

MUNICIPALITIES AND THE REGULATION AND MANAGEMENT OF GHGS

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A. INTRODUCTION

Municipalities, urban and rural, traverse landscapes in Canada, each its own regulatory regime. Depending on authorizing legislation they may have powers to regulate and manage activities, projects, and infrastructure that mitigate or aggravate climate change.¹ The powers include over local development, businesses, transportation and roads, zoning and land use planning, waste management and garbage control, collection, and disposal, recycling, landfills, and over their own infrastructure, energy use and demands. In fact, the Federation of Canadian Municipalities (FCM) points out that up to half of greenhouse gas (GHG) emissions “are under the direct or indirect control or influence of municipal governments.”² Municipalities also bear the brunt of climate change impacts including emergency response, floods, droughts, transportation interruptions, resident health and so on. Yet municipalities generally are not seen as front-line players as climate change regulators and managers.³ This role is left to the federal and provincial governments.

This paper considers the role of municipalities in the regulation and management of GHGs in relation to climate change.⁴ Section B looks at municipal jurisdiction to make laws that directly limit GHG emissions. Section C presents a case study that tests the validity of a hypothetical municipal bylaw that limits GHGs from landfills. Section D describes municipal-related initiatives other than direct regulation of GHG emissions that result in reduced GHG emissions.

This paper focusses on climate change mitigation, meaning measures that lessen human contributions to climate change, primarily through limiting or alleviating GHG emissions. Mitigation may be contrasted with adaptation, which involves conducting risk management scenarios, anticipating the adverse impacts of climate change, and taking actions to prevent, minimize, or alleviate adverse impacts.⁵

B. MUNICIPAL AUTHORITY IN CANADA

The Constitution and municipal authority

The Canadian Constitution divides legislative powers between the federal and provincial governments. There is no constitutional head of power for municipalities. Municipal powers are derived from provincial legislation, since provinces have legislative jurisdiction over municipal institutions.⁶ Judicial decisions firmly establish that municipalities, like all statutory creations, have no authority beyond the powers expressly or implicitly conferred by legislation. If a

¹ E.g., Cynthia Rosenzweig “All Climate Is Local” *Scientific American*, (2011) 305(2) 70-73.

² Federation of Canadian Municipalities (FCM), Partners for Climate Protection: << <https://fcm.ca/home/programs/partners-for-climate-protection/about-climate-change.htm>>>.

³ For a U.S. review of this issue see Katherine A. Trisolini, “All Hands on Deck: Local Governments and the Potential for Bidirectional Climate Change Regulation,” (2010) 62(3) *Stanford Law Review* 669-746.

⁴ Many thanks to University of Calgary Law Student David Hillier for his research relating to this paper.

⁵ I discuss adaptation and municipalities in Arlene Kwasniak, *Climate Change and Water: Law and Policy Options for Alberta*, CIRL Occasional Paper #57 (CIRL: Calgary, 2017): << https://cirll.ca/files/cirl/water-and-climate-change_kwasniak.pdf>>.

⁶ S 91(8), *Constitution Act, 1867*, formerly the *British North America Act, 1867*, 30 & 31 Victoria, c 3.

municipality acts beyond conferred powers, a court may determine an action to be *ultra vires* – beyond authority – and accordingly without legal effect.

Court Interpretation of Municipal Authority: Dillon’s Rule, *Spraytech*, and *Rothmans*

In the past courts strictly limited municipal powers in accordance with what is known as “Dillon’s Rule.” The Rule derives from a 1906 case that states:

It is a general and undisputed proposition of law that a municipal corporation possesses and can exercise the following powers and no others, first, those granted in express words; second, those necessarily or fairly implied in or incident to the powers expressly granted; third, those essential to the declared objects and purposes of the corporation, not simply convenient, but indispensable. Any fair reasonable doubt concerning the existence of power is resolved by the courts against the corporation, and the power is denied.

