

Request for Decision

Idling Control in Greater Sudbury

Presented To:	Operations Committee
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Recommendation

WHEREAS Council has expressed concern about public nuisances and concern for the economic, social and environmental well-being of the municipality and the health, safety and well-being of its citizens,

WHEREAS motor vehicle idling results in the release of atmospheric pollutants and greenhouse gases that are harmful to the environment and to people's health,

BE IT RESOLVED THAT Council selects Option 2 – preparation of a by-law to control motor vehicle idling, whose coming into force will be preceded by an education campaign on the topic.

Background

At the August 11, 2010, Policy Committee meeting, representatives of the Coalition for a Liveable Sudbury presented the benefits of an idling control by-law for the Greater Sudbury community. Policy Committee agreed that a report in cooperation with the Sudbury & District Health Unit, Coalition for a Liveable Sudbury and EarthCare Sudbury be brought back to Council so that this matter can move ahead.

City staff met on several occasions to discuss idling control strategies and issues. City staff also researched what other Ontario municipalities had undertaken in terms of idling control, including approaches to and experiences with enacting a by-law.

City staff held a meeting with representatives of the Coalition for a Liveable Sudbury and the Sudbury & District Health Unit on November 9, 2011, to discuss the proposed options for idling control.

Negative Effects of Vehicle Idling

Vehicle engines produce a number of undesirable air emissions when in operation. Tailpipes emit criteria air contaminants, such as volatile organic compounds (VOCs), carbon monoxide (CO), and oxides of nitrogen (NOx) that contribute to air pollution and have detrimental health effects on people and the environment. A recent report by Toronto's Medical Officer of Health states that there is clear evidence that air pollution from

Signed By

Report Prepared By

Stephen Monet
Manager of Environmental Planning
Initiatives
Digitally Signed Dec 21, 11

Division Review

Paul Baskcomb
Director of Planning Services
Digitally Signed Dec 21, 11

Recommended by the Department

Bill Lautenbach
General Manager of Growth and
Development
Digitally Signed Dec 22, 11

Recommended by the C.A.O.

Doug Nadorozny
Chief Administrative Officer
Digitally Signed Dec 22, 11

vehicles adversely affects human health. Air pollution from vehicles is associated with a broad range of respiratory and cardiovascular effects, cancer, and hormonal and reproductive effects. Groups that are especially at risk from vehicle-related air pollution include children, fetuses, pregnant women, and the elderly. Vehicle operation also releases carbon dioxide (CO₂) – the principal greenhouse gas that contributes to climate change.

Research indicates that Canadian motorists idle their vehicles an average of 6 to 8 minutes a day. Idling a vehicle's engine not only contributes to smog and climate change, but also wastes fossil fuels, which, of course, are non-renewable. Natural Resources Canada (NRCAN) estimates that if Canadian motorists avoided idling for just three minutes a day, over the year they would collectively save 630 million litres of fuel, and \$756 million in fuel costs (assuming a fuel cost of \$1.20/L). These savings translate into a reduction of 1.4 million tonnes of CO₂, equivalent to taking 320,000 cars off the road for the entire year.

As expected, increases in idling time results in increases in fuel use and CO₂ emissions. In tests conducted by NRCAN using three vehicles driven over a simulated urban driving cycle in -18°C conditions, idling for 5 minutes resulted in a 7 to 14 percent increase in fuel use (and concurrent CO₂ emissions), while idling for 10 minutes resulted in 12 to 19 percent increases in fuel use.

A report produced for NRCAN in 2003 found that idling for over 10 seconds uses more fuel and produces more CO₂ compared to restarting a vehicle's engine. As more of a guideline that balances factors such as fuel savings, overall emissions and potential component wear on the starter and battery, NRCAN recommends 60 seconds as a reasonable idling period, after which you should turn the engine off. By limiting idling to 60 seconds when a vehicle is stopped, money saved on fuel should more than offset any potential increase in maintenance costs from wear and tear on a vehicle's starter and battery. The operator therefore not only saves money but there are also benefits to people's health and the environment.

