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# TRANSIT'S ROLE IN CLIMATE ACTION

COMMENTS ON THE CITY OF BURLINGTON'S DRAFT  
CLIMATE ACTION PLAN  
JANUARY, 2020



**BURLINGTON FOR ACCESSIBLE SUSTAINABLE TRANSIT**

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# TRANSIT'S ROLE IN CLIMATE ACTION

Comments on the City of Burlington's Draft Climate Action Plan

Burlington for Accessible Sustainable Transit (BFAST)

January, 2020

We congratulate Burlington's City Council on the leadership and foresight it has shown on our community's commitment to dealing with environmental degradation and global warming. The programs outlined in the Climate Action Plan are significant and the City will show serious intent with the adoption of this Plan.

While we strongly support the draft Plan overall, we would argue that public transportation could play a greater role — and have significantly more benefits — than envisaged in the draft Plan.

## TRANSPORTATION PRIORITIES

We believe that a community can make its greatest contribution to the environment by reducing the number of personal vehicles on the roads within its boundaries. At average GHG emissions of 4.6 metric tonnes per year, reducing the use of personal vehicles is an obvious target for reduction in GHG emissions.

Are electric cars the solution? Cities are beginning to realize that while they are part of it, the real solution is to reduce the number of private cars on the road. Toronto's Globe and Mail, for example, editorialized on January 3 that "Canada's cities are about to add millions of new residents. They can't all drive to work."<sup>1</sup>

The contribution of private automobiles to total GHG emissions is not only significant in terms of direct pollution. Private vehicles require huge, heat-radiating infrastructure in the form of roads and parking lots, regardless of the fuel they use. This infrastructure requires large quantities of petrochemical products to build and maintain.

Electric vehicles begin their lives with a carbon deficit, the result of extracting the lithium used in their batteries at an even greater environmental cost than that of oil and gas. Some experts say that

there is simply not enough lithium or cobalt (another essential ingredient in lithium-ion batteries) to satisfy anticipated needs.<sup>2</sup> And the additional demand to charge the vehicles could, under current circumstances, be met with electricity produced from burning fossil fuels.

This is not to disagree with the idea of converting to electric-powered vehicles, but to argue that electric vehicles cannot be the extent of a strategy for a sustainable transportation system. We also need to focus on reducing the number of vehicles on the roads. BFAST suggests that this goal should be among the most important of our transportation priorities.

Reducing the number of vehicles will enhance the quality of life in our city at the same time as it cuts GHG emissions. Imagine Burlington with parking lots converted to green space, or our wider roads shaded by medians planted with trees. Both of these actions would cool our cities, absorb CO<sub>2</sub> and release oxygen into the local environment. But none of this can happen if we continue our pattern of over reliance on personal vehicles that carry only one person.

Relying on electric vehicles to provide one of the greatest savings in GHG emissions is, in our view, a potential weakness in the draft Plan. Consumers have been much slower to buy electric vehicles than optimistic forecasts predicted.<sup>3</sup> This trend could well continue into the future.

Will drivers ever embrace transit? The answer is being demonstrated in Burlington by the response to even the modest improvements made in the system over the past year. We are informed that the majority of ridership lost to the disastrous and irresponsible transit cutbacks of 2012-2013 has been recovered in less than a year. Moreover, seniors have responded in droves to the free transit pilot project. Could this be a sign that more drivers are prepared to forego the stress and expense of automobile commuting in favour of transit?

Persuading drivers to leave their cars at home for just work commutes would result in significant reduction in greenhouse gases (whether caused by the vehicles themselves, their manufacture or the generation of electricity) no matter how the cars are fueled. It's a measure that works because of its simplicity: promoting transit as an alternative to individual commutes by personal vehicles doesn't rely on the development and acceptance of a new technology and an entire transportation infrastructure that exists today only in its infancy.

## **ECONOMIC BENEFITS OF TRANSIT**

We are pleased to see that the economic benefits of reducing GHGs are included in the draft Plan. (Building the Economy, pages 36-40). In our view, however, the draft Plan understates both the GHG savings and economic benefits that can be achieved by transit. We would suggest that the benefits of increasing transit also should include benefits found in previous economic studies by Kubursi<sup>4</sup> and the Canadian Urban Transit Association<sup>5</sup>. Also, consideration should be given to the methodology of determining transit benefits developed by the Victoria Transportation Institute.<sup>6</sup>

In particular, the Kubersi study enumerates economic benefits of transit that are not mentioned in Burlington's draft plan. Increasing the share of transit ridership by 15-20%, for example, would save Hamilton's commuters more than \$19 million per year. These savings would have a multiplier effect, as most of the money would likely be spent in the community, supporting local business and employment.

It has been our belief for some time now that Burlington would benefit from a study on the economic impact of increased transit ridership. Such a study, when combined with the modelling being developed as part of the Integrated Mobility Plan, would provide realistic targets and projections of how investment in transit would reduce our community's carbon footprint and generate local economic benefits.

