



Maximizing Economic Development in Waste Management

Considerations for the renewal of Newfoundland and Labrador's waste management strategy

October, 2019

Recommendations emerging from member
and partner consultations

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I Background

On January 9, 2019, the Department of Municipal Affairs and Environment announced that a comprehensive review of Newfoundland and Labrador's solid waste management strategy would take place.

From June until August 2019, the Newfoundland and Labrador Environmental Industry Association (NEIA) engaged its membership in one-on-one consultations with the intent to advance on their behalf a series of comprehensive recommendations for consideration in the renewal of the province's waste management strategy.

A first draft of recommendations was completed in September, 2019. NEIA worked through the Fall with stakeholders to validate and refine its recommendations. The final iteration of this document summarizes the positions and ideas that came to light as a result of NEIA's engagements.

The overarching theme of this series of recommendations is that there are significant economic growth and innovation opportunities associated with the advancement of waste management in Newfoundland and Labrador, and that there is an important role for the provincial government to play in enabling, facilitating, stimulating, and demanding such activity.

II Executive Summary

On January 9, 2019, the Department of Municipal Affairs and Environment announced that a comprehensive review of Newfoundland and Labrador's solid waste management strategy would take place. NEIA engaged its members one-on-one in the development of a series of ideas and positions, outlined and explored in this document. In summary, NEIA is recommending that the Government of Newfoundland and Labrador should:

- make the findings of its *Comprehensive Review of Provincial Solid Waste Management Strategy* publicly available as to give stakeholders the opportunity to review and respond in the interest of making its next iteration as effective as possible
- support strategic partnerships between regional service boards, those that generate significant industrial waste, the waste management business community, relevant governments, and research institutions.
- identify and implement policy and regulatory instruments that can assist in facilitating and enabling innovation in waste management (e.g. push/pull interventions, support for pilot projects, targeted financing, etc.)
- encourage increased collaboration between the Department of Tourism, Culture, Industry and Innovation and the Department of Municipal Affairs and Environment on the subject of waste management, possibly through the recently established clean technology interdepartmental working group
- include transportation as a subject matter of interest for strategic partnerships between regional service boards, those that generate significant industrial waste, the waste management business community, relevant governments, research institutions – and transportation stakeholders
- be more strategic in supporting (a) innovation in waste management and (b) the development of needed solutions to known waste management challenges by re-allocating SWMIF and CWDF resources to more mission-based initiatives
- use recycling revenues, a significant financial resource, to leverage public investments and contributions from industry in the provision of mission-based initiatives
- require action plans be in place to be followed if investments prove to show promise or success; the next steps towards the development of a viable solution, or the adoption of a technology / process that was piloted, should be mandatory considerations in the genesis of a project
- provide insight into the challenges associated with the diversion of organic waste that have delayed implementation as to inform future action

- issue a “challenge” to interested parties (with an associated reward) to develop innovative and cost-effective approaches to organics diversion in the province
- begin work immediately in developing a strategy for the diversion of organics from provincial landfills
- include non-municipal septic waste, waste oil, biosolids, and hazardous materials in its waste management strategy
- frame waste management initiatives from the perspective of climate change, and have a list of established prioritized actions, to maximize opportunities for federal investment
- ascertain and communicate the full cost of modern solid waste management, including collection, transportation, sorting, landfilling, remediation, etc. and how this may vary within regions
- set consistent fees across the province for the disposal of waste and recycling materials that reflect the full costs of disposal – including environmental costs
- commit to pursuing province-wide mandatory recycling of paper, plastic, and cans for both residents and businesses
- strive to be a leading participant and contributor to the Canadian Council of Ministers of the Environment and its *Strategy on Zero Plastic Waste*
- engage the private sector in providing cost-effective monitoring technologies / services as to deploy the level of enforcement required to disincentivize non-compliance of waste management policies and regulations
- explore the potential for pay-as-you-throw (PAYT) programming to contribute to the advancement of waste management in the province
- align its extended producer responsibility (EPR) programming with Canada’s leading jurisdictions, and consider how EPRs can be best leveraged to advance waste management in the province
- support businesses and social enterprises that have an interest in providing waste management solutions where there are none. Support could include enabling policy measures, rebates for service providers, incentives for residential / business participants, etc.
- implement modern waste management practices within its departments and agencies and set the standard by which others should follow
- use its purchasing power to ‘make a difference’, by embracing circular economy values in its procurement processes and those of government agencies.