City of Greater Sudbury - Idling Control Initiatives

Operations

In 2008, City of Greater Sudbury's Council approved an idling control policy for municipal employees and contractors. The policy requires drivers to limit vehicle idling to a maximum of three minutes, under most circumstances.

Over the past few years, the City's Fleet Services and Transit Services have also initiated a number of actions that will contribute to decreased idling time of the City fleet. Various driver training modules designed to reduce fuel use and cut emissions have been used to train City staff. The City has worked with the Fleet Challenge Ontario program as well as NRCAN's FleetSmart initiative.

Various other actions aimed at reducing fuel use and idling have also been undertaken by Fleet Services. Engine pre-heat systems and auxiliary cab heaters have been installed in about 50 vehicles so far allowing the inside of these vehicles to stay warm without the need for idling the vehicle. LED signal and traffic control lighting is now required on new vehicles purchased by the City. The low energy use of these lights allows the vehicle to be turned off for extended periods without the risk of discharging the battery.

Recently, Fleet Services initiated a pilot project to monitor a number of measures of vehicle use patterns, including idling. On-board information systems have been installed on a handful of vehicles and, based on the early results of this pilot project, a decision will likely be made to deploy this technology throughout the City fleet. Vehicle data are tracked wirelessly and made available directly to the Fleet Manager. Idling time is one of the measures that can be tracked and discussed with Supervisors.

Community Outreach

The City of Greater Sudbury's EarthCare Sudbury Program has been involved in local idling research and campaigns since its inception in 2000. EarthCare Sudbury has prepared and published a number of articles in the local media on the topic of vehicle idling.

In 2001, EarthCare Sudbury, with funding from Natural Resources Canada, undertook a project aimed at understanding idling behavior among residents and the success of strategies to reduce idling. As part of a larger initiative to reduce engine idling in the City of Greater Sudbury, this project targeted 49 schools throughout the city as well as a large number of locations where residents are apt to idle. There were several project objectives:

- To reduce engine idling by parents, school bus drivers and the general public;
- To increase awareness of the importance of reducing greenhouse gas and smog-related emissions from individual actions, such as engine idling; and
- To develop knowledge and expertise in encouraging a whole community to change their behaviour regarding vehicle idling.

An intervention strategy was developed and applied in an attempt to modify idling behavior among school bus drivers and parents dropping kids off at the schools. Intervention components included posting metal 'Idle Free Zone' signs on the school property, engaging drivers on the topic of vehicle idling, and handing out idling information cards and vehicle stickers. The intervention strategy reduced both the frequency and duration of idling.

Through the EarthCare Sudbury Program, hundreds of 'Idle Free Zone' signs have been posted at various commercial, municipal and institutional sites, in addition to those posted at schools. In addition, a CTV EarthCare Minute ad dealing with idling control was prepared and aired in 2009, 2010, and 2011.

Existing Idling Control By-laws in Ontario

The Ontario Municipal Act empowers municipalities to pass by-laws respecting the following matters:

- Economic, social and environmental well-being of the municipality.
- Health, safety and well-being of persons.

In addition, a municipality may prohibit and regulate with respect to public nuisances, including matters that, in the opinion of council, are or could become or cause public nuisances.

In Ontario, regulation of idling is achieved either through anti-idling provisions in existing by-laws, such as for noise or parking, or through stand-alone idling control by-laws. The latter is judged preferable since control is sought for reasons of air pollution. Several Ontario municipalities that have enacted stand-alone idling control by-laws, including Burlington, Guelph, Hamilton, London, Markham, Oshawa, Ottawa, Toronto and Windsor, among others. There are a number of matters that the by-laws are required to address, including permitted idling time, exemptions and enforcement.