## **COMMENTS ON APPENDED ENGAGEMENT STRATEGY**

We are pleased and encouraged to see that Council plans an extensive process of consultation and engagement on how Burlington can help in the fight against global warming. However, we note that in some instances, the strategy can be more aggressive in encouraging people to adopt public transit rather than relying on electric vehicles to reduce their carbon footprint.

On page 4, for example, the strategy seems to write off young families as candidates for transit use. However, an improved transit system could potentially allow a young family to get by with one personal vehicle instead of two, or two instead of three. Again, we strongly believe that switching from over-reliance on personal vehicles will yield greater results in terms of carbon footprint than simply switching to alternate fuels for existing vehicle use. And adopting transit can save a family more than \$9,000 per year (based on operating cost of a compact car) if it allows them to get by with one fewer vehicle, according to the Canadian Automobile Association.<sup>7</sup>

In addressing the needs of employees (page 5), the strategy again focuses on conversion of ICE vehicles to electric rather than reducing motor vehicle use. It does not discuss transit and active transportation at all. Many employers now are having difficulty in recruiting and maintaining staff because of lack of transit.<sup>8</sup> This issue should be further examined with reference to the Integrated Mobility Plan.

## **THE IMPACT OF FREE PARKING**

Another way on which transit can provide further assistance in mitigating climate change is in reducing the need for parking. Parking facilities and infrastructure are a significant contributor to warming in our cities.

Also, the cost and availability of parking is a key determinant of how workers choose to get to work. Matt Pinder's analysis of the availability of free or paid parking affects commuter mode revealed that employees in Hamilton and Burlington who had to pay for parking were much more

likely to use transit.<sup>9</sup> The impacts of parking on travel choices is described in detail in Donald Shoup's book "The High Cost of Free Parking."<sup>10</sup>

## OTHER COMMENTS

**Page 18:** Please review the calculation of needed growth rates i.e. "98% growth" and "19.6% per year". Our calculation, based on these ridership numbers, would show greater than 200% total growth is needed to achieve an 8.3% target modal split for transit. The annual rate of increase should not be one fifth of the total five year increase, but instead should be the compounded annual rate; i.e. 15% annual growth over 5 years results in a doubling (100% increase) of ridership and a 25% annual growth over 5 years results in a tripling (200% increase) of ridership.

**Page 28:** Figure 6 shows a very large increase in electricity use for electric vehicles. What are the environmental effects? A significant increase in electricity demand would currently be supplied by plants burning fossil fuels.

**Page 45:** "Table 5 – Programs of Activity:" This table shows that vehicle electrification will have over 30 times the effect of reducing motor vehicle emissions by reducing car use and increasing the modal share of transit/cycling/walking. Is this reasonable? What is this based on?

**Pages 52-53:** "Program 4 – Integrated Mobility Plan:" This table is very confusing. How does a projected decrease of 60% in motor vehicle trips (from present modal share of over 90% to 2050 projection of 31%) translate into a 1% reduction in GHG emissions?

**Page 60:** "Community Stakeholders:" Given our work on the transit file, we believe BFAST should be included as a stakeholder.

**Page 67:** "Monitoring and Evaluation:" We are pleased to see the use of Burlington Transit's service standard ("number of new buildings that are within 400 metres of a bus stop").

All of which is respectfully submitted,

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- 2 Forbes, “The World’s Cobalt Supply Is In Jeopardy” <https://www.forbes.com/sites/greatspeculations/2018/02/27/the-worlds-cobalt-supply-is-in-jeopardy/#56f86a3a1be5>
- 3 CBC News, “Sales of electric vehicles plummet in Ontario now that province has cancelled rebate” Dec. 15 2019 <https://www.cbc.ca/news/canada/toronto/year-ont-electric-vehicles-1.5397190>
- 4 Dr. Atif Kubursi, Economic Impact of the Community Climate Change Action Plan City of Hamilton, Econometric Research Ltd, 2016. <http://cleanairhamilton.ca/wp-content/uploads/2017/05/7-Kubursi.pdf>
- 5 McCormick Rankin Corporation, and Dr. Jeff Casello, University of Waterloo, for the Canadian Urban Transit Association, The Economic Impact of Transit Investment: A National Survey, Metropolitan Knowledge International, 2010
- 6 Victoria Transport Policy Institute, <https://vtpi.org/>
- 7 Canadian Automobile Association, CAA Provides Real Picture of Annual Driving Cost. <https://www.caa.ca/caa-provides-real-picture-of-annual-driving-costs/>
- 8 Frank McKeown, Burlington Economic Development Corporation, personal communication.
- 9 Matt Pinder, “By the Numbers: Impacts of Paid Parking at Work on Commuter Modal Share,” Published July 08, 2015. [https://www.raisethehammer.org/article/2647/by\\_the\\_numbers:\\_impacts\\_of\\_paid\\_parking\\_at\\_work\\_on\\_commuter\\_modal\\_share](https://www.raisethehammer.org/article/2647/by_the_numbers:_impacts_of_paid_parking_at_work_on_commuter_modal_share)
- 10 Donald Shoup, The High Cost of Free Parking, April 2005, ISBN1884829988