



VÉLO CANADA BIKES



**Submission for the Pre-Budget
Consultations in Advance of the 2021 Budget**

By: Vélo Canada Bikes

February 17, 2021

Recommendation 1: That the Government provide funding in the amount of \$720M for the rapid deployment of active transportation infrastructure networks to connect people to jobs, schools, hospitals, and essential services within communities.

Recommendation 2: That the Government develop a National Active Transportation Strategy, with sufficient funding to support meaningful public engagement and research, including a communication and public education component, and create a dedicated Active Transportation Infrastructure Fund of \$700M per year.

Recommendation 3: That the Government of Canada immediately designate e-bikes as zero emission vehicles and implement incentives for the purchase of e-bikes, cargo, and cargo e-bikes, including, but not limited to, rebates, grants, subsidies, and a review of tariffs.

Recommendation 4: Building on the Pan-Canadian Framework on Clean Growth and Climate Change; that the Government develop an ambitious and evidence-based position on the greenhouse gas (GHG) reduction potential of nation-wide active transportation modal shift. This position ought to be based on a study of California Air Resources Board (CARB) findings; the maximum reduction potential model; and integration of this evidence into the national active transportation strategy; and Canada's commitment to meeting the UN sustainable development goals.

Recommendation 5: That Government budgetary research, as part of the gender-based process, include an analysis of the impact of the budget on active transportation among women

Recommendation 6: That the government identify funding to enable marginalized communities to participate in equity-based analysis of transportation usage and funding in Canada focusing on Indigenous peoples, newcomers, and people of colour. Key metrics should include safe access to safe and sustainable transportation, resultant life expectancy and physical activity, and the impact of the built environment on injury and death.

RATIONALE FOR RECOMMENDATIONS

Recommendation #1

Communities and municipalities across Canada have responded to transportation challenges during COVID by opening streets for active transportation. Walking and cycling, in particular, have expanded exponentially. That trend has continued through the winter months.

The Government responded to this activity in creating the Canada Healthy Communities Initiative for 2021. Whether for exercise, for community connection, for a safe transportation option, or out of financial necessity, more people are choosing active transportation. An immediate and dedicated funding stream for active transportation is required to capture the gains of 2020 and the CHCI initiatives of 2021.

Recommendation #2

On March 11, 2020, MP Fillmore announced the Government of Canada's intent to create a National Active Transportation Strategy¹. This commitment was reiterated within the Pan-Canadian Framework on Clean Growth and Climate Change. A commitment to funding active transportation infrastructure that supports a National Active Transportation Strategy, is required to lend validity to the whole exercise. Prior Vélo Canada Bikes research and submissions have fully expounded on the requirements and scope of the commitment that is needed.

Recommendation #3

Pedal-Assist Bikes, where an electric motor provides assistance to the rider's pedaling, are commonly referred to as e-bikes. By their very nature, e-bikes are zero-emission vehicles. As such, they should be eligible for the EV rebate program offered to support Canadian consumers in making greener sustainable choices for their transportation needs.

For individuals and families e-bikes and cargo bikes² present a reasonable alternative to the personal automobile. The vast majority of personal and family trips, taken by car, within communities, such as, commuting to work, shopping, trips to school, and trips to community events, are easily replaced by bicycles. The advent of e-bikes has expanded that access to a much broader group of people. E-bikes give access to people with mobility challenges, as never before. In communities with more challenging terrain, e-bikes are considered a game changer, as they allow more people to use a bicycle on routes that would have previously been inaccessible.

¹ Twitter: @AndyFillmoreHFX March 11, 20202

² Cargo Bike is a catch all term to refer to a bicycle capable of carrying heavy or bulky loads and passengers, including children.

Commercially, there is a great deal of interest from delivery services to expand their use of cargo bikes³. In larger urban settings, more community delivery services for restaurants, groceries, and other household needs, are seeing a surge in the use of bicycles for delivering goods. In addition, cargo bikes and e-cargo bike-share programs are being piloted in municipalities in Canada (Jalon, Montreal 2020; Mayor Tory, Toronto 2020). Montreal has partnered with Purolator to pilot cargo e-bikes for package deliveries. In Toronto, UPS is piloting a similar program including smaller more local distribution centres. Companies are recognizing that “Last-Mile” deliveries by cargo e-bikes can be more efficient, save money, and reduce GHGs.

Recommendation #4

The California Air Resources Board (CARB) was established in 1967. CARB establishes state public air quality regulations to protect the health of Californians. CARB findings should be studied to determine the Government’s ability to align policy with these findings. (ww2.arb.ca.gov) CARB has identified vehicle-mile-reductions (VMR) as essential to meeting goals for GHG reductions in transportation. CARB has identified “complete streets – designed for walking, biking and transit...” as a particularly impactful strategy to reduce vehicle-miles-travelled (VMT). CARB found a 10% improvement in “Infrastructure and Services: e.g., distance to transit, quality of transit service, bike/pedestrian infrastructure...” can reduce VMT by up to 60%.

Active transportation is not broken-out in this analysis, but its benefits are increased by holistic solutions that combine it with transit and in-fill housing, for example.

