

Idle Control Program

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| Date | April 21, 2021 |
| To | Operations and Community Services Committee |
| From | Citizen Experience, Innovation & Performance |
| Service Area | Innovation, Energy & Technology |
| Item No. | OCS21-15 |

RECOMMENDATION

That the Operations and Community Services Committee receive and file this report.

ISSUE

Research suggests that 36 per cent of energy related greenhouse gas (GHG) emissions in Canada stem from transportation. Light-duty vehicles, which include cars, vans, and light-duty trucks are responsible for almost half of that total. As a core component of Canada's national climate plan, the federal government is finalizing the Clean Fuel Standard (CFS) regulations that requires a reduction of carbon content in gasoline and diesel between 2022 and 2030. The federal government estimates the CFS regulations will reduce emissions in Canada by 30 million tonnes per year which is the equivalent of taking approximately seven million cars off the road.

The federal government has other, complimentary efforts underway, to reduced GHG emissions including:

- setting Canada-wide targets to see zero-emission vehicles make up an increasing percentage of new vehicle sales;
- establishing more robust infrastructure for charging and refueling electric and alternative fuel vehicles; and
- implementing consumer rebates for purchasing and leasing zero emission vehicles.

While work continues at the federal government level to lessen the transportation sector's carbon intensity, interim efforts at the organization and community level can greatly reduce GHG emissions. City of Regina's Administration has identified significant GHG emissions reduction potential within the organization and community through reduced vehicle idling

alongside increasing other methods of transportation such as transit, walking, biking, and other forms of active transportation.

The purpose of this report is to update Committee on steps the City of Regina (the “City”) has taken to reduce GHG from vehicle emissions and what the City is planning to do in the next year to further reduce the City’s emissions and promote reduction in emissions throughout the community.

IMPACTS

Federal Regulations

The federal government is using multiple tactics to lower the carbon footprint of Canada’s transportation sector:

1. The Clean Fuel Standard (CFS) will be a set of regulations requiring Canadian fossil fuel suppliers to reduce the carbon content of fuel. The CFS is a core component of Canada’s national climate plan and it is expected that the final CFS regulations will be published in late 2021 with regulatory requirements coming into force in December 2022.
2. The Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative (2016 - 2022) will establish a coast-to-coast fast-charging network along the national highway system, natural gas refueling stations along key freight corridors and hydrogen refueling stations in metropolitan centres. To date, Natural Resources Canada has projects in place to deliver 526 electric vehicle fast-chargers, six hydrogen refueling stations and 12 natural gas refueling stations.
3. Zero-emission vehicle sales targets are being developed. These targets seek to have zero emission vehicles make up 10 per cent of new light-duty vehicle sales by 2025, 30 per cent by 2030, and 100 per cent by 2040. Zero emission vehicles include battery electric vehicles, hydrogen fuel cell electric vehicles and plug-in hybrid electric vehicles.
4. Multiple financial incentives for consumers looking to purchase zero emission vehicles. This includes purchase and lease incentives along with tax incentives for businesses purchasing zero emission vehicles.

This multi-pronged approach from the federal government shows that electric or zero emission vehicle adoption is a critical component for reducing GHG emissions in Canada. Data from 2019 shows that in Regina, there are roughly 165,000 vehicles registered and 84 are electric (1.16 million vehicles in Saskatchewan of which 379 are electric). While electric vehicle adoption is increasing over time (Regina had 9 in 2015 and 84 in 2020), finding interim opportunities to reduce GHG emissions in the transportation sector can help achieve Council’s direction to become a renewable community by 2050.

Environmental

Vehicle exhaust emits a range of gases into the atmosphere, one of which is carbon dioxide (CO₂) which is the principal greenhouse gas that contributes to climate change. Each litre

of gasoline used produces about 2.3 kg of CO₂ that is emitted into the environment.

These emissions, like all GHG emissions, stay in the atmosphere and continue to accumulate. This means that the climate impact of emissions in any given year is not confined to that year. It is the cumulative increase of current and past GHG emissions that drives future climate change. Very little of any incremental emissions of CO₂ are re-absorbed, they just stay in the atmosphere.

The cumulative impact of every licensed driver in Regina reducing their idling by one minute per day has the potential to reduce GHG emissions by about 6,000 tonnes per year which is equivalent to removing about 1,500 cars from the road.

Corporately, the City's vehicle fleet could eliminate up to 40 tonnes of GHG emissions per year with each minute of reduced idling.

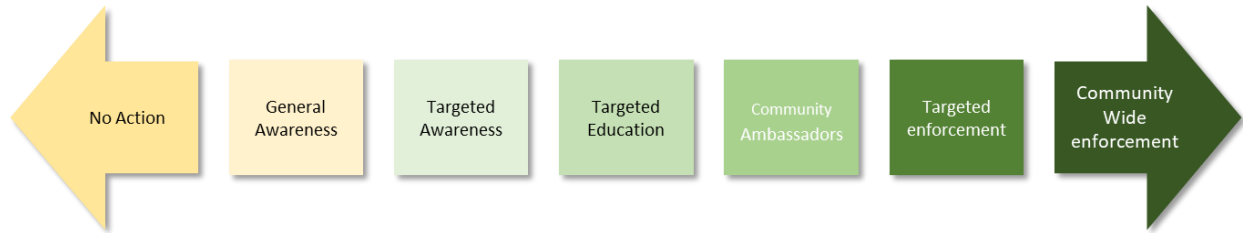
Financial

Both at the City, and across the community, sustained efforts to limit unnecessary idling reduces fuel consumption and fuel costs. Based on research from Natural Resources Canada, each minute-long reduction in idling over the course of a year for an average resident, would see a fuel savings of roughly \$18 per year or about \$2,700,000 for all registered drivers in Regina.