Through the years courts more liberally construed Dillon’s Rule. A significant evolution occurred in Supreme Court of Canada (SCC) decision, *Spraytech v Town of Hudson*.⁷ The Plaintiff, *Spraytech*, challenged the validity of a Town bylaw that restricted the cosmetic use of pesticides (e.g. to kill dandelions). The Town passed the bylaw under its general and omnibus power to make bylaws for the health of its residents under *The Cities and Towns Act*.⁸ *Spraytech* argued that under Dillon’s Rule the Bylaw was invalid because as the *Act* contained no express power authorizing it, and argued that the Town could not rely on its general/ombibus bylaw making power since the bylaw conflicted with federal and provincial legislation, and paramountcy rendered the municipal bylaw invalid. The Court disagreed and held that as long as the bylaw is within municipal authority, even if there is, or could be, federal or provincial legislation in the same area, there is no conflict as long as it is possible to comply with the municipal bylaw and the federal or provincial law. In the case there was no conflict. The Court stated that a municipal bylaw’s being more restrictive than federal or provincial legislation does not constitute a conflict. A conflict arises only when both the municipal bylaw and provincial or federal legislation cannot be complied with at the same time – the impossibility of dual compliance.

*Rothmans, Benson & Hedges Inc v Saskatchewan*⁹ concerned a federal law and a provincial law, though its principles may be applied to test the validity of a municipal bylaw. The issue was whether a section of the Saskatchewan *Tobacco Control Act*¹⁰ was inoperative because of a conflict with a section of the federal *Tobacco Act*.¹¹ The Saskatchewan law regulated the retail display of tobacco products, e.g., it prohibited displaying tobacco products where young persons may be present. The federal *Tobacco Act* expressly permitted tobacco products to be displayed for retail. The Applicant argued there federal and provincial laws conflicted, and federal paramountcy required the Court to declare the provincial law inoperative to the extent of the conflict. The Court

⁷ 114957 *Canada Ltée (Spraytech Société d’arrosage) v Hudson (Town)*, [2001] 2 SCR 241, [2001] SCJ No 42, 200 DLR (4th) 419, 171 NR 201, 19 MPLR (3d) 1, 2001 SCC 40, *Spraytech v The Town of Hudson*, [2001] SCJ No 42.

⁸ CQLR c C-19.

⁹ *Rothmans, Benson & Hedges Inc v Saskatchewan*, [2005] 1 SCR 188.

¹⁰ *The Tobacco Control Act*, SS 2001, c T-14.1.

¹¹ *The Tobacco Act*, SC 1997, c 13.

found no conflict as there was no impossibility of dual compliance. Both laws could be complied with through compliance with the provincial law. The federal law was permissive, not mandatory. However the Court added a test to determine whether a provincial legislative provision is inoperative in light of a federal law. The test is that if the provincial provision frustrates the purpose of a federal law, the federal law will prevail. On the facts the court found no frustration.¹²

Express Legislative Test

The express legislative test overrides the impossibility of the dual compliance test. The express legislative test applies where legislation prescribes when a legal provision or acting on a legal provision will be invalid or inoperative. To illustrate, in *Peacock v Norfolk County*¹³ an Ontario municipal bylaw prohibited siting intensive livestock operations within certain land use zones. However case the Province had approved the Plaintiff's operations within the zones under provincial legislation.¹⁴ Section 61 of the *Nutrient Management Act* stated "A regulation supersedes a by-law of a municipality or a provision in that by-law if the by-law or provision addresses the same subject matter as the regulation." The Court found that the provincial regulation under which the Peacocks received their approval addressed the same subject as the municipal bylaw, and that the express legislative test applied and not the impossibility of dual compliance. The bylaw's prohibition was thus inoperative.

