

Compressed Natural Gas Environmental Attributes

Date: November 13, 2024

To: Infrastructure and Environment Committee

From: General Manager, Solid Waste Management Services

Wards: All

SUMMARY

The City's Solid Waste Management Services (SWMS) Division has been transitioning from diesel-powered trucks to quieter and more environmentally conscious natural-gas-powered trucks since 2010, with 96 per cent of the City's in-house residential waste collection fleet now using natural gas.

To support the move away from diesel, SWMS had compressed natural gas (CNG) fuelling stations installed at three of its sites. As a result of its CNG use and ownership of any related environmental attributes, SWMS has an opportunity to benefit from the creation and sale of compliance credits pursuant to the Clean Fuel Regulations under the Canadian Environmental Protection Act and may be eligible to generate environmental attributes under other programs as well. Environmental attributes refer to any and all credits, benefits, emissions reductions, offsets, and allowances, related to the avoidance, removal or mitigation of greenhouse gases or pollutants.

The purpose of this report is to seek authority for SWMS to enter into agreements related to the generation, management, marketing, distribution, use and sale of environmental attributes associated with its CNG use.

RECOMMENDATIONS

The General Manager, Solid Waste Management Services recommends that:

1. City Council authorize the General Manager, Solid Waste Management Services and/or designate, to negotiate, enter into, and execute any new agreements, amendments of existing agreements, or acknowledgements – including on the basis of a non-competitive procurement under Toronto Municipal Code Chapter 195, Purchasing – necessary in connection with the efforts to generate, manage, market, distribute, use and sell in a manner beneficial to the City the environmental attributes associated with Solid Waste Management Services' CNG use in vehicles, on terms and conditions

acceptable to the General Manager, Solid Waste Management Services and in a form satisfactory to the City Solicitor.

FINANCIAL IMPACT

There are no immediate financial impacts resulting from this report, however the generation and sale of environmental attributes could result in revenue for Solid Waste Management Services (SWMS). It is estimated that SWMS could generate approximately \$140,000 per year from the creation and sale of Clean Fuel Regulation credits related to its CNG use.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

At its meeting on April 17, 2024, City Council adopted Item IE12.2, entitled "Organics Processing Facilities Update" which authorized the General Manager, Solid Waste Management Services and/or designate, to negotiate and enter into any new agreements, amendments of existing agreements, or acknowledgements - including on the basis of a non-competitive procurement under Municipal Code Chapter 195, Purchasing - necessary in connection with the efforts to produce, manage, market, distribute, use and sell Renewable Natural Gas and other environmental attributes associated with Renewable Natural Gas production, on terms and conditions satisfactory to the General Manager, Solid Waste Management Services and, if necessary, the Executive Director, Corporate Real Estate Management, and in a form satisfactory to the City Solicitor.

The City Council Decision document can be viewed at:

<https://secure.toronto.ca/council/agenda-item.do?item=2024.IE12.2>

At its meeting on May 10, 2023, City Council adopted Item IE3.4, entitled "Carbon Accountability: Institutionalizing Governance, a Carbon Budget and an Offset Credits Policy" which included the Corporate Offset Credits Policy, a net zero-aligned approach to offset credits applicable to all City of Toronto Divisions, Agencies and Corporations. The policy clarifies the "net" of net zero by defining whether and how the Corporation will purchase and/or sell carbon offsets in a science-based, fiscally responsible way as it works toward the net zero goal.

The City Council Decision document can be viewed at:

<https://secure.toronto.ca/council/agenda-item.do?item=2023.IE3.4>

At its meeting on May 10, 2023, City Council adopted Item IE3.5, entitled "The Sustainable City of Toronto Fleets Plan (2023 Update and Status Report)"

which provided an update to the Sustainable City of Toronto Fleets Plan goal and objectives in addressing climate mitigation and adaptation with strategies for transitioning City Fleets to sustainable, climate resilient, net-zero operations.

The City Council Decision document can be viewed at:

<https://secure.toronto.ca/council/agenda-item.do?item=2023.IE3.5>

At its meeting on December 9, 2015 City Council adopted Item PW9.3, entitled "Agreement with Enbridge for the Installation of Compressed Natural Gas Refuelling Stations at City Facilities" which authorized the Acting General Manager, Solid Waste Management Services or designate(s) to negotiate and enter into agreements with Enbridge Gas Distribution Inc. to construct, commission and maintain natural gas vehicle refuelling stations at the City-owned facilities located at 1050 Ellesmere Road (Ellesmere Yard) and 25 Old Eglinton Road (Bermondsey Yard) and at future City facilities if required.

