



File: Comox Valley Regional District
Solid Waste Management Plan

January 25, 2019

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Dear Andrew,

Re: Follow up from the October 11, 2018 Comox Strathcona Waste Management board meeting

This letter is issued to further clarify information presented to the Comox Strathcona Waste Management (CSWM) board at the October 11, 2018 CSWM board meeting and to answer questions posed by board members and staff during and after the meeting.

The approved CSWM solid waste management plan (SWMP) was and still is aligned with applicable Provincial policies and solid waste management planning guidelines. The current SMWP refers to two important points relevant to the questions raised in your email, specifically:

- “The hierarchy has been applied to the development of the Solid Waste Management Plan options with the intent of minimizing the amount of residual waste that must be landfilled. In 2010, the Province developed a policy related to recovering energy from the waste stream: that regional districts must plan to achieve at least 70% waste diversion through the first 3Rs (reduce, reuse and recycle) prior to considering the 4th R of “recover” (e.g. waste-to-energy facilities). This policy has also been considered in the development of the Plan’s options and it is expected that the actions in this plan can achieve 70% diversion upon full implementation.” (Section 4 of the SMWP)
- “Implementation of the waste minimization components of the Plan presented herein is designed to achieve a waste diversion rate of over 70%”. (Section 24 of the SWMP).

The approval letter for the current SWMP, signed by the Minister on May 23, 2013 states that the “SWMP amendment must first be submitted prior to landfill expansion or waste-to-energy technologies and costs before possible inclusion in plan”.

In this context, the Comox Valley Regional District (CVRD) and the CSWM Board is encouraged to continue working toward waste prevention and waste diversion and improve diversion rates to accomplish the targets set out in the CSMW SWMP.

Adherence to the 5R pollution prevention hierarchy means that before considering the inclusion of an energy recovery process (Recover), targets for reduction of waste to be achieved through higher levels of the pollution prevention hierarchy (Reduce, Reuse and Recycle) should be set in a SWMP. An updated Waste-to-energy information sheet was issued by the ministry on November 2018 (<https://www2.gov.bc.ca/assets/gov/environment/waste-management/garbage/wtefactsheet.pdf>). The Ministry expects that local governments will set waste disposal rate targets (in accordance with ministry policy) before considering the inclusion of WTE facilities within their SWMP. The information sheet was updated with a municipal solid waste disposal rate target of 350 kg/capita instead of a 70% diversion rate, to align with the updated SWMP guide and the use of a disposal rate target instead of diversion rates which are often estimated and hard to calculate.

Based on the information that has been communicated to the ministry to date, the fuel-derived WTE initiative contemplated by the Board would be considered a Disposal or waste Recovery initiative rather than a Recycling project in the pollution prevention hierarchy. The definitions provided are useful to distinguish recycling and recovery activities:

Recycling:

The collection, transportation and processing of products that are no longer useful in their present form and the subsequent use, including composting, of their material content in the manufacture of new products for which there is a market

Recovery:

The reclaiming of recyclable components and / or energy from the solid waste stream by various methods including but not limited to manual or mechanical sorting, incineration, distillation, gasification, or biological conversion other than composting

In practice, this means that the CVRD and the CSWM Board would need to demonstrate that reasonable effort has been made to implement Reduce, Reduce and Recycling initiatives to achieve a waste diversion rate of over 70%, before initiating Recovery initiatives such as fuel derived initiative. To be considered a Recovery facility, further details on the facility and information confirming the end fate of any by products would be required along with demonstration that the facility and its end products are achieving an energy efficiency rate >60% over a 12-month period, would be required.

The Guide also describes the type of changes that would be subject to major or minor amendments to a SWMP. Major amendments would trigger a complete review of the SWMP and involve all four planning steps described in the Guide. As described in the Guide, initiatives that trigger major amendments to the SWMP include, among other things, the opening or changes to the location or status of a site or facility included in a SWMP requiring an authorization under the *Environmental Management Act* and any other facility that could have an adverse impact to human health or the environment.

Despite the wording of the current SWMP and the approval letter referred to above, it is likely that the fuel-derived WTE facility considered by the Board would trigger a major amendment to the plan based on the examples provided in the Section C.4.1. of the Guide.

The Reviewable Project Regulation (RPR) identifies the types of projects subject to an Environmental Assessment (EA) under the *Environmental Assessment Act* and a fuel derived WTE could trigger an EA if any of the criteria under Table 7 -Electricity or Table 11 - Solid Waste Management Projects, are met. This will need to be evaluated by the Environmental Assessment Office once and if the project goes ahead. The fact the project would be owned or operated by interests other than the Regional District would not affect this evaluation.

In summary, based on information that has been provided to the ministry to date, it is expected that a WTE project will require an amendment to the SWMP, and possibly be subject to EA Review. In pursuing the amendment, the CVRD and CSWM Board will need to demonstrate how the proposal is consistent with current ministry policy and guidance.

Organic waste continues to be the largest portion of the waste stream going to landfills in BC, generating significant greenhouse gas emissions. There is a need to reduce and divert more organic waste from landfills to reduce greenhouse gas emissions and prolong landfill lifespans. In a circular economy, food & organic waste are not landfilled but instead are used as a valuable resource for communities.