III Recommendations

1 Learn from the Past

The *Newfoundland and Labrador Waste Management Strategy*, published in 2002, had the following goals: (1) divert 50 percent of the materials currently going to disposal by 2010; (2) reduce the number of waste disposal sites by 80 percent; (3) eliminate open burning at disposal sites by 2005 and phase out the use of incinerators by 2008; (4) phase out use of unlined landfill sites by 2010; and (5) full province-wide modern waste management by 2010. Many actions in support of these objectives were implemented, but not all of the 2002 goals were met. Helpful in the development of a new waste management strategy would be a summary of the progress on and challenges associated with the plan outlined in 2002.

Recommendation: **The Government of Newfoundland and Labrador should make the findings of its *Comprehensive Review of Provincial Solid Waste Management Strategy* publicly available as to give stakeholders the opportunity to review and respond in the interest of making its next iteration as effective as possible.**

2 Ensure Economic Development is a Primary Strategic Objective

Waste generated in Newfoundland and Labrador needs to be viewed through a holistic, strategic, and proactive lens. This is particularly true with respect to industrial waste – current (and forecasted) materials from aquaculture, agriculture, forestry, oil and gas, mining, and others.

Considering these sources of waste and pursuing solutions in the broader context (and not exclusively at the individual level) opens the door to cross-sectoral research and development – which can lead to innovation. This is the approach being taken by one of the province’s established Regional Innovation Systems (or ‘RIS’, led by the Department of Tourism, Culture, Industry and Innovation) where various industrial actors in a specific geographical region are set to begin

analysis of the opportunities associated with the waste materials being produced. Such activity can have an economic impact, with the potential to create new jobs and activity in regions, and also by contributing to the productivity and competitiveness of important industrial actors. NEIA can play a strong leading or supporting role in such activity.

The expertise and solutions developed for Newfoundland and Labrador around waste management can be exportable to other parts of the world facing similar challenges or in similar circumstances (e.g. waste management in an island, coastal, rural, remote, and/or natural resource-heavy environment) representing economic growth and diversification opportunity. International partnerships can be established to pursue both exploratory and applied research.

Given the potential for innovation and economic development in the field of waste management, more collaboration is required between the Department of Tourism, Culture, Industry and Innovation and the Department of Municipal Affairs and Environment. Entrepreneurs providing solutions in and around waste management have experienced difficulty simultaneously navigating the support ecosystem of one and the regulatory framework of the other.

Recommendation: The Government of Newfoundland and Labrador should support strategic partnerships between regional service boards, those that generate significant industrial waste, the waste management business community, relevant governments, and research institutions.

Recommendation: The Government of Newfoundland and Labrador should identify and implement policy and regulatory instruments that can assist in facilitating and enabling innovation in waste management (e.g. push/pull interventions, support for pilot projects, targeted financing, etc.)

Recommendation: The Government of Newfoundland and Labrador should encourage increased collaboration between the Department of Tourism, Culture, Industry and Innovation and the Department

of Municipal Affairs and Environment on the subject of waste management, possibly through the recently established clean technology interdepartmental working group.

3 Study Transportation

The transportation of waste has significant costs – both financial and environmental. The transportation of waste across great distances is inefficient and creates potentially avoidable greenhouse gas emissions. As transportation in general is considerable provincial contributor to climate change, and a challenge that a number of the province’s key industries face, it is an area ripe for innovation and partnership. An analysis of the transportation of goods (and wastes) in specific areas of interest may reveal opportunities for the sharing of resources and assets (e.g. ‘backhaul’ opportunities).

Recommendation: The Government of Newfoundland and Labrador should include transportation as a subject matter of interest for strategic partnerships between regional service boards, those that generate significant industrial waste, the waste management business community, relevant governments, research institutions – and transportation stakeholders.