Permitted Idling Time

Most Ontario by-laws permit idling for 2, 3 or 5 minutes. Burlington is the first municipality in Ontario to have a 1 minute idling limit. It was reduced in 2009 from its initial 3 minute limit. Other municipalities have expressed intentions to move to a 1 minute idling limit.

A report prepared for NRCAN in 2005 by the Clean Air Partnership proposed a model idling control by-law with a 1 minute idling limit. As mentioned previously, NRCAN proposes a 1 minute limit as a reasonable

idling period based on factors such as fuel savings, overall emissions and potential component wear on the starter and battery. Also, the shorter the idling limit the more efficient and cost-effective the enforcement.

In the idling control by-laws, longer idling limits are set for transit vehicles while at a layover or stopover location.

Exemptions

All idling control by-laws in Ontario list exemptions, which include various emergency situations or involve emergency vehicles engaged in an operational activity. Other exemptions include vehicles being serviced, vehicles involved in parades, armoured vehicles while someone is on duty inside the vehicle, or a motor vehicle carrying a passenger where a medical doctor certifies in writing that for medical reasons, the person requires the temperature or humidity be maintained within a certain range.

1. Temperature

Some by-laws also include exemptions relating to outside temperature, while others don't. Municipalities that choose to include a temperature-related exemption for idling have settled on outside temperatures lower than 5oC and higher 27oC. Temperature introduces another factor that complicates enforcement. Officers must keep track of outside temperatures before laying an idling charge. On days when temperature approaches the exemption temperature limits, keeping track of temperatures is further complicated by variations during the day and between locations. In addition, staff in other municipalities have received complaints of unnecessary idling but were powerless to act due to the temperature being outside of the limits.

Several Ontario municipalities have chosen to remove temperature exemptions altogether. The Highway Traffic Act, for example, requires that a vehicle's windows afford the driver clear view to the front, side and rear. A driver can idle a vehicle to maintain clear view conditions, but would initially be expected to scrape windows rather than relying solely on the defrost/defog function in their vehicles.

2. Drive-throughs

Drive-throughs are convenient features associated with certain commercial establishments. At times, however, drive-throughs can lead to idling as vehicles queue up along the drive-through lane waiting for particular goods or services.

In Greater Sudbury, a drive-through service facility is permitted as an accessory use to a permitted restaurant, financial institution, retail store, automotive service station, gas bar and automated car wash, except in the C6 Downtown Commercial Zone. In Ontario, the trend is to include drive-throughs in the list of exemptions in idling control by-laws if these features are permitted through land-use planning.

Enforcement

Idling control by-laws in Ontario are enforced on a complaints basis or as officers come across idling vehicles while conducting their normal work duties.

In Ontario, municipalities with idling control by-laws have preceded enforcement with education. Even during enforcement, education is seen as the preferred approach. Verbal warnings and a brochure that explains the benefits of not idling vehicles reinforces the message that 'idling gets you nowhere'. Charges for most idling control by-laws are laid under Part I of the Provincial Offences Act. In this instance, officers must obtain information from the driver before issuing a ticket. Drivers are not obliged to provide any information to the by-law officers. This has lead a few municipalities (e.g., Burlington, Peterborough and Orillia) to develop their by-law so as to make idling a Part II offence under the Provincial Offences Act. All

parking offences are issued Part II tickets and the licence plate number is used as a means to identify the owner of a vehicle who then becomes ultimately responsible for paying the ticket. Enforcement of the idling control by-law is, therefore, made simpler and more efficient for the officers, who only now need to record vehicle licence plate numbers on the tickets and affix the ticket to the windshield.