For the City of Regina's vehicle fleet, each minute-long reduction of unnecessary idling per day could result in an annual fuel savings of \$16,700. Moreover, cost savings could be achieved by reducing engine run time. For example, reduction in the cost of maintenance and ancillary parts and potentially extending the life of the asset. Fleet data for maintenance and fuel consumption is already tracked in detail, providing a baseline for ongoing monitoring once the internal policy is implemented. Administration will explore options for reinvesting savings into funding future sustainability initiatives.

OTHER OPTIONS

The City is not waiting until the federal government's zero emission targets are set. The City has made progress and has plans to make further progress. As an interim approach until widespread zero emission vehicle adoption, the Administration is taking a leadership role to explore opportunities to reduce vehicle idling at the community level. There are many options available to encourage reduced vehicle idling, and it is Administration's intention to engage the community to create a Regina-tailored approach. Options range from no action to those focused on education and awareness to restricting where, when, and for how long idling is permissible. For example, one end of the continuum could be passive public education campaigns while the opposite end could be more targeted approaches in high-idle areas such as Regina's downtown.



COMMUNICATIONS

Between Q2 and Q3 of 2021, Administration will conduct broad community engagement with residents and key stakeholders on the options outlined above.

Community education and awareness on the benefits of idling reduction is key to meaningful engagement that will inform the development of an idle control program. Administration will focus education and engagement on three key themes:

1. Idling awareness – Building awareness of multiple benefits from reduced idling that may or may not be known to drivers and addressing common misconceptions around the need to idle vehicles.
2. Understanding idling habits – Community feedback will assist Administration in better understanding the idling habits of Regina residents, including behaviours such as frequency and location of idling, average duration of idling, and attitudes and opinions regarding idling.
3. Options to encourage idling reduction – Administration will seek to understand community preferences around how to encourage and incentivize broad reduction in vehicle idling throughout Regina. This will also involve education surrounding the benefits and trade-offs moving from passive to more resource intensive tactics.

The information gathered will be analyzed and used to inform Administration's development of options and recommendations to encourage and achieve reducing vehicle idling in Regina. The information will also establish a baseline for comparison when evaluating future performance of any Council-approved tactics to reduce community idling.

DISCUSSION

At the municipal level, efforts to reduce vehicle idling are not new and have existed for 25 years. In 1996, Toronto was the first Canadian city to implement an idle control program that included a bylaw restricting idling. Originally, idle control efforts were taken to mitigate smog and improve air quality. Soon after, cities began citing parallel environmental concerns related to GHG emissions. By 2010 there were more than 60 municipalities across Canada with Idle Control programs (with over 70 municipalities today).

Other levels of government have also made efforts to encourage reduced idling. The Government of Nova Scotia passed the Anti Idling Act in 2010 with the preamble stating that, "reducing idling is a cost-effective and easy way to reduce greenhouse gases and air pollutants." The Government of British Columbia has stated that, idle-free initiatives are a

straightforward and cost-effective action that local governments can immediately take to reduce greenhouse gas emissions.” At the federal level, Natural Resources Canada makes available a significant amount of research and resources to assist municipalities in idle control efforts and conducted the primary research on driver behavior that most municipal programs reference.

The City of Regina has, in the past, conducted targeted education and engagement. Starting in 2006, Regina initiated a multidimensional idling outreach program in partnership with Climate Change Saskatchewan. The first action was the installation of “Idle Free Zone” signs at City Hall and then throughout other City-operated facilities. Signs were also made available to tenants of Wascana Centre. The signs were placed at 36 locations across City facilities, recreation centres and schools. Engagement also included reaching out to students – over 1,400 in total between 2006 and 2008 – through presentations, a short video and other activities. This multidimensional approach is also a common tactic used in many municipalities.

Administration is proceeding with a community-specific idling reduction program in advancement of the Energy & Sustainability Framework to fast track GHG emissions reductions across the community. A report will be submitted to the Operations and Community Services Committee in Q4 of 2021 with a recommended Community Idle Control Program and an update on the City’s internal policy.

To minimize the emissions impact of the City’s own vehicle and equipment fleet, Administration is following the concept of, ‘reduce, improve, switch.’ An internal Idle Control Policy is currently being updated to reduce emissions impacts, as much of the current fleet will be used for many more years. The policy limits the permissibility of idling to only specific situations, such as those related to health and safety or when idling is necessary for operations-specific purposes. This approach is consistent with other municipal policies across Canada as well as the recommendations of Natural Resources Canada. Approval of the refreshed policy is expected by the end of April with a phased implementation to follow. Administration is also finding opportunities to improve deployment of its vehicle fleet. This means evaluating how vehicles are used to determine if a smaller, lower-emitting vehicle would work in place of those that are higher-emitting.

A refreshed understanding of vehicle requirements puts the City in a better position as the Energy & Sustainability Framework will include specific strategies and plans to switch the City’s fleet to alternative fuel sources when vehicles are replaced. Alongside the development of the Energy & Sustainability Framework, as part of the Transit Master Plan, the City has initiated a study for switching to alternative fuel buses. This study will provide options for transitioning the bus fleet away from conventional diesel fuel, taking into consideration variables such as carbon emissions, costs, availability of fuel/electricity, routing implications, and more. These overlapping pieces of work will ensure the City of Regina has a planful approach for transitioning to alternative fuel fleet vehicles.

DECISION HISTORY

At the October 28, 2020 City Council directed the Administration to develop a community-wide Energy & Sustainability Framework and Action Plan (CR20-88).

Respectfully submitted,



Kim Onrait, Executive Director
Citizen Services

Respectfully submitted,



Louise Folk, Executive Director,
Citizen Experience, Innovation &
Performance

Prepared by: Ryan Gray, Corporate Strategy and Performance Consultant