4 Use Recycling Revenues More Effectively

Newfoundland and Labrador generates significant revenues from the waste materials it collects and sells abroad. A review of how these funds are being used is warranted.

One instructive example is the Multi-Materials Stewardship Board (MMSB)’s Solid Waste Management Innovation Fund (SWMIF). This \$100,000 fund is made available each year to support innovative activities in the private sector to address solid waste management challenges. This in theory is sound, however the fund is disbursed in maximum allotments of \$15,000 per applicant.

This grant is not substantive enough to support significant projects, and as a result has mostly been used to support small niche initiatives addressing a wide variety of different forms of waste that have likely had little impact on the province's waste stream.

This resource could be used more effectively. Research shows that 'mission' based initiatives or the use of 'challenges' can be an effective means of driving and/or fostering innovation. If these resources were used each year to try to address one very specific waste management issue, the reduction could be much more significant on the waste stream and the impact far greater from an economic development and innovation perspective. Further, the \$100,000 could be used more strategically in that it could potentially leverage other sources of public funding – be they federal or provincial – to increase in size and impact. If the intent was to focus on one specific industrial waste challenge, industry (or industries) may also be financial partners.

Much the same can be said for the MMSB's Community Waste Diversion Fund (CWDF). This fund is currently distributed to a maximum of \$10,000 per community. The impact that such small investments can have is limited, whereas much could be achieved through single larger annual allotments (e.g. a regional scrap vehicle pick-up initiative one year, a used-fishing gear pick-up or electronics collection another year in isolated communities, and so on).

In a jurisdiction where targeted funding for clean technology is very limited, it is critical that financial assets – like those that support the SWMIF and CWDF – are used in the most effective manner possible.

Recommendation: The Government of Newfoundland and Labrador should be more strategic in supporting (a) innovation in waste management and (b) the development of needed solutions to known waste management challenges by re-allocating SWMIF and CWDF resources to more mission-based initiatives.

Recommendation: The Government of Newfoundland and Labrador should use recycling revenues, a significant financial resource, to leverage

public investments and contributions from industry in the provision of mission-based initiatives.

Recommendation: The Government of Newfoundland and Labrador, in supporting mission-based initiatives, should require action plans be in place to be followed if investments prove to show promise or success. The next steps towards the development of a viable solution, or the adoption of a technology/process that was piloted, should be mandatory considerations in the genesis of a project.

5 Address Organic Waste

Organic waste represents up to 30% of Newfoundland and Labrador's solid waste, and as such was necessary to address in order for the province to achieve its 2010 goal of 50% diversion. In 2014, a report was commissioned by the province to outline options for the processing of organics. Helpful in the development of a new waste management strategy would be an understanding of what challenges have contributing to delay of organics diversion. Continued delay in addressing organic waste diminishes the life span of the province's landfills and contributes to greenhouse gas emissions.

In lieu of immediate large-scale investment in composting infrastructure that will allow for curbside pickup from coast to coast, the private sector and social enterprise may be able to provide solutions. There may be innovative approaches to the management of organic waste that are not being considered – or that have not been invented yet. A 'challenge' could be issued to the interested parties to develop innovative sustainable business / social enterprise models for the management of organic wastes in specific geographic areas. The perfect province-wide solution may continue to be elusive, yet in the meantime supporting isolated initiatives can still divert significant amounts of waste, provide citizens and business with options, and expose the population to systems and habits that will one day be a requirement.

It is important that this waste stream be considered within the broader context of waste as discussed in section 2. The organic waste may be a resource that can assist in the management of regional industrial wastes, for example.

Recommendation: **The Government of Newfoundland and Labrador’s *Comprehensive Review of Provincial Solid Waste Management Strategy* should provide insight into the challenges associated with the diversion of organic waste that have delayed implementation as to inform future action.**

Recommendation: **With the information above made available, the Government of Newfoundland and Labrador should issue a “challenge” to interested parties (with an associated reward) to develop innovative and cost-effective approaches to organics diversion in the province.**

Recommendation: **The Government of Newfoundland and Labrador should begin work immediately in developing a strategy for the diversion of organics from provincial landfills.**

6 Broaden the Scope of ‘Waste Management’

Newfoundland Labrador’s Waste Management Strategy addresses, almost exclusively, solid waste. However, there are significant challenges the province is experiencing with respect to sustainable diversion strategies for other forms of waste, e.g. non-municipal septic waste, waste oil, biosolids, and hazardous materials. These sources of waste should not be excluded or treated in isolation from the solid wastes addressed in the development of a strategy.

