



Challenge Statement/Synopsis:

Walker Environmental is seeking a solution to divert organic waste from Canada's retail grocers, close the loop for organic waste, and thereby play a part in the transformation of Canada's economy towards a circular economy. Through the implementation of this technology in support of our existing waste diversion program, we continue to add to our portfolio of low-carbon products and services and support a circular economy in Canada.

The solution must reduce the volume of organic waste on-site, generate a pumpable slurry (i.e. grind, macerate, homogenize, etc.) and store the end product in secured units. The storage unit should allow for collection via vacuum trucks that transport materials to anaerobic digestion facilities for the generation of clean renewable energy. Emissions reduction and circularity is achieved by:

- Reducing greenhouse gas emissions by diverting excess organic waste from landfill where it creates methane
- Ensuring waste is delivered to anaerobic digester partners where it contributes to the production of biofuel
- Reducing waste transportation emissions with an organic waste holding tank that holds more waste for longer periods between collection

Context

Walker is the largest national provider of vacuum truck services for the collection, processing and recycling of grease interceptor and food-related organic residuals. Walker services over 10,000 customers nation-wide with seven grease trap and liquid organic waste collection and processing facilities (Toronto, Woodstock, Ottawa, Montreal, Nisku, Calgary and Vancouver), which produce feedstock for renewable energy through anaerobic digestion and biofuel facilities.

Walker has been providing a program to retail grocers to assist in the promotion of their commitment to socially responsible waste recycling alternatives (by using organic residuals to generate green renewable energy). Walker Environmental developed a patent-protected pre-processing technology, Organic Resource Recovery System (ORRS), whereby produce and other food waste are ground into slurry by a mill, discharged into a holding tank, and stored until collected by vacuum trucks. Unlike traditional tote storage, the ORRS tank is airtight, and limits odours. The program and system is designed to reduce the amount of store space organic waste occupies and enable stores to uphold their sustainability and waste diversion objectives.

Limited floor space at stores creates difficulties disposing of unsold perishables. Bins from traditional tote programs require too much space, and on-site decomposition created potential risks like odours and visits from unwanted pests. Reduced tonnage to landfill prevents emission of potent greenhouse gases such as methane and saves disposal costs. The program also reduces waste transportation



emissions with an organic waste holding tank that holds more waste for longer periods between collections.

As Walker scales up its programs across Canada, we would like to expand our options and access additional technologies that would better allow us to carry out the objectives of our organic waste recovery programs.

Response Criteria

- Results in reduction of organic waste volume through a process that yields liquid/pumpable slurry (includes pre-processing and processing – preferably through a combined step)
- Holding tank or other housing unit to allow for collections via vacuum truck hose
- Processing and storage units can be from separate providers
- Occupy small footprint suitable for installation in urban stores where real estate is limited (i.e. small footprint)
- Suitable for installation at existing facilities
- Methane emissions are negligible as the majority of methane is captured through the anaerobic digestion process at biogas plants post collection. Therefore, a complete seal of the storage unit is not an essential criterion for selection; however, solutions that address or minimize odor are preferred.

The Opportunity

At Walker Environmental, we have set ourselves apart in the waste management sector by putting a heavy focus on maximizing greenhouse gas reduction opportunities. The waste sector accounts for 7% of Canada's emissions, and our employees see this as a unique opportunity to play a vital role in reducing GHGs. Walker provides environmental solutions to both public and private sector customers. We are developing long-term solutions that will result in quantifiable, permanent greenhouse gas reductions in Canada. Our projects will have a long-lasting positive impact, with projected emission reductions and environmental, social, and economic benefits for years to come.

We use proven technologies to develop and operate infrastructure that helps our customers reduce their environmental impacts, improve energy efficiency and achieve higher performance. We seek out opportunities, whether through technological advancements or sustainable business practices, to contribute to the circular economy that ensures our projects are truly sustainable. Our extended reach provides an ideal advantage for existing technologies to proliferate in the North American markets.

About Walker Environmental

Walker Environmental Group Inc. (Walker Environmental) is a wholly owned subsidiary of Walker Industries Holdings Limited (Walker Industries), a family-owned company known for its service to its customers and communities for over 130 years. Walker Environmental is a leading waste and resource



recovery company producing long-term value through innovation. With operations from coast-to-coast in Canada we provide environmental solutions to public and private sector customers.

Walker takes a long term, generational view to evaluate opportunities. Whether it is through technological advancement or business practices, Walker operates through a Social-Economic-Environmental (SEE) Model that ensures their projects are truly sustainable. Walker believes that product quality is key to the successful recovery of organics within the circular economy. The company operates two landfills, a waste transfer facility, six biosolids stabilization plants, two composting facilities, six trap grease processing facilities, several landfill gas renewable energy projects, and a waste haulage company. Through these operations Walker is now the largest fully integrated organics recovery company in Canada, as well as the largest disturber of organic amendment products in the country – managing and recovering over 1,000,000 tonnes of organics annually.

Our businesses in Canada include:

- 1 - GORE® Cover Composting System, static pile and open windrow compost facility producing AA compost from SSO, food waste, digestate and yard waste. Licensed for up to 170,000 tonnes of in process waste. (Arthur, ON)
- 1 - GORE® Cover Composting System and open windrow compost facility producing AA compost from SSO, food waste and yard waste. Licensed for up to 90,000 tonnes annually. (Thorold, ON)
- Multiple leaf and yard waste open windrow composting facilities, producing soils, mulch, growing media and potting mixes. (Multiple locations across Ontario)
- 6 alkaline stabilization biosolids facilities processing over 100,000 wet tonnes/year to produce fertilizers. (Thorold, Sarnia, Leamington, Sudbury, Halifax and Summerside)
- 7 grease trap and liquid organic waste processing facilities. (Toronto, Woodstock, Ottawa, Saint-Hyacinthe, Nisku, Calgary, and Vancouver) to produce feedstock for anaerobic digestion and renewable energy production
- 2 landfills with disposal capacity of 1.1m tonnes annually (Niagara Falls, ON)
- 1 - 1,000 tonne/day transfer station (Burlington)
- 4 - Multi-Mega Watt landfill gas recovery projects (Niagara, Ottawa, Winnipeg, Brandon)
- 2 - Municipal Recycling Depots (Niagara, Burlington)
- Internal Fleet of highway tractors and various types of trailers

***Only non-confidential information should be included in your response ***