

Matthew Green, General Government and Licensing Committee Secretariat

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November 29, 2021.

Dear Committee Members,

TAF is supportive of the Outstanding Vehicle-for-Hire Directives report recommendations concerning electrification and emissions reduction in the VFH sector. We are pleased to see the inclusion of a Vehicle-for-Hire Working Group to convene all relevant City, industry, and community stakeholders to discuss opportunities to electrify the vehicle for hire industry by 2030. The working group, modeled after the Boston “Ride-for-Hire Working Group”⁵, will help fulfil Council direction on regulating carbon emissions from the VFH sector while supporting the City’s equity goals.⁶.

TAF supports recommendations two, three and four, which include the establishment of a Working Group subcommittee. Emissions reductions and electrification targets for the VFH sector should, at a minimum, be aligned with the updated TransformTO Net Zero strategy to be adopted by Council next month. These actions will help address the climate crisis declaration adopted by the City of Toronto¹. It is vital that the City of Toronto have a plan in place to enable VFH companies to shift from internal combustion engines to electric vehicles, given the time needed to develop the infrastructure necessary for the transition.

Notably, the VFH industry is broadly supportive of decarbonization. In the 2019 VFH Bylaw review, taxi industry stakeholders overwhelmingly supported the extension of emissions standards to the entire VFH industry. Nine-in-ten residents agreed, according to a survey commissioned by the City². Since that time, major Private Transportation Companies, including Lyft³ and Uber⁴, have publicly announced ambitious decarbonization goals.

In 2019, Council directed MLS to develop and report back by the end of 2020 with an emissions reduction incentive program, and low-emission standards and targets for the entire VFH industry⁵. This direction was re-confirmed when Council approved the Electric Vehicle Strategy, assigning MLS the

¹ <https://www.toronto.ca/news/city-council-declares-climate-emergency-and-commits-to-accelerating-action-to-address-climate-change/>

² <https://www.toronto.ca/legdocs/mmis/2019/gl/bgrd/backgroundfile-134403.pdf>

³ <https://www.lyft.com/blog/posts/leading-the-transition-to-zero-emissions>

⁴ <https://www.uber.com/us/en/about/sustainability/>

⁵ Council decision [GL6.31](http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.GL6.31) (74), July 16, 2019, accessible at <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.GL6.31>

lead role in developing incentives and regulations to electrify the VFH industry⁶. We are disappointed that there has been no progress in developing standards or incentives since that time. Given the urgency of the climate emergency, **we strongly recommend that the proposed strategy referenced in staff recommendation 4 include specific policies and programs for implementation beginning in 2023.**

At our recent meeting, MLS indicated that development of incentives, standards, and targets for the VFH industry would continue to be delayed due to incomplete analysis of carbon emissions and air pollution from the industry. **TAF has already used the best available data from the City and other sources to estimate the baseline emissions from the VFH industry** and forecast future emissions (see Appendix). While there are limitations in the available data, the model can be updated with new data as it becomes available and can be used to model the impact of various policy and program interventions. While further research and improved data is always desirable, we wish to emphasize that there is no need to further delay action in this area pending the results of the third-party emissions study⁷.

The Atmospheric Fund is encouraged by the recommendation to form a working group to convene stakeholders to discuss reducing emissions in the vehicle-for-hire sector. We have convened stakeholder groups in the past to tackle major shifts in the City of Toronto, and we look forward to supporting MLS with this and other tasks.

Sincerely,



Bryan Purcell
VP of Programs & Policy

The Atmospheric Fund

About the Atmospheric Fund

The Atmospheric Fund (TAF) is a regional climate agency that invests in low-carbon solutions for the Greater Toronto and Hamilton Area (GTHA) and helps scale them up for broad implementation. Please note that the views expressed in this submission do not necessarily represent those of the City of Toronto or other GTHA stakeholders. We are experienced leaders and collaborate with stakeholders in the private, public and non-profit sectors who have ideas and opportunities for reducing carbon emissions. Supported by endowment funds, we advance the most promising concepts by investing, providing grants, influencing policies and running programs. We're particularly interested in ideas that offer benefits in addition to carbon reduction such as improving people's health, creating local jobs, boosting urban resiliency, and contributing to a fair society.