Recommendation: **The Government of Newfoundland and Labrador should include non-municipal septic waste, waste oil, biosolids, and hazardous materials in its waste management strategy.**

7 Apply the Climate Lens

It is estimated that waste management accounts for up to 8% of the province's greenhouse gas emissions. At both the federal and provincial levels, there are significant financial resources available for projects and initiatives that contribute to the reduction of greenhouse gas emissions. With a series of established priorities, these resources can be leveraged to make substantial investments in the modernization of Newfoundland and Labrador's waste management framework.

Recommendation: The Government of Newfoundland and Labrador should frame waste management initiatives from the perspective of climate change, and have a list of established prioritized actions, to maximize opportunities for federal investment.

8 Set and Enforce Consistent Standards

The waste management strategy aimed for costs and services provided to be consistent across the province. This was not achieved, but it remains a necessary goal. While the solutions decided upon may differ from region to region, the standards and environmental expectations must be consistent from one region to the next. This is important not just from the perspectives of maximizing waste diversion and the notion of 'fairness' (e.g. the expectations of residents in one community to the next), but also in helping to avoid system inefficiencies. Different pricing schemes / tipping fees for waste and recycling tonnage from region to region, for example, creates an ineffective system where haulers 'shop around' for the best price. Setting consistent prices province-wide will help dispel the notion that these are arbitrary fees that can be avoided. Adequate enforcement must be in place to ensure rules are being followed by residential, commercial, and industrial actors.

Recommendation: The Government of Newfoundland and Labrador should ascertain and communicate the full cost of modern solid waste management, including collection, transportation, sorting, landfilling, remediation, etc. and how this may vary within regions. With this information in-hand, stakeholders will be in a

better position to set consistent prices (e.g. tipping fees) and understand where challenges exist and solutions are needed.

Recommendation: The Government of Newfoundland and Labrador should set consistent fees across the province for the disposal of waste and recycling materials that reflect the full costs of disposal – including environmental costs

Recommendation: The Government of Newfoundland and Labrador should commit to pursuing province-wide mandatory recycling of paper, plastic, and cans for both residents and businesses. Only with such ambition will progress be achieved. Recycling is a baseline act of sustainability that, when undertaken, helps instill an awareness of one's everyday decisions and their impact on the environment.

Recommendation: The Government of Newfoundland and Labrador should strive to be a leading participant and contributor to the Canadian Council of Ministers of the Environment and its Strategy on Zero Plastic Waste. The solutions that the province develops to address plastics challenges in the rural, remote, and island context can be exported globally.

Recommendation: The Government of Newfoundland and Labrador should engage the private sector in providing cost-effective monitoring technologies / services as to deploy the level of enforcement required to disincentivize non-compliance of waste management policies and regulations.

9 Disincentivize the Generation of Waste

In addition to setting appropriate and consistent pricing schemes for commercial / bulk waste disposal and recycling, Newfoundland and Labrador could consider pay-as-you-throw (PAYT) programming for households. This approach to waste collection charges households directly for pickup based on volume, weight, or the number of bags put out for collection. *Canada's EcoFiscal Commission* – a group of experienced, policy-minded economists from across the country – indicates that PAYT programs can have a number of benefits. First, households have direct control over the costs associated with waste collection, and will invariably strive to minimize those costs. Second, operating costs of collection can be reduced with households on average, producing less waste. Third, the cumulative reduction in waste can extend the life of landfills. Fourth, revenues generated through the PAYT program reduce the need to cross-subsidize disposal services through property taxes or other revenue sources and can be presented transparently to households as being cost-neutral.

