ONTARIO WASTE MANAGEMENT ASSOCIATION

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Dear Mr. Hutchison,

We are writing to provide comments on behalf of the Ontario Waste Management Association in response to the proposed Landfill Gas Offset Protocol (EBR #: 013-0480), which was posted on the Environmental Registry last month.

The OWMA is the largest waste management association in Canada and represents more than 250 members within Ontario's private and public sectors. OWMA members manage 85% of Ontario's waste and have diverse interests and capital investments in areas, such as waste and recycling collection, material recycling and resource recovery, organics processing and composting, hazardous waste recycling and safe disposal, and landfills and transfer stations.

The waste management sector's total annual greenhouse gas (GHG) emissions in Ontario are roughly 9 megatonnes[1], or about 5% of the province's total emissions. Several opportunities exist to reduce emissions in different areas of the sector, which have been outlined in greater detail in the Cap-and-Trade Research for the Waste Management Sector Report that was prepared for the OWMA by GHD.

With 90% of the sector's emissions coming from solid waste disposal[2], landfill gas (LFG) capture systems hold significant potential to lower the sector's emissions and support the Province's broader climate change efforts. The reduction of emissions through technology and innovation remains a priority for our sector and should play an important role in Ontario's climate change strategy.

We were pleased to see, in the Climate Change Action Plan, that the government acknowledged the importance of "different practices and technologies" in the waste

[1] Page 2, Cap-and-Trade Research for Ontario's Waste Management Sector, OWMA, http://owma.silkstart.com/articles/cap-and-trade-research-for-ontarios-waste-management-sector
[2] Waste–2015 GHG Emissions (25 Mt), Environment Canada, https://www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=662F9C56-1

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management sector that can capture GHG emissions "that would otherwise be released into the air."[3]

These technologies not only capture and destroy landfill gas, but they can also convert the methane generated in landfills by organics into renewable natural gas (RNG) that can be used to create energy for the electricity grid or fuel for compressed natural gas (CNG) vehicles, including waste collection fleets. These examples show how innovation in the waste management sector is advancing Ontario toward a more circular economy. With the right incentives in place, these technologies will only become more efficient over time and lead to better results, including high-quality, pipeline-ready RNG.

Unfortunately, the proposed Landfill Gas Offset Protocol, as written, restricts offset crediting to only small landfills while providing little to no certainty or incentive to invest in LFG systems. As a result, the protocol is unlikely to achieve any meaningful emissions reductions in support of the Province's broader climate change goals.

Eligibility Requirements:
In Ontario, there are about 2,382 landfill sites and 37 open landfills that are larger than 1.5 million cubic metres.[4] Regulation 232/98[5] requires landfills larger than 1.5 million cubic metres to capture and destroy, or use, LFG. This requirement can be met by flaring LFG, which reduces its global warming potential by 95%[6], or by using the gas for either electricity generation or fuel production.

Unfortunately, the protocol, in section 3.4.1.1, excludes all large landfills from generating offset credits. The rationale that has been given is that landfills larger than 1.5 million cubic metres would not meet the additionality test because they are already required under Regulation 232/98 to capture and destroy LFG. However, by excluding landfills that already have existing LFG systems from the protocol, Ontario is missing a significant opportunity to incentivize the improvement of these systems, which would lead to greater emissions reductions in the sector.

Large and Small Landfills:
It is important to note that while Regulation 232/98 requires landfills larger than 1.5 million cubic metres to capture and destroy, or use, LFG, it does not mandate performance standards for those systems.

As a result, there remains significant opportunity to make LFG systems in the province more efficient. In fact, our research shows that Ontario could lower the sector's GHG

[3] Page 51, Climate Change Action Plan, https://www.ontario.ca/page/climate-change-action-plan
[4] Page 28, Ibid.
[5] O. Reg. 232/98, Government of Ontario, https://www.ontario.ca/laws/regulation/980232
[6] Landfill Gas Capture Guideline, Government of Ontario, https://www.ontario.ca/page/landfill-gas-capture-guideline-regulatory-and-approval-requirements-landfill-gas

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emissions by nearly 3 megatonnes through a combination of efficiency improvements and installing LFG systems at small landfills[7]. But both of these activities will require significant investment.