C. DIRECT MUNICIPAL REGULATION OF GHGs – LANDFILL GAS CASE STUDY

Introduction

As put by the US Environmental Protection Agency:

Landfill gas (LFG) is a natural byproduct of the decomposition of organic material in landfills. LFG is composed of roughly 50 percent methane (the primary component of natural gas), 50 percent carbon dioxide (CO₂) and a small amount of non-methane organic compounds. Methane is a potent greenhouse gas 28 to 36 times more effective than CO₂ at trapping heat in the atmosphere over a 100-year period ...¹⁵

Environment and Climate Change Canada notes that "Emissions from Canadian landfills account for 20% of national methane emissions."¹⁶

Clearly, effective climate change mitigation requires reducing and managing landfill gas.¹⁷ This case study considers municipal jurisdiction in such mitigation.

¹² *Rothmans, Benson & Hedges Inc v Saskatchewan*, *supra* note 9 at para 25.

¹³ *Peacock et al v The Corporation of Norfolk County, and The Ontario Pork Producers' Marketing Board, Intervenor*, [2006] 81 OR (3d) 530, 269 DLR (4th) 45; leave to appeal to the SCC refused in [2006] SCCA No. 371.

¹⁴ *Nutrient Management Act*, 2002, SA 2002, c.4, s 61, and AR 267/03.

¹⁵ EPA, *Landfill Methane Outreach Program*: << <https://www.epa.gov/lmop/basic-information-about-landfill-gas>>>

¹⁶ ECC, *Solid Waste and Greenhouse Gases*: << <http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=6f92e701-1&wbdisable=true>>>.

¹⁷ Management approaches include capture and combustion or utilizing landfill gas for "various energy purposes," *ibid.* Also see MetroVancouver, *Reducing Greenhouse Gases at Landfill Sites*: <<

The case study concerns a municipality, “Greensboro,” that passes a bylaw prohibiting landfill gas (LFG) emissions over specified quantities (the “LHG Bylaw”). A developer of a proposed private landfill contests the validity of the bylaw claiming it is beyond municipal jurisdiction. Is the LFG Bylaw valid?

As not all provinces can be dealt with here, the case study assumes that Greensboro is in Alberta. A comparable exercise could be undertaken for the rest of Canada.

Charter Cities vs. Other Municipalities

The term “municipality” in this paper includes the range of local governments that provincial legislation may establish. For example the *Municipal Government Act*¹⁸ (MGA) defines “municipality” to include a city, village, town, summer village, and municipal district (s 1(1)(s)). Provincial laws that create and regulate municipalities typically apply to the entire range though some authorities may vary given a municipality’s size and type.¹⁹ However a few large urban Canadian municipalities enjoy special status under a city charters. A charter city is governed by stand-alone legislation that modifies the general municipal legislation, and provides charter cities greater autonomy and additional jurisdiction and powers.

In Canada, Saint John’s, Montreal, Winnipeg, Lloydminster and Vancouver are charter cities. Calgary and Edmonton recently joined this group. To ascertain a charter city’s regulatory authority regarding GHGs, in addition to reviewing the general municipal legislation, one must also examine the city’s charter legislation. This Part of the paper first considers the case study in relation to the jurisdiction of Alberta municipalities under the general municipal legislation, the MGA, and then considers it with respect to special authorities given under charters.

Municipal Purposes

A primary question is whether the LFG Bylaw falls within municipal purposes. If not, a court could declare it to be *ultra vires* and of no effect.²⁰

The MGA purposes (s 3) include:

- (a) to provide good government,
- (a.1) to foster the well-being of the environment, ... [added in 2017]
- (c) to develop and maintain safe and viable communities

Spraytech requires purposes to be interpreted flexibly and broadly. As mitigating climate change fosters the well-being of the environment ((a.1)) and safe and vibrant communities (c), the LFG Bylaw should fall within municipal purposes, provided it is intended to benefit the municipality.

<http://www.metrovancouver.org/services/liquid-waste/innovation-wasterwater-reuse/biosolids/reducing-greenhouse-gas-landfills/Pages/default.aspx>>>.

¹⁸ *Municipal Government Act*, RSA 2000, c M-26 (MGA).

¹⁹ E.g. under s 16 of the MGA *cities* own roads, but the *Crown* owns road in other types of municipalities.

