PEMBINA institute

December 23, 2020

Ms. Angela Litrenta, Director (Acting)
Ministry of Transportation
Safety Program Development Branch
87 Sir William Hearst Avenue, Building “A”, Room 212
Toronto ON M3M 0B4

Dear Ms. Angela Litrenta:

**Re.: Comments on Ontario Regulatory Registry Proposal (20-MTO091) - Power-Assisted Bicycle (E-Bike) and Cargo E-Bike Pilot Program**

On behalf of the Pembina Institute, we are pleased to provide comments on the proposed regulatory and policy framework for power-assisted bicycles (e-bikes) and the cargo e-bikes pilot program. We understand Transport Canada intends to repeal the definition of a "power-assisted bicycle" under the Motor Vehicle Safety Regulations (C.R.C., c. 1038, Section 2) in February 2021 and provinces and territories will have discretion to define and regulate these vehicles.

The Pembina Institute is a non-profit think-tank that advocates for strong, effective policies to support Canada’s clean energy transition. Our transportation team has done extensive research, including with industry and governmental collaboration, in the area of zero- and low-carbon emission modes of transportation, such as cargo e-bikes.

Our comments in this letter are scoped to the proposed regulatory framework for cargo e-bikes and a proposed pilot by the Ministry of Transportation (“Ministry”).

## General comments

We support a legislative and regulatory framework in the Ontario Highway Traffic Act (HTA) that allows the use of cargo e-bikes for urban freight delivery purposes. Many jurisdictions globally are working to advance cycling regulations and policy – including cargo e-bikes – to increase ridership; provide more travel choice for people of all ages, abilities, and incomes; and increase safety of all road users. Further, as the use of cargo e-bikes for last-mile deliveries is expected to play a large role in future goods movement within city limits of the densest and most congested cities, it is important that provincial and municipal regulations with appropriate municipal infrastructure are in place to ensure the safe use and integration with other road users. Establishing a clear and flexible regulatory framework in Ontario and Canada

that considers existing cycling technologies and anticipates future innovations in the global bike industry for passenger and goods movement is critical for users and Ontario businesses.

Cargo e-bikes paired with the use of microhubs is an efficient and cost-effective last-mile delivery mode that reduces transportation greenhouse gas emissions.[1] Cargo e-bikes are already operational, by businesses of all sizes, in Toronto, Vancouver, Montreal, and in approximately 30 U.S. states and numerous European cities. In the City of Montreal, the Colibri project, run by non-profit organization Jalon, facilitates the delivery of over 5,000 parcels per week from local businesses by cargo e-bikes, which reduces truck trips.[2] Experience shows that the viability and efficiency of this mode of delivery requires power-assistance, especially when carrying heavy loads or navigating varying terrain.

Support for a new regulatory framework to allow greater use of e-bikes and cargo e-bikes comes with several important considerations, including the development of a more nuanced classification system, stakeholder engagement, public education and awareness initiatives, and for the pilot program. These considerations are listed in greater detail here.

## Considerations to improve regulatory clarity with model global frameworks

For cargo e-bikes to be a scalable solution for businesses in Ontario, regulations should be consistent with other provinces and related with the larger global market where the deployment of cargo e-bikes is more prevalent.

We offer the following considerations to enhance the proposed regulatory framework:

### Establish a broader regulatory classification system that acknowledges the range of e-bikes

There is a variety of users of e-bikes for personal mobility, but that group also includes commercial cargo cycle operators. Over the years, a variety of types of e-bikes have been manufactured in response to the needs of different users. The Ministry's e-bike regulatory framework should be expanded to acknowledge the wide range of e-bike types. This would be helpful for many purposes such as facilitating imports and sales, understanding risk profiles of e-bike types and operator rules, determining cycling infrastructure use at the municipal level, etc.

[1] Nithya Vijayakumar, *Cyclelogistics: Opportunities for moving goods by bicycle in Toronto* (Pembina Institute, 2017), 1. http://www.pembina.org/reports/cyclogistics-final.pdf

[2] CBC The National, November 27, 2020

For example, with regard to infrastructure use, the City of Toronto does not allow certain types of e-bikes on all cycling infrastructure for safety reasons.[3] Pedal-assisted cargo e-bikes are legal for use on roads, painted bike lanes, and cycle tracks. Power-assisted e-bikes capable of operating solely by motor power are allowed on roads and painted bike lanes. A provincial classification system that better acknowledges the wide range of e-bikes would support these municipal decisions.

Different regulatory frameworks with classification systems exist in the global marketplace, including those developed by the PeopleForBikes coalition in the United States, and the approach of the European Union (EU Regulation 168/2013).[4] [5] Both frameworks contain classes of e-bikes with clear definitions that allow and facilitate the development of a diversified e-bike market. Furthermore, cargo e-bikes serve different needs than a typical e-bike and therefore warrant unique regulatory consideration. Cargo e-bikes can carry more mass and may need more power or a different design or both. In Europe, there is an e-bike class largely designed for cargo e-bikes. It is similar to the other classes except power is permitted up to 1,000 W and three- or four-wheel cycles are allowed. This class is the subcategory L1e-A "Powered Cycle".

Therefore, a supportive regulatory framework in Ontario can help scale up the safe use of cargo e-bikes for both personal mobility and the future of last-mile, urban freight delivery.