Incorporate findings that support key assumptions:

- Where there is high quality AT infrastructure, e-bike sales (as a share of all bike sales) are rapidly rising, reaching 31.5% in Germany, 42% in the Netherlands and 50% in Belgium. E-bike shares on AT infrastructure are rising.
- This includes diverse light electric vehicles: Belgium may have the highest e-bike share because its policies allow faster vehicles and mopeds. Such policies do present some safety and accessibility challenges but since they can substantially increase GHG savings (see below) they should be modelled. Relatedly, cargo e-bikes to replace last-mile deliveries made by diesel trucks and other mode-breaking applications should be modelled as well.
- Convergence will accelerate as LEV options improve and diversify (Weiss, 2015 found an 8% year over year cost reduction); modelling should incorporate these changes and proven policy supports that further accelerate this trend like e-bike subsidies.

³ CBC: November 06, 2019 <https://www.cbc.ca/news/technology/cargo-bike-deliveries-1.4437511>

Research shows e-bikes replace cars much more than conventional bikes.

- The dramatic per-km advantage of e-bikes over internal combustion engine cars and E-cars is established (Weiss 2015); research is emerging on what kind of trips e-bikes replace.
- A global study found that cycling and e-bikes can combine for 14% of person-km traveled to achieve a 10% reduction in urban passenger transport GHGs (Mason, Fulton, and McDonald 2015)
- In a UK study, participants in an e-bike trial reported an average 20% reduction in miles driven from commuting and other trips (Cairns et al. 2017)
- A Swedish study found e-bike users mostly replaced car trips more than other modes and saved around 60km/wk of driving across urban and rural areas (Hiselius and Svensson 2017).
- North American e-bike owners were found to be replacing car trips 62% of the time, those replaced trips being an average length of 15km, and were 46% commuting (MacArthur et al. 2018).

Recommendation #5

Under a commitment to gender-based budgeting and equity, increased investment in active transportation infrastructure should be monitored to ensure that access to and use of AT is expanded across all segments of society. There is a historical gender/age/social gap amongst cyclists⁴. Special focus must be put in place to guarantee equity of access in all active transportation infrastructure projects. Setting equity targets and measurements as part of both the National Active Transportation Strategy and its implementation are required to ensure equitable access. Vélo Canada Bikes' paper: Gender Equity and Cycling in Canada explores this challenge in depth (VCB October 2018).

Recommendation #6

Indigenous peoples, newcomers and people of colour have consistently been marginalized within our broader communities. In the world of Reconciliation and Inclusion, special focus must be placed on these communities. The Government ought to invest in making sustainable transportation choices readily available and accessible as a part of an overarching effort to increase equity, diversity, and inclusion.

⁴ Vélo Canada Bikes, October 2018: <https://www.canadabikes.org/gender-equity-and-cycling-in-canada-background-information-and-literature-summary/>

References:

Cairns, S., F. Behrendt, D. Raffo, C. Beaumont, and C. Kiefer. 2017. "Electrically-Assisted Bikes: Potential Impacts on Travel Behaviour." *Transportation Research Part A: Policy and Practice* 103 (September): 327–42. <https://doi.org/10.1016/j.tra.2017.03.007>.

Cherry, C.R., 2007. *Electric Two-Wheelers in China: Analysis of Environmental, Safety, and Mobility Impacts*. Dissertation. University of California, Berkeley, USA.

Hiselius, Lena Winslott, and Åse Svensson. 2017. "E-Bike Use in Sweden – CO 2 Effects Due to Modal Change and Municipal Promotion Strategies." *Journal of Cleaner Production* 141 (January): 818–24. <https://doi.org/10.1016/j.jclepro.2016.09.141>.

MacArthur, John, Michael Harpool, Daniel Schepke, and Christopher Cherry. 2018. "A North American Survey of Electric Bicycle Owners." *Transportation Research and Education Center*.

Yonatan Strauch for the Transition Accelerator <https://doi.org/10.15760/trec.197>.

Mason, Jacob, Lew Fulton, and Zane McDonald. 2015. "A Global High Shift Cycling Scenario: The Potential for Dramatically Increasing Bicycle and E-Bike Use in Cities Around the World, with Estimated Energy, CO₂, and Cost Impacts." *Institute for Transportation & Development Policy*, University of California, Davis.

Weiss, Martin, Peter Dekker, Alberto Moro, Harald Scholz, and Martin K. Patel. 2015. "On the Electrification of Road Transportation – A Review of the Environmental, Economic, and Social Performance of Electric Two-Wheelers." *Transportation Research Part D: Transport and Environment* 41 (December): 348–66. <https://doi.org/10.1016/j.trd.2015.09.007>.

Vélo Canada Bikes: National Walking and Cycling (Active Transportation) Infrastructure Fund Proposal, 2016 <https://www.canadabikes.org/wp-content/uploads/2016/09/CyclingWalkingFundingProposalnov416.pdf>

Vélo Canada Bikes: Gender Equity and Cycling in Canada, October 2018. <https://www.canadabikes.org/gender-equity-and-cycling-in-canada-background-information-and-literature-summary>

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