²⁰ In *Shell Canada Products Ltd. v Vancouver (City)*, [1994] 1 SCR 231, the SCC held that a Vancouver resolution to “not do business with Shell Canada "until Royal Dutch/Shell completely withdraws from South Africa" was not within municipal purposes as it constituted boycotting on matters external to the interests of the citizenry (232).

Bylaw making authority

Another question is, does the provincial legislation authorize a municipal bylaw that limits landfill gas emissions, such as the LFG Bylaw? The MGA contains general and specific grants of bylaw making power. General grants are to be interpreted broadly, specific grants more narrowly, and limitations on specific grants cannot be enhanced through general grants (ss 9 and 10). General grants (s 7) that arguably could authorize the LFG Bylaw include:

7. A council may pass bylaws for municipal purposes respecting the following matters:
 - (a) the safety, health and welfare of people and the protection of people and property; ... ²¹
 - (e) businesses, business activities and persons engaged in business; ...

The most relevant specific grants are in Part 17, which sets out municipal authority to regulate planning, subdivision, and development. Did Greensboro have authority to pass the LFG Bylaw under Part 17? A landfill would be a development as “development” includes any changes of use of land or intensity of use.²² Accordingly, an Alberta municipality likely could require a development permit for a landfill that included limitations on landfill gas emissions.

Legislative Restrictions on Municipal Authority

The MGA limits what a municipality may do in exercising its bylaw and other authorities, even if the exercise is within municipal purposes and otherwise falls within jurisdiction. In a given situation, one or more of the following MGA provisions could limit municipal jurisdiction in regards to the LFG Bylaw.

- Section 13 states that “If there is an inconsistency between a bylaw and this or another enactment, the bylaw is of no effect to the extent of the inconsistency.” “Enactment” means a provincial or federal statute and subordinate legislation (s 1(1)(j)).

“Inconsistency” here presumably means impossibility of dual compliance, as per *Spraytech*. Currently, to the writer’s knowledge, no provincial law directly limits all landfill GHGs. Neither Alberta’s *Waste Control Regulation*²³ under the *Environmental Protection and Enhancement Act* (EPEA)²⁴ or the *Code of Practice for Landfills* speaks to GHG emissions. Alberta’s carbon levy under the *Climate Leadership Act*,²⁵ applies to fuels (not LFGs). The *Climate Change and Emissions Management Act*,²⁶ regulates emissions under the *Carbon Competitiveness Incentive Regulation*²⁷ (CCIR). The CCIR does not apply to biomass CO² emissions,²⁸ which includes some

²¹ The City of Calgary, for examples, bases its authority to pass a waste management and recycling bylaw on this power. See << <http://www.calgary.ca/CA/city-clerks/Documents/Legislative-services/Bylaws/20M2001-WasteAndRecycling.pdf>>>.

²² MGA, s 616 (b)(iii) and (iv).

²³ AR 192/96.

²⁴ EPEA, RSA 2000, c E-12.

²⁵ SA 2016, c C-16.9.

²⁶ SA 2003, c C-16.

²⁷ AR 255/2017.

²⁸ *Ibid*, ss 1(1)(f) and (j), and 29(1)(a).

elements of LFG. Although biomass methane emissions could be regulated under the CCIR, that regulation aims at large emitters (100,000 tonnes + of regulated emissions a year) thus leaving room for municipal regulation of LFG under that threshold. Recall that a bylaw more strict than provincial regulation may be valid under *Spraytech* provided that an operator can abide by both the provincial and municipal regulation and the bylaw does not frustrate the purposes of the provincial legislation.

- Under section 619 an authorization “granted by the [Natural Resources Conservation Board, Energy Resources Conservation Board, Alberta Energy Regulator, Alberta Utilities Commission] ... prevails ... over any statutory plan, land use bylaw, subdivision decision or development decision ... or any other authorization under ... Part [17]” The section directs a municipality to approve an application before it to the extent that it complies with such provincial authorization. Thus, section 619 contains an express legislative test, overriding *Spraytech*.

