the transportation sector.

The report finds that a low-carbon fuel standard, zero-emissions vehicle mandate and vehicle efficiency/emissions standards come out on top as priority mitigation policies. This potential for large emissions reductions applies to passenger and freight vehicles. Most of the major impact mitigation policies for transportation concern the “low-carbon fuels” and “vehicle efficiency” legs of the transportation stool. These policies are implemented at the provincial and federal levels.

Evidence suggests that following one or two of the most effective priority policies will not be enough for a low-carbon transition. Policy-makers need to consider priority measures as part of a broader, comprehensive policy mix that includes land-use planning and improvements to the built environment, active transportation and public transit.

Shifting Gears summarizes evidence and provides recommendations to help stakeholders champion best practices for Metro Vancouver, and possibly other regions of Canada. It offers 14 findings related to low-carbon vehicles and fuels, vehicle efficiency, travel reduction, new mobility and freight and makes 11 recommendations directed to Metro Vancouver, noting that national and provincial support would greatly complement efforts on the travel reduction side.

As urgency to respond to the climate crisis ramps up, prioritizing the most effective emissions-reduction solutions in the transportation sector couldn't be more critical. Basing these actions on sound science and moving forward quickly is essential. With this report, the David Suzuki Foundation hopes to offer a blueprint to build public and organizational support for effective and innovative policies that leaders will feel compelled to implement.

SHIFTING GEARS: RECOMMENDATIONS FOR METRO VANCOUVER AND B.C. AT A GLANCE

- 1 Support B.C.'s zero-emission vehicle mandate
- 2 Support the low-carbon fuel standard in B.C. and Canada and ramp up beyond 2030
- 3 Support Canada's emissions standards for cars and trucks and ramp up beyond 2025
- 4 Apply stringent new policies for heavy-duty vehicles, especially emissions standards
- 5 Pursue road-pricing in Metro Vancouver
- 6 Provide more travel choices like walking and biking that lead to social and health benefits
- 7 Increase transit infrastructure and services and support TransLink's plan to fully electrify its bus fleet by 2040
- 8 Improve the built environment, including density, diversity and transit-oriented development
- 9 Support car-share and ride-hailing programs but introduce policies to keep emissions down
- 10 Monitor progress in automated vehicle technology and develop policies to align deployment with climate, social and health goals
- 11 Ensure co-ordination between different climate and transportation policies across government levels