Opportunities for prevention include participation as a partner in the Love Food Hate Waste program, which provides access for local governments to tools and resources that can be used to enact food waste prevention campaigns across the province. Additional information on organic waste prevention and diversion programs is available on the Ministry website at:

<https://www2.gov.bc.ca/gov/content/environment/waste-management/food-and-organic-waste>.

The CleanBC Communities Fund is a foundational component of the B.C. government's CleanBC plan. CleanBC puts B.C. on the path to a cleaner, better future – with a low-carbon economy that creates opportunities for all while protecting our clean air, land and water. Additional information on funding programs through CleanBC is available at: <https://www2.gov.bc.ca/gov/content/transportation/funding-engagement-permits/funding-grants/investing-in-canada-infrastructure-program/green-infrastructure/cleanbc-communities-fund>.

Please do not hesitate to contact me should you have follow up questions or comments on the above,

Sincerely,



Luc Lachance, P.Eng
Section Head, Solid Waste, Authorizations South
Environmental Protection Division

Cc: Avery Gottfried, P. Eng, Senior Policy Specialist, Ministry of Environmental and Climate Change Strategy, Environmental Standards Branch
Mark Rutten, P. Eng, General Manager of Engineering Services Branch, CVRD



Considerations for the Inclusion of Waste-to-Energy Facilities (WTE) in Solid Waste Management Plans

Introduction

The purpose of this document is to help local governments assess their waste management practices and goals before considering the use of waste-to-energy (WTE) to manage municipal solid waste (MSW).

The Ministry expects that local governments will set key waste disposal rate targets before considering the inclusion of WTE facilities within their SWMP.

Considerations

- 1) WTE is an allowable activity under the Environmental Management Act (EMA).
2) The Ministry supports the hierarchy and the goal of minimizing the volume of waste being disposed.
3) All Regional Districts that plan to direct a portion of their MSW to a WTE facility must seek an amendment to their SWMP, prior to considering WTE as a waste management option, that adds sufficient detail which:

1 The Ministry defines the pollution prevention hierarchy as reduce, reuse, recycle, recovery and residual management.

- a) Identifies a municipal solid waste disposal rate target of 350 kg/capita/year2 with measurable interim targets set and met throughout the planning and implementation process;
b) Highlights that WTE planning and capacity is conducted only after considering the higher levels of the hierarchy and does not impede efforts to achieve higher levels of reduction, re-use and/or recycling initiatives; and
c) Authorizes the WTE facility to accept MSW for treatment and/or disposal.
4) In order to be considered under the 4th R of the hierarchy, the Ministry expects that the facility has an energy efficiency of at least 60% as measured over a 12-month period3
5) When a WTE facility does not achieve 60% energy efficiency over a period of 12 months, the Ministry will consider that WTE facility as a Residual Management facility (5th R).

2 The Ministry anticipates that local governments may have a higher or lower municipal solid waste disposal rate target depending on their access to services (locally and/or provincially) within the first three levels of the hierarchy.

3 Energy efficiency criteria is modelled after Annex II of the Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives (2008/98/EC),

Energy efficiency = (Energy produced - Energy from fuels - Other energy imported) / (0.97 x (Energy of waste input + Energy from fuels))

The energy efficiency of WTE facilities should be calculated in a BC context based on energy in/energy out, without the use of equivalence factors comparing the energy from MSW with the energy potential from other fuels (e.g., coal).

6) The Ministry expects that the criteria in Table 1 be met for all WTE facilities.

Application

This information applies to thermal treatment technologies such as mass-burn incineration (including cement kilns and pulp and paper mills), gasification and pyrolysis that recover energy from MSW, but does not apply to anaerobic digestion and agricultural greenhouses and does not describe site specific requirements of proposed facilities.

Please note that this information is for the convenience of the reader and may change from time to time. The

current legislation and regulations should be consulted for complete information.

If you require additional information, please contact your regional office of the Ministry of Environment and Climate Change Strategy.

Ministry Contact

For more information, consult our website at:

<https://www2.gov.bc.ca/gov/content/environment/waste-management/garbage/waste-to-energy>

Or email the Ministry at:

envprotdiv@Victoria1.gov.bc.ca

Table 1: Criteria for WTE facilities

(A)Criteria for local governments planning to direct MSW to a WTE Facility		(B)Criteria for WTE facilities utilizing MSW as a feedstock		
Municipal solid waste disposal rate target	Technical assessment	Technology	Management of by-products	Emission requirements
<p>Local governments contributing MSW to a facility must have an approved SWMP that authorizes and/or recognizes the WTE facility to accept and dispose of MSW.</p> <p>The SWMP is expected to include a municipal solid waste disposal rate target of 350 kg/capita/year before considering the use of WTE technologies for managing MSW. In addition, the SWMP should prioritize strategies that would help reduce, reuse and recycle waste, and ensure that WTE is not impeding these efforts.</p>	<p>Assessment and comparison of waste management treatment and disposal options should be completed.</p>	<p>Adopt the best achievable technology. This should be determined by assessing feasible options based on reliability, cost effectiveness and discharge intensity.</p>	<p>Clearly identify viable solutions for disposal or beneficial use of bottom ash, fly ash and/or liquid by-products.</p>	<p>The emissions from a facility must meet the Ministry’s Factsheet Air Emissions Combustion of Municipal Solid Waste* and emission requirements set out in the site specific authorization for the facility.</p>

*<http://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/combustionmswfs.pdf>