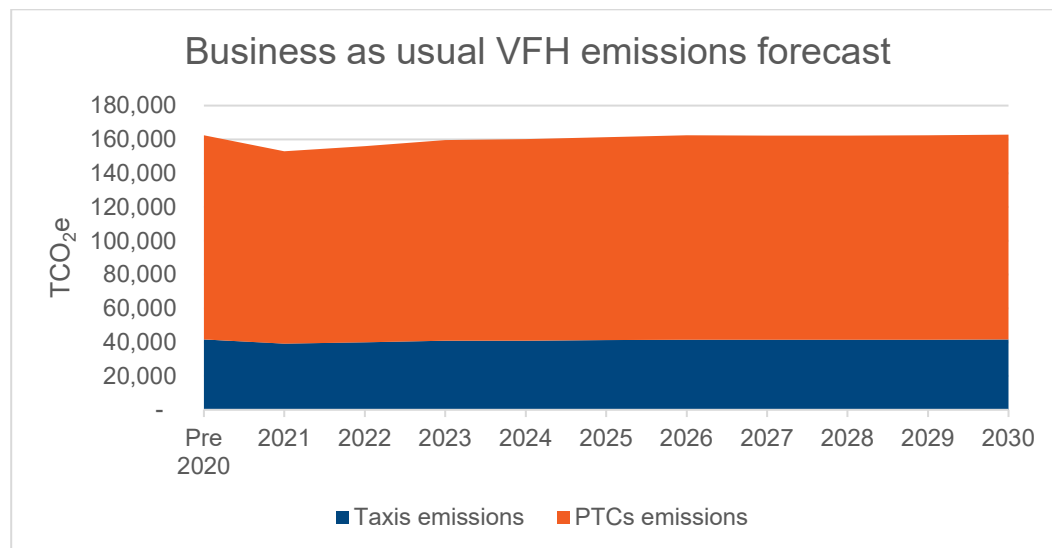
⁶ Council decision [IE11.17](#), January 29, 2020. EV strategy available at <https://www.toronto.ca/wp-content/uploads/2020/02/8c46-City-of-Toronto-Electric-Vehicle-Strategy.pdf>
⁷<https://www.toronto.ca/legdocs/mmis/2019/gl/bgrd/backgroundfile-134403.pdf>

Appendix

VEHICLES FOR HIRE GHG BASELINE AND BUSINESS AS USUAL FORECAST

Summary

Annual emissions from Vehicles for Hire in Toronto (before the pandemic) are estimated to be 162,488 T CO₂e. Forecasting a conservative growth and no additional policies or restrictions, cumulative emissions from this sector are expected to account for 1.6Mt (1,602,304 T CO₂e) in the 2021-2030 period.



Baseline:

There are various uncertainties associated with baseline information for Vehicle Kilometres Travelled and Emissions Factors both for taxis and Private Transportation Companies due to limited data sources. For this study, multiple data sources have been analyzed and consulted to produce the most accurate baseline possible. These sources are summarized in the tables below:

Vehicle Kilometres Travelled (VKTs):

Several sources have been combined to estimate a total VKT value and the calculated value is slightly over 800M Km/year.

Taxis VKTs:

Details	Value	Units	Comments	Source
Estimated number of trips per day	65,000	trips/day	Data from 2014/used also for 2016	https://www.toronto.ca/legdocs/mmis/2014/ls/bgrd/backgroundfile-66258.pdf
Average ride distance	7.63	km/trip	Calculated (context: 10 km/trip with Data from 2014)	https://www.toronto.ca/legdocs/mmis/2014/ls/bgrd/backgroundfile-66258.pdf
% Cruising	40%		Adds extra 40% VKTs per trip	Facilitated in conversation with the City and other sources
Total annual VKTs	253,264,375	km	Calculated	

PTCs VKTs:

Details	Value	Units	Comments	Source
Daily VKTs in Sep 2018	1,230,000	Km/day		Unpublished City Data
% Cruising	40%		Extra 40% VKTs per trip	Facilitated in conversation with the City and other sources
Total annual VKTs	628,530,000	Km/year	Calculated	

EFs:

Taxis EFs:

Variable	Value	Units	Comments	Source
Average EF for taxis Pre-COVID	164.1	gr CO ₂ e/Km		Calculated based on registered taxi vehicle data provided by the City.
Emissions factors for authorized vehicles			Obtained from NRCan	https://fcr-ccc.nrcan-rncan.gc.ca/en/

PTCs EF:

Variable	Value	Units	Comments	Source
Average EF for PTCs Pre-COVID	192.4	gr CO ₂ e/Km		Calculated based on PTC vehicle data provided by the City.
Emissions factors for authorized vehicles			Obtained from NRCan	https://fcr-ccc.nrcan-rncan.gc.ca/en/

Baseline emissions:

Total VFH annual emissions Pre-COVID (T CO ₂ e/year)	
Total taxi emissions Baseline	41,548
Total PTCs emissions Baseline	120,940
Total VFH emissions baseline	162,488

Forecast:

The impact of COVID in the sector is still unknown, but based on conversations with industry experts, a rebound to pre-pandemic levels is expected.

VKTs:

Forecasting VKTs is likely the most critical element of the baseline, since it's unclear how this industry is going to operate in a post-pandemic world.

Before the pandemic, after years of very significant growth, Toronto seemed to be reaching a plateau that has also been observed in cities where PTCs had an earlier market penetration. We assumed a drop and recovery to pre-pandemic values in PTCs has been modelled until 2023, and after, a very slow growth rate until 2030.

	Growth rate taxis	Growth rate PTCs
Pre 2020		
2021	-5.0%	-5.0%
2022	3.0%	3.0%
2023	3.0%	3.0%
2024	0.8%	0.8%
2025	0.8%	0.8%
2026	0.8%	0.8%
2027	0.8%	0.8%
2028	0.8%	0.8%
2029	0.8%	0.8%
2030	0.8%	0.8%

EFs:

In order to forecast EFs, average efficiency improvements for authorized vehicles in the period of 2012 to 2019 has been extrapolated to 2020-2030.

Forecasted EFs (g CO ₂ e/Km)	Taxis	PTCs
Pre 2020	164.1	192.4
2021	162.6	190.7
2022	161.0	188.8
2023	160.0	187.6
2024	159.2	186.8
2025	158.9	186.4
2026	158.8	186.3
2027	157.4	184.7
2028	156.2	183.2
2029	155.1	182.0
2030	154.3	180.9

Total emissions forecast

Taxi emissions Baseline	PTCs emissions Baseline	Total emissions Baseline
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2021	39,117	113,864.40	152,981.88
2022	39,897	116,133.71	156,030.81
2023	40,832	118,856.18	159,688.57
2024	40,969	119,253.32	160,222.14
2025	41,222	119,991.33	161,213.69
2026	41,526	120,875.19	162,401.19
2027	41,489	120,767.45	162,256.44
2028	41,486	120,757.82	162,243.50
2029	41,538	120,911.38	162,449.82
2030	41,632	121,184.06	162,816.18
TOTAL 2021-2030	409,709	1,192,595	1,602,304.21

The total emissions expected from VFH for the period 2021-2030 are **1,602,304 T CO₂e**.

Disclaimers:

Note this estimate captures the direct impact of ride-hailing activities, not yet considering the impact of mode-switching (especially moving from public transit to ride-hailing), which could be a next step in this analysis.

Also excluded from the current model are emissions from drivers' commute and VHF's impact in traffic congestion.

Emissions were modelled before the Federal Government announcement of its intent to create a regulatory requirement for 100% of new car sales to use low emissions/EV technologies by 2035. It is not clear when a regulation may be drafted or whether it will include any compliance requirement prior to 2030. Therefore the impact of the proposed regulation on VFH emissions to 2030 cannot be modelled at this time.