Without a market-based incentive, it will be difficult to make these improvements worthwhile for both large and small landfill sites. Most small landfills have a low LFG recovery rate, which presents various operational challenges with the maintenance of an efficient LFG system. These sites are typically shallow and require a higher proportionate share of capital and infrastructure to recover LFG over a wider area. Quantification and verification are complex and costly activities that could place a significant financial burden on small landfill operators. According to our research, quantification and verification costs can make up 30% of the operating costs of a small landfill. As a result, a carbon price of about $20 a tonne is unlikely to incentivize the development of offset projects at small landfill sites due to the financial uncertainty and risks involved with these projects.

With the right incentives, however, large landfills could achieve the economies of scale needed to improve existing LFG systems and reduce emissions. To that end, our association would request that the government provide crediting options for efficiency improvements at large landfill sites.

Incentives for Beneficial Use:
Section 4 states that the "protocol does not account for carbon dioxide emission reductions associated with displacing grid-delivered electricity or fossil fuel use." We believe, however, it would be prudent to include offset crediting options for the beneficial use of LFG. Capturing and converting LFG into RNG to displace fossil fuel emissions in the electricity grid or the transportation sector can play a significant role in helping the Province achieve its emissions-reductions goals.

In fact, certain OWMA members currently have LFG systems in place to capture methane, convert it into RNG and use it to fuel their waste collection fleets, thereby displacing diesel emissions. Others have LFG systems in place whereby the LFG is directly piped into fuel/boiler units as a replacement to natural gas. These types of activities should be encouraged as the Province continues to develop ways to capture value from the waste stream.

Unfortunately, the proposed protocol provides no incentive for these activities, and the government has not yet provided clarity on how, or if, it intends to incentivize these activities. If the government wants to increase the renewable content in natural gas, it will have to send a clear signal that it intends to provide the incentives needed to establish a viable market for RNG. To do that, the government should develop an

[7] Appendix A, Page 4, Ibid.

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approach to fairly and equally incentivize RNG technologies in the waste management sector before moving forward with its renewable content requirement.

Determining Regional Differences:
In the Western Climate Initiative's Offset System Essential Elements Final Recommendations Paper,[8] it is stated clearly, "when a baseline based on the most stringent regulatory requirement is not practical because of regional differences, the WCI Partners may recommend a protocol using an alternative method."

In this regard, it is important for the provincial government to assess the regional differences among WCI jurisdictions and provide for the ability to adapt Ontario's LFG protocol to potentially address these differences. These include the number of landfills, disposal capacity, population density, transportation costs, etc.

The current LFG Offset Protocol does not account for regional differences. Instead, section 3.4.1.1 of the protocol, for example, establishes an eligibility threshold of 450,000 tonnes waste-in-place, which follows California's regulatory requirement, not Ontario's. The stringency of this requirement will exclude several landfill operators in our province from generating offset credits, and thereby restrict an important source of local supply of credits in the cap-and-trade market.

Large emitters in Ontario want to support local offset projects. Unfortunately, the proposed LFG Offset Protocol, as currently drafted, misses a significant opportunity to create a local source of offset credits that will help large emitters meet their compliance obligations while further lowering emissions in our sector. To correct this situation, the OWMA would encourage the government to assess the regional differences among WCI jurisdictions to determine a baseline that is suited for the economic and environmental circumstances of our province.

We look forward to hearing from you and would be happy to answer any questions or address any concerns that you may have.

Sincerely,

Gord White
Chief Executive Officer
Ontario Waste Management Association

[8] Offsets System Essential Elements Final Recommendations, Western Climate Initiative, http://www.westernclimateinitiative.org/component/remository/func-startdown/277/