



BILL 27:

OPPORTUNITIES AND STRATEGIES FOR GREEN ACTION BY BC LOCAL GOVERNMENTS

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This paper has been written to contribute to the discussion concerning local governments and their efforts to build more sustainable communities. The specific goal is to provide some analysis and practical guidance regarding how local governments may use the legal tools available to advance green initiatives.

The focus is Bill 27, 2008, the “Green Communities” legislation that amended the *Local Government Act* and *Community Charter* in May 2008. The paper looks at how decision-makers may use the powers extended by recent legislative amendments, together with existing powers, to strengthen sustainability efforts. A subsidiary goal is to alert decision-makers to the new requirements instituted by the amendments.

The paper is organized by Green Action topic and highlights **New Requirements** and **New Opportunities** under each topic. The Green Action topics are:

- A. Global Warming Greenhouse Gas (GHG) and Energy Reduction;
- B. Climate Change Adaptation;
- C. Water Sustainability; and
- D. Sustainable Land Use.

For each **New Requirement** or **Opportunity**, the paper also provides **Strategies** for overcoming challenges and making the best use of the powers for achieving each of the Green Action objectives.

Note that because the paper has been organized by topic, instead of legislative power, many of the powers created under Bill 27 are discussed in more than one section with a focus specific to the Green Action then under discussion (GHG or energy reduction, adaptation, water or land use). While this results in some repetition of the discussion of legislative powers, organizing the paper by Green Action topic rather than by legal power has facilitated a more intuitive (and in-depth) discussion of each of the Green Actions as well as a canvassing of the suite of powers and strategies available to advance each of the Actions. The paper also strives to identify the many cross-cutting opportunities and the important relationships among the Actions.

A. Global Warming GHG and Energy Reduction: What actions are now required or possible?

Over the past several years, BC local governments have demonstrated significant interest in taking action to reduce global warming. While requirements for local government action do now exist in law, many local governments have, quite apart from (and many in advance of) that, publicly committed their local government to action by voluntarily signing the BC Climate Action Charter¹

¹ Signing the BC Climate Action Charter commits a local government to: 1) being carbon neutral in corporate operations by 2012, 2) measuring community-wide emissions, and 3) developing compact, complete communities.

or signing up for Federation of Canadian Municipalities (FCM)/International Council for Local Environment Initiatives (ICLEI's) Partners for Climate Protection Milestones Program.²

The two main focal points for local government action on global warming are:

- a) Changing practices with respect to civic-owned buildings and operations (corporate operations),³ and
- b) Changing regulations that govern land use, and privately-owned facilities and operations and their associated emissions (community-wide emissions).⁴

New Requirement for Global Warming GHG and Energy Reduction Action: As a result of Bill 27 amendments, local governments are now required to institute, in the Regional Growth Strategy (RGS) (by 2011) and in the Official Community Plan (OCP) (by 2010), greenhouse gas emission reduction targets, and actions and policies for achieving those targets.⁵

At a minimum, this new law should ensure that all BC local governments will establish GHG emission reduction targets, and actions and policies for achieving them.

Recognizing that challenges may impede local governments from complying with this requirement, we recommend the following strategies to overcome some of the challenges.

Strategies:

- Compliance with this requirement involves making amendments to the OCP and RGS. Processes established in the *Local Government Act* (LGA) will need to be followed (see Part 25, Division 2 of the LGA for procedures respecting RGS adoption and amendment, and Part 26, Divisions 2 and 3 of the LGA for procedures respecting OCP adoption and amendment).
- Local governments will need to inventory community emissions and establish ambitious, yet realistic, reduction targets. Local governments may take advantage of resources that are available to help with inventorying emissions and setting emissions targets. For example, the province has provided draft 2007 emissions inventory data for regional districts and municipalities (see the Community Energy and Emissions Initiative, online at <http://www.toolkit.bc.ca/ceei>). One of the goals of this initiative is to provide a standardized approach to emissions inventory activities. The current reports cover four sectors: buildings, on-road transportation, solid waste and deforestation.
- Achieving more compact, complete communities through better land use planning is the objective.

