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## 2023 OPERATING BUDGET BRIEFING NOTE

### Potential Savings from Reducing Idling in the City's Fleet and Possible Measures to Address it

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#### Issue/Background:

- On January 13<sup>th</sup>, 2023, the Budget Committee requested the General Manager, Fleet Services to prepare a briefing note on the potential savings from a reduction of idling in all fleets managed by Fleet Services (not inclusive of the Toronto Transit Commission, Toronto Police Services, Toronto Fire Services, or Toronto Paramedic Services fleets), and possible measures to address it ahead of the introduction of an all-electric City fleet. This Briefing Note responds to the Committee's request.
- Fleet Services' Fleet Safety Policy instructs City fleet operators never to leave their engine on unnecessarily for more than one minute in a sixty-minute period, per the City of Toronto's Idling Control By-law 775-2010. City employees with a Class G City Driving Permit receive training in the City's anti-idling protocols. City employees operating other vehicle classes (such as heavy-duty equipment) receive guidance on idling protocols necessitated by some equipment types. Anti-idling educational messaging is also provided regularly by Fleet Services and staff Divisions through routine driver health and safety talks that complement annual training. Fleet Safety & Compliance field staff also conduct compliance checks that include addressing unnecessary idling.
- Some idling is necessary. About 10% of the vehicles and equipment in the City's fleet, including specialized units such as cranes and dump trucks, have been identified as vehicles that are required to idle for operational reasons due to conducting work while stationary. In other cases, when City drivers are in the field in extreme weather conditions with no option of entering a building, the City is obligated under the Ontario Health and Safety Act (OHSA) to take every reasonable precaution to protect the health and safety of a worker, including protection from heat stress or cold exposure. Idling in such cases is permissible.
- In 2022, Fleet Services began to install telematics devices on City vehicles that gather data on the cost and emissions produced by idling in the City's fleet. Currently, about 1,800 vehicles and equipment are configured with telematics out of an estimated 4,100 on-road assets that have the ability to idle, which represents 44% of the City's applicable fleet. Data from these vehicles and equipment shows an annual cost of idling of \$270,000. Though extrapolating this

number to the whole fleet that has the capability to idle (i.e. assets with an engine) is complicated by the diversity of vehicles and uses, the cost of idling from all City vehicles, excluding hybrid vehicles and vehicles with start/stop anti-idling technology highlighted below, is estimated to be \$500,000 annually.

- Since 2008, Fleet Services has procured vehicles with start/stop anti-idling technology, where the system detects that the vehicle has come to a halt and automatically stops the engine from running unnecessarily. A total of 659 vehicles representing 13% of the City fleet (see Appendix) are equipped with idling reduction and/or low/no emissions technologies, a number that will continue to increase as vehicles reach end of life and are replaced.

**Key Points:**

- Recognizing that some idling is necessary and the proportion of this type of idling is not easily quantified or discerned, there is still significant opportunity to reduce the cost of unnecessary idling in the City's fleet by leveraging fleet technology. In 2023, Fleet Services will work toward reducing this cost through a combination of evidence-based client engagement using telematics data, procurement of electric and plug-in hybrid vehicles where feasible in addition to vehicles with start/stop technology, downsizing the fleet where possible, and improved communications with clients.
- Newly available telematics data allows Fleet Services to understand the exact duration, location, and cost associated with idling at the individual vehicle level, enabling staff to analyze larger trends and develop targeted interventions to reduce idling. Fleet Services will generate telematics idling reports by Division at regular periods and use this data as the basis for engaging staff Division supervisors and managers in understanding idling patterns in their fleet, developing strategies to address it, and tracking progress over time.
- Fleet Services has enhanced its regular anti-idling communications to all client Divisions, making use of high-level insights on idling patterns City-wide from telematics data. This messaging will also help raise awareness on the City's existing policies and by-laws, and counter frequent misperceptions about idling.
- Fleet Services will continue to aggressively procure vehicles and equipment equipped with start/stop technology, and low-emissions or zero-emissions vehicles to replace existing internal combustion engine (ICE) vehicles where possible.

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### Appendix: Fleet Vehicles Equipped with Anti-idling Technologies

The chart below provides a breakdown of the number and proportion of vehicles with anti-idling technology in the City's fleet, in addition to vehicles with hybrid technology that can be operated without running an engine.

**Table 1: Fleet Vehicles Equipped with Anti-idling Technologies**

Vehicles with Idling Reduction & Hybrid Technology	Unit Type	Number	% of Unit Type Category
Vehicles with Start/Stop Technology	Light Duty	419	21%
	Heavy Duty	14	2%
Vehicles with Hybrid Technology	Light Duty	103	5%
	Medium Duty	2	<1%
	Heavy Duty	6	1%
	Off-Road Equipment	2	<1%
Plug-in Hybrid	Light Duty	7	<1%
Electric Vehicle	Light Duty	26	1%
Electric Equipment (e.g., forklift, scissor lift, zero-turn mowers)	Various	80	6%
Total Overall		659	13%