The City Council Decision document can be viewed at:

<https://secure.toronto.ca/council/agenda-item.do?item=2015.PW9.3>

COMMENTS

Background

The City's Solid Waste Management Services (SWMS) Division has been transitioning from diesel-powered trucks to quieter and more environmentally conscious compressed-natural-gas-powered trucks since 2010. To support the move away from diesel, SWMS entered into agreements with Enbridge Gas Inc. (Enbridge) to install and maintain compressed natural gas (CNG) fuelling stations at three of its sites. The stations are considered regulated assets under the Ontario Energy Board, that are owned, constructed, operated and maintained by Enbridge.

Currently, 96 percent of the in-house residential waste collection fleet has been converted from diesel to CNG. The replacement of diesel waste collection trucks with CNG trucks aligns with the City's focus on the use of renewable and sustainable fuels as part of its interim steps in transitioning its medium and heavy-duty vehicles to zero emission vehicles.

Natural gas is a clean-burning fuel that can be compressed, stored and used to fuel vehicles. Compressed natural gas (CNG) produces fewer toxic pollutants and greenhouse gas emissions than gasoline or diesel fuel. CNG is a pressurized fuel that is contained within a sealed system from production to its use in vehicles. That means it is less likely to contaminate soil or water through accidents, spills or evaporation. Using CNG to fuel vehicles is also less expensive than gasoline. CNG fuelling stations are used across Canada to refuel natural gas vehicles. Currently, there are about 20,000 natural gas vehicles in Canada. ¹

Clean Fuel Regulations

The Clean Fuel Regulations pursuant to the Canadian Environmental Protection Act ² provide incentives for the development and adoption of clean fuels, technologies and processes, with a goal to significantly reduce pollution by making the fuels used every day cleaner over time.³ Based on SWMS' CNG use and CNG fuelling station agreement with Enbridge, the City has the opportunity to benefit from the creation and sale of credits under the Clean Fuel Regulations. Enbridge is the owner and operator of the CNG fuelling stations that the City contracted them to install and maintain at SWMS sites, however as part of the agreement between the City and Enbridge, the City retains title to any environmental attributes related to the CNG stations themselves and the use of CNG in vehicles. Based on this combination of Enbridge ownership and operation and City title to environmental attributes, there is an opportunity for the City to benefit from the generation and sale of compliance credits under the Clean Fuel Regulations.

Alignment with City's Corporate Offset Credits Policy

Any compliance credits created and sold pursuant to the Clean Fuel Regulations would align with the City's Corporate Offset Credits Policy.⁴ Section 20 of that policy permits the sale, transfer, or disposition of offset credits where doing so does not require a corresponding adjustment to the accounting of Corporate emission sources. Based on consultation with Legal Services, the City's Environment and Climate Division has confirmed that the Clean Fuel Regulations do not require such an accounting adjustment for compliance credits sold under the regulations. Any other environmental attribute opportunities related to CNG will be analyzed on a case-by-case basis to ensure alignment with the policy.

SWMS' Production of Renewable Natural Gas for City Use

Separate and apart from the CNG program, SWMS has renewable natural gas (RNG) infrastructure at the Dufferin and Disco Road Organics Processing Facilities that allows it to capture the biogas generated from processing organics, upgrade it to RNG, and inject it into the natural gas grid for City use. RNG is chemically identical to traditional fossilized natural gas, however it comes from a renewable resource (the City's Green Bin program) and does not require mining or drilling activities. Because it is chemically identical to CNG, RNG can be used in CNG trucks.

As per the strategy adopted by City Council in 2020, the RNG produced at the Dufferin and Disco Road Organics Processing Facilities is being blended with the natural gas the City buys to create a lower-carbon fuel blend that the City is using to power its vehicles

² Government of Canada Clean Fuel Regulations, link:
<https://laws-lois.justice.gc.ca/PDF/SOR-2022-140.pdf>

³ Government of Canada information about natural gas for transportation, link:
<https://natural-resources.canada.ca/natural-gas-transportation/3525>

⁴ City Corporate Offset Credits Policy, link:
<https://www.toronto.ca/legdocs/mmis/2023/ie/bgrd/backgroundfile-235867.pdf>

and heat its buildings, allowing for a reduction in greenhouse gas emissions across the organization.

SWMS is also exploring the potential of generating credits under the Clean Fuel Regulations in relation to these RNG projects. City Council has already provided the General Manager of SWMS with sufficient authority to explore this opportunity and enter into any necessary agreements related to it.

Next Steps

If provided the authority to enter into necessary agreements and amendments to existing agreements related to the generation, management, marketing, distribution, use and sale of environmental attributes associated with CNG use, SWMS will pursue the benefits to the City from credits related to the Clean Fuel Regulations and continue to explore other potential environmental attribute opportunities related to its CNG use in vehicles.

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SIGNATURE

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