*We recommend the Ministry include provisions in the E-Bike Framework after evaluation of the pilot that will clearly support and scale up the use of cargo e-bikes and accommodate their unique needs.*

## Benefits of having a classification system in Ontario

A system that acknowledges and classifies the range of types of e-bikes achieves many objectives, for example:

- Allows for regulatory clarity across markets that support businesses to scale cargo e-bike operations in Ontario and Canada.
- Allows the Ontario government, municipalities, and users to utilize and leverage educational resources that are already available in the North American or European market.

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[3] City of Toronto, "Electric bicycles - e-bikes - power assisted bicycles - City streets - parks - bike lanes." https://www.toronto.ca/311/knowledgebase/kb/docs/articles/transportation-services/transportation-infrastructure-management/cycling-infrastructure-and-programs/electric-bicycles-e-bikes-power-assisted-bicycles-city-streets-parks-bike-lanes.html

[4] People for Bikes, "Model Electric Bicycle Law with Classes." https://wsd-pfb-sparkinfluence.s3.amazonaws.com/uploads/2020/01/Model-eBike-Legislation-Jan2020.pdf

[5] European Union, *Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles,* 168/2013. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013R0168&from=EN

- Should the government introduce a labelling requirement, police enforcement can distinguish between bicycle-style e-bikes and from mopeds and motorcycle style e-bikes.
- Municipalities can continue to pass bylaws to determine where e-bikes can operate safely in each unique local environment.
- Accommodates new e-bike technologies, including cargo e-bikes. Different forms of e-bikes (pedal-assisted) are emerging globally with various numbers of wheels, rider coverings for all seasons, and overall designs.

## Consult stakeholders and review global regulatory frameworks regarding the use of a throttle ("twist grip throttles" or "throttle-on-demand")

Under the model law of the PeopleForBikes in the U.S., "twist grip throttles" are permitted in Class 2. Class 2 e-bikes are treated as bicycles in this model law. Conversely, "twist grip throttles" are not allowed in the European Union under Regulation 168/2013. In this regulation, all two- or three-wheel vehicles and quadricycles are treated as motor vehicles with some exceptions. One such exception – treated as a bicycle – is pedal cycles with pedal assistance with an auxiliary electric motor where the output of the motor stops when the cyclist stops pedaling.

Under this European regulation, the provision does not allow for "twist grip throttles" on a vehicle treated as a bicycle. They are only permitted on motor vehicles.

Further, e-bikes with throttles may be subject to licence, registration, and insurance requirements in the European Union. Consideration should be given to applicability of such requirements in Ontario.

*As a part of the pilot, we recommend the Ministry conduct additional consultations with stakeholders, review these global regulatory frameworks, assess road safety research literature and experiences of other jurisdictions with "twist grip throttle bikes" regarding road safety. Based on this, update regulations that relate to "twist grip throttles".*

## Best practice guide for municipalities

*To support Ontario municipalities to pass bylaws to permit the use of bicycle-style e-bikes and determine what is best for their communities, the Ministry should create a best-practices guide for e-bikes and cargo e-bikes.*

The best-practice guide could describe how municipalities can manage: access to bike infrastructure including on-street bike lanes and cycle tracks; cargo e-bike loading/unloading and parking facilities; allowing e-bikes on transit vehicles; and operating parameters within public boulevards.

Furthermore, we encourage the province to host and convene relevant actors (e.g., municipalities, interested civil society groups and subject matter experts, Association of Ontario Municipalities, Federation of Canadian Municipalities etc.) and provinces for an inter-provincial/territory policy discussion on regulations and best practices for e-bike and cargo e-bike operations and infrastructure.

## Cargo e-bike pilot considerations

We support a short-term pilot to evaluate the use and operation of cargo e-bikes. This pilot should focus on building awareness and provide educational training, data collection, and to determine whether or not further regulations are required for cargo e-bikes. *We recommend that the Ministry:*

- Support municipal planning authorities by identifying broad best practices and enabling infrastructure that would support the safe and efficient deployment of cargo e-bikes. Update best practices guide and resources, as more information about pilot performance is available.
- On an annual basis, collect relevant data to monitor and evaluate the use and integration of cargo e-bikes with other road users. Engage with relevant stakeholders to identify data and performance metrics.
- Undertake additional policy and market research and analysis to establish additional regulations as it relates to licensing, registration, insurance and other compliance measures upon the end of the pilot if appropriate based on the data collected and other research.
- Work with local agencies and relevant stakeholders to offer training and educational resources for the safe use of cargo e-bikes and navigation with pedestrians and other vulnerable road users.
- Leading up to the conclusion of the pilot, the Ministry hold stakeholder consultations to communicate the findings of the pilot and discuss any potential regulatory and legislative amendments as it relates to licensing, registration, insurance and other compliance measures.

## Conclusions

Cargo e-bikes give consumers and businesses more choice to deliver parcels efficiently and safely while limiting environmental impacts. This new travel mode also presents an opportunity to reduce traffic congestion by replacing last-mile delivery trucks with cargo e-bikes. In order for the proposed regulation to unlock the economic opportunities of a new and growing e-bike and cargo e-bike market, a more nuanced classification system of bicycle-style e-bikes is required. The Pembina Institute welcomes the opportunity to discuss our comments

and serve as a resource to the Ministry's regulatory development and design of the cargo e-bike pilot.

Yours sincerely,

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