To illustrate, suppose an operator obtained an EPEA authorization for a landfill on condition that it would emit no more than X tonnes of LFG per year. The operator also required a development permit under Greensboro’s LFG Bylaw which, say, permitted no more than X-Y tonnes emissions per year, an amount less than X. Does section 619 impact the application of the Bylaw? No, simply because section 619 does not apply to EPEA authorizations.²⁹ The situation would be different, if the, say, NRCB issued the provincial authorization, in which case the higher maximum would prevail.³⁰

- Under section 620 a condition of an authorization “granted pursuant to an enactment ... prevails over any condition of a development permit that conflicts with it.”

Consider the scenario discussed under section 619. Under section 620 an EPEA authorization would prevail over Greensboro’s development permit condition. Assuming that “prevails over” means overrides or supersedes³¹ then the permit’s lower emission limit would not be operative.

Section 620, however, does not deprive municipalities of development permit authority when a provincial authorization is required.³² Municipalities retain that authority and may include conditions that do not conflict with the provincial authorization. Indeed, there is case authority that a municipality may even reject an application for a permit for a provincially authorized development without violating section 620, since a refusal does not involve conditions.³³

- Under section 622 “Every statutory plan, land use bylaw and action undertaken pursuant to ... Part [17] by a municipality ... must be consistent with the land use policies”

²⁹ *Northland Material Handling Inc. Parkland (County)*, para 47, 2012 ABQB 407.

³⁰ The Court, *ibid*, states ““The Legislature clearly intended to make a distinction between environmental legislation on the one hand, and certain other types of regulation on the other.”

³¹ As suggested in *ibid*, and in the SDAB decisions in the following note.

³² *SDAB2015-0007 (Re)*, 2015 CGYSDAB 7 and *SDAB 2015-0007 (Re)*, 2015 CGYSDAB 007.

³³ *Northland Material Handling Inc. . Parkland (County)*, *supra* note 29.

established by Cabinet. Where there is an *Alberta Land Stewardship Act*³⁴ regional plan applicable to an area, then all municipal bylaws, policies, plans etc. must be consistent with the plan.

Currently, provincial land use policies and regional plans do not seem to restrict municipal authorities with respect to managing GHG emissions, so the Greensboro LFG Bylaw would pass this test.

Charter Cities

How do Alberta's charter cities, Edmonton and Calgary (E&C), fare with respect to the case study? Recall that charter cities' legislation may modify general municipal legislation as it otherwise applies to municipalities, and provide additional authorities.

They fare very well when it comes to regulation and management of GHGs, including those in LFG. Here is why:

- The E&C charters add to the general jurisdiction to pass bylaws (s 7 MGA):
(h.1) the well-being of the environment, including bylaws providing for the creation, implementation and management of programs respecting any or all of the following:
... (ii) climate change adaptation and greenhouse gas emission reduction;³⁵
- The E&C Charters require the cities to establish climate change mitigation and adaptation plans.³⁶

The express bylaw making power to implement and manage GHG reduction programs makes it clear that a LFG Bylaw is within bylaw making authority. However, a charter city is still subject to the limitations in sections 13, 619, 620, or 622 of the MGA.

D. OTHER MUNICIPAL CONTRIBUTIONS TO GHG REDUCTION

Sections A-C set out a method to determine whether a municipality may directly regulate GHG emissions by, for example, setting emission limits on developments. The sections shows that in Alberta, at least, municipalities likely have power to regulate GHGs provided that provincial (or federal) legislation or authorizations does not limit, prevail over, or conflict with municipal regulation and the municipal regulation does not frustrate the purpose of the other jurisdiction's laws. But municipalities can contribute to climate change mitigation otherwise than by direct regulation of emissions. This section describes just a few of such GHG reduction approaches:

³⁴ *Alberta Land Stewardship Act*, SA 2009, c A-26.8.

³⁵ *City of Edmonton Charter, 2018*, AR 39/2018, s 4(2)(ii), and *City of Calgary Charter, 2018*, AR 40/2018, s 4(2)(ii).