It is also important to hold the primary producers of goods accountable for the costs associated with the management of the waste they are creating. Extended producer responsibility (EPR) is a policy where a producer's responsibility, physical and/or financial, for a product is extended to the postconsumer stage of a product's life cycle (rather than being assumed by governments) – essentially forcing producers to consider their activities from the circular economy perspective. This policy encourages producers to incorporate environmental considerations into their product and packaging designs. Newfoundland and Labrador has EPR programs in place for paint and electronics waste, and is 'currently working with partners and industry to develop EPR programs for used oil and printed paper and packaging materials'. The province committed, through a 2009 agreement with the Canadian Council of Ministers of the Environment, to a *Canada-wide Action Plan for EPR* which included implemented programs for other products by 2017 including: packaging, mercury containing lamps, other mercury-containing products, household hazardous and special wastes, automotive products, construction materials, demolition materials, furniture, textiles and carpet, and appliances (including ozone-depleting substances). British Columbia became the first province to have "full EPR" for all of its programs, and is the only province that has a full EPR program for its municipal curbside recycling programs – shifting the burden of operating these

programs from governments to manufacturers. Newfoundland and Labrador should align its approach to EPR with the most progressive jurisdictions in Canada.

Recommendation: The Government of Newfoundland and Labrador should explore the potential for pay-as-you-throw (PAYT) programming to contribute to the advancement of waste management in the province.

Recommendation: The Government of Newfoundland and Labrador should align its extended producer responsibility (EPR) programming with Canada's leading jurisdictions, and consider how EPRs can be best leveraged to advance waste management in the province.

10 Incentivize the Reduction and Diversion of Waste

In some cases private sector businesses and social enterprises are taking a proactive approach to addressing the province's waste management challenges. Organic waste is an area where there are a number of firms who are engaged in composting initiatives within their communities. These actors should be encouraged and supported in their efforts to fill service gaps. Assistance provided to these organizations (financial, regulatory, etc.) should not be viewed as strictly commercial investments, but also be recognized for their contribution to waste diversion, mitigating the province's greenhouse gas emissions, and extending the life of landfills.

The private and community sectors have significant capacity to assist in confronting the province's waste management challenges and leveraging their strengths can help address some low-hanging fruit. For example, the diversion and processing of metals can be lucrative, beneficial for the taxpayer, and extend the lifespan of landfills. Partnerships between governments, communities, and the private sector can result in win-win-win scenarios. An initiative as simple as having homeowners (in areas without recycling programs) remove metal cans from garbage bags can have a significant impact.

The provincial government can play an influential role in the degree to which such initiatives are successful and/or divert waste. It can support businesses / social enterprises through enabling policy and regulatory measures, provide rebates or waive certain conditions or fees, and/or invest in their activities. It can incentivize residential or business participation in these privately let initiatives, which may prove to be a cost effective approach to waste diversion.

Recommendation: The Government of Newfoundland and Labrador should support businesses and social enterprises that have an interest in providing waste management solutions where there are none. Support could include enabling policy measures, rebates for service providers, incentives for residential / business participants, etc.

11 Lead by Example

The provincial government and its agencies must lead by example and set the gold standard for waste management within their buildings, offices, and worksites. Featuring the largest public sector per capita across Canada, not only would the impact be potentially substantial from a waste reduction perspective, but action within the public service's ranks represents an enormous educational and awareness campaign. The many public sector employees, held to a high standard in their workplace, will educate their friends and family outside of the office.

Excellent examples already exist internally that can be replicated – such as the Department of Tourism, Culture, Industry and Innovation's initiative to introduce composting within their Confederation Building offices. Additional lessons can be learned from private sector leaders who run comprehensive waste management programs throughout their commercial buildings in a cost-effective manner.

As the biggest 'purchaser' in the province, the provincial government and its agencies can have an impact on the amount and type of waste being generated provincially. By embracing circular economy values government can prevent waste through supporting innovative models and design,

and maximize the life of acquired products by ensuring their resiliency and through enhanced use and repair. Much of this can be achieved through sound procurement processes, and can be particularly relevant for health authorities, school districts, etc.

Recommendation: The Government of Newfoundland and Labrador should implement modern waste management practices within its departments and agencies and set the standard by which others should follow.

Recommendation: The Government of Newfoundland and Labrador should use its purchasing power to ‘make a difference’, by embracing circular economy values in its procurement processes and those of government agencies.