Idling Control Options

Option 1 – Education on Vehicle Idling

Following this option the City would reinitiate its idling awareness and educational efforts that it had undertaken in the early to late 2000s. The EarthCare Sudbury Program would be focused on communication aimed externally at the community, while the Fleet Services would continue its idling awareness initiatives for City staff. Community education would involve delivering idling awareness campaigns through the EarthCare Sudbury Partnership, thereby potentially affecting tens of thousands of Sudburians; media releases; bookmarks to be delivered through the libraries; EarthCare Minutes on CTV; and, possibly, social media. A communications plan for idling control would be developed by EarthCare Sudbury in collaboration with Corporate Communications and French Language Services. Implementation of the communications plan will be achieved through the EarthCare Sudbury operating budget.

Fleet Services will continue to raise awareness among City staff as to the problems of idling and the existence of the Idling Control Policy. Key to this success will be the continued participation of all supervisors to ensure that staff comply with the Policy.

Pros

- Minimal disruption to regular staff operations; continuing existing initiatives.
- No extra resources required to implement.

Cons

- Idling is somewhat of an entrenched behaviour facilitated by such technologies as remote vehicle starters. Therefore, education alone may be insufficient to result in a significant reduction in vehicle idling.

Option 2 – Education with Idling Control By-law

Under this option the City would initiate an education and awareness campaign similar to Option 1. In addition, the City would enact and subsequently enforce an idling control bylaw which would come into force on January 1, 2013, preceded by several months of public education. The bylaw would allow motor vehicles to idle up to 60 consecutive seconds within sixty consecutive minutes. The bylaw would be applicable to private and municipal properties and highways under the City's jurisdiction. Exemptions to the bylaw would include, but not necessarily be limited, to the following:

- Emergency vehicles, off-road vehicles and equipment while engaged in operational activities, including training and client transfer.
- Vehicles assisting in emergency response and/or activities.
- Mobile workshops where engine power is necessary for electrical or pressure generation, tool use, hoist or winch use, lift gate or boom operation, and/or similar applications.
- Vehicles with power take-off containing work equipment that must be powered by the vehicle engine.
- Transit vehicles in layover or stopover, defined as a stopping point along a transit route or at a transit vehicle terminal, for a maximum of 15 minutes to allow transit vehicles to adjust to service schedules.
- Vehicles that remain motionless because of emergency or traffic conditions, including but not limited to congestion, traffic control signals, weather conditions or mechanical difficulties.

- Vehicles where idling is required as part of the repair process or to prepare the vehicle for service.
- Extreme cold weather or heat alerts where idling may be necessary for the well-being of the operator and/or passengers.
- Idling to defrost, defog or deice vehicle windows provided a scraper is used prior to starting the engine. Idling must end once fog, frost, or ice conditions have been eliminated.
- Outside workers may idle a vehicle for up to 15 minutes for the purpose of getting warm and/or dry if indoor accommodations are not available at the work site. To reduce the possibility of carbon monoxide accumulation in the cab, window(s) must remain partially open for safe ventilation.
- A vehicle transporting a person who has in their possession a medical doctor's certificate stating that for medical reasons, the person requires the temperature or humidity to be maintained within a certain range and the idling of the vehicle is necessary to achieve that temperature or humidity level.
- Vehicles engaged in a parade or any other event authorized by the municipality.
- Vehicles that are operated on the travelled portion of a drive-through lane.

A minimum six-month period would be dedicated to education and awareness before commencement of full enforcement with issuance of tickets for bylaw infractions. During the education period, bylaw officers would only hand out brochures and issue warnings to those caught idling their vehicles for more than 60 seconds. Tickets would be issued under Part 2 of the Provincial Offences Act. Thus, it would be the owner of the vehicle rather than the driver who would ultimately be liable.

Pros

- Should lead to adequate idling control with enforcement of the by-law rather than just relying on education.
- Enforcement using Part 2 powers makes the owner of the vehicle responsible for the fines.
- By-law officers will be able to enforce as they come across idling vehicles while conducting their normal work duties.

Cons

- With complaints-based enforcement, it will be difficult to issue tickets for infraction situations that are occasional and without a set daily or weekly pattern. Response time of by-law officers is currently several days for non-emergency situations.