³⁶ *Ibid*, Part 16.1, both regulations.

- The Federation of Canadian Municipalities (FCM) reports that “159 GHG reduction municipal initiatives “have been approved for funding [totaling over 12 million dollars] through three infrastructure programs funded by the Government of Canada.”³⁷
- Municipalities use land use planning, subdivision and development powers to manage and reduce GHG emissions. E.g., in 2016 Vancouver’s city council approved the Zero Emissions Building Plan, “a phased approach to aggressively combat and reduce carbon pollution in Vancouver by transitioning to zero emissions for most new building types by 2025.”³⁸
- Municipalities develop and carry out climate change mitigation and adaptation plans. The Region of Waterloo (Waterloo, Kitchener, and Cambridge) is a good example. As a result of its plans, together with other initiatives:
 - Residential growth has largely converted from urban sprawl to growth in already built up areas, reducing the need for additional infrastructure and associated upstream and downstream GHG emissions.
 - Implementing their Water Master Plan has resulted in decreasing annual water consumption by 5 billion liters (over 10 years), and reducing GHG emissions by 535 tonnes.
 - The Region met and increased its GHG reduction targets (from 10% reduction below 2009 levels to 25%).
 - By switching to LED traffic signals the Region has reduced both costs and GHG emissions.³⁹
- Municipal energy incentive programs for residents and businesses encourage use of solar or wind to reduce GHGs.⁴⁰ Provincial or federal programs can do this in respect of municipalities.⁴¹
- Through increased public transit⁴² and bike lanes⁴³ municipalities contribute to GHG emissions reductions.

³⁷ FCM at << <https://fcm.ca/home/media/news-and-commentary/2018/communities-across-canada-receive-support-for-infrastructure-planning-green-innovation-and-climate-change-resiliency-initiatives/backgroundunder.htm>>>.

³⁸ FCM, National Measures Report 2018: <<https://fcm.ca/Documents/reports/PCP/2018/pcp-national-measures-report-2018-en.pdf>> at 14. The FCM is an organization of nearly 2000 Canadian municipalities representing 91% of the Canadian population: << <https://fcm.ca/home/membership.htm>>>.

³⁹ FCM, “FCM Green Champions Awards” (November 15, 2016), <<https://fcm.ca/home/awards/fcm-green-champions-awards.htm>>.

⁴⁰ E.g. the Medicine Hat, Alberta “Solar Electric Incentive Program ... offers rebates to residential utility customers to purchase and install solar PV systems on their homes”: <https://www.medicinehat.ca/government/departments/utility-sustainability/hat-smart/rebates/solar-electric-2358#1>>>.

⁴¹ E.g. the Alberta Municipal Solar Program provides “financial incentives to Alberta municipalities who install grid-connected solar photovoltaics (PV) on municipal facilities or land”: << <http://www.mccac.ca/programs/AMSP>>>. Taking advantage of this, Calgary added more “than 2.3 megawatts of energy capacity to six public buildings using solar power” ... “offsetting more than 47,500 tonnes of greenhouse gas emissions”: <https://www.alberta.ca/release.cfm?xID=48860B36563C9-D0DA-D755-D61464CFBDCDC2A>>>.

⁴² See the Canadian Urban Transit Association, “6 Top Transit Projects for 2018”: << <http://cutaactu.ca/en/blog-posts/6-top-transit-projects-2018>>>.

⁴³ Hilary Angus, in “Building Bike Lanes Could Slow Climate Change” July 5, 2016, News Advocacy: <<https://momentummag.com/building-bike-lanes-slow-climate-change-new-study-finds/>> quotes a McGill study that notes a reduction “of close to 2% in GHG emissions ... for an increase of 7% in the length of the [Montreal] bicycle network.”

Although these initiatives are mainly driven at the municipal level, other levels of government have roles in encouraging and even requiring them. E.g., provinces can legislatively mandate that municipalities develop and carry out GHGs reduction plans, as evidenced by the Edmonton and Calgary city charters, mentioned earlier.