² <http://www.sustainablecommunities.fcm.ca/partners-for-climate-protection/>

³ Corporate emissions reductions are the focus of the *voluntary* Climate Action Charter.

⁴ Community-wide emissions are the focus of the legislated targets established by the *Local Government Act* amendments described below.

⁵ Amendments are found in sections 850 and 877 of the *Local Government Act*. Note that the Act states that the RGS should establish GHG reduction targets "to the extent that these are regional matters." It has still not been established what this phrase means, or whether this will create a loophole.

- If your regional district has a regional growth strategy, consider striking both internal (municipal) and regional working groups early on, to identify what sort of targets you want to establish, both as member municipalities, and as a region, and how you might work collaboratively on those targets with other member municipalities towards achieving identified goals.⁶
- Establish targets and an accountability plan to ensure that action towards those targets advances. You should expect to need to designate a staff person or committee to the task of coordinating and leading the achievement of agreed-upon actions.
- Consider mechanisms for making your policy and actions more transparent and more accountable. Solicit the public's help for ideas on ways to improve transparency.
- Plan to build capacity. Seek out funding for your local government and/or the regional working group early on, to obtain needed expert advice and assistance for determining what will constitute ambitious, yet realistic, targets and what actions and policies will help you to get there. Funding assistance may be available from the Green Municipal Fund. (Note that for local governments who have signed the Climate Action Charter and thereby committed to becoming carbon neutral by 2012, the provincial government has committed to offsetting any carbon tax paid by a municipality.⁷)
- Consider adopting life-cycle costing or full-cost accounting (to account for ecosystem costs and services etc) as a means for integrating your goals into the decision framework and using a market-based mechanism to encourage decision-making in the desired direction. This would also be consistent with the Vancouver Valuation Accord, signed by Premier Campbell in March 2007.⁸
- Use training and other educational outreach to reach constituent communities and to support goals.
- Consider adopting complementary policies and bylaws, for example:
 - A bylaw under section 904 of the LGA, establishing a density bonus for green buildings;
 - A revitalization tax exemption program bylaw under section 226 of the *Community Charter* providing a temporary tax exemption for development of a certain density located in a targeted centre or encouraging infill development;
 - A bylaw protecting heritage buildings, recognizing the energy embodied in them;

⁶ Because the OCP targets have been set up to be required to be established first, the regional target (which all member municipalities must align themselves with) is unfortunately likely to gravitate to the lowest common denominator.

⁷ This is the Climate Action Revenue Incentive Program grant administered by the Ministry of Community Development. For further information on the program, please contact Talitha.Soldera@gov.bc.ca. The grant to eligible local governments is equal to 100 per cent of the carbon tax paid as a direct expenditure, and Carbon Tax Calculation Form must be submitted in accordance with Ministry guidelines and deadlines.

⁸ An example of full costing being implemented legislatively is Ontario's *Sustainable Water and Sewage Systems Act, 2002, S.O. 2002, c. 29*, not yet in force, which requires full-cost reporting on the provision of water services. It provides, at section 3(7): "The full cost of providing the water services includes the source protection costs, operating costs, financing costs, renewal and replacement costs and improvement costs associated with extracting, treating or distributing water to the public and such other costs as may be specified by regulation."

- A bylaw establishing a local service area, for implementing a district heat system (e.g. geothermal or sewer heat recovery);
- Bylaws and policies directed toward achieving more sustainable transportation (e.g. road, sidewalk and bikeway standards, bus or car-pool programs, etc.)
- RGS, OCP and other plans, policies, bylaws and actions should promote and facilitate waste reduction and integrated resource recovery⁹ (e.g. capturing, diverting or reusing liquid and solid “waste streams”) and eco-industrial networking¹⁰ principles. The planning and development approval process needs to have legal and financial mechanisms in place to ensure resource recovery is incorporated into plans and development. Ideally this would draw upon an audit and business-casing of potential integrated resource recovery options (e.g. waste and energy “streams”) for the community.
- Bylaws or policies in support of increasing the number of trees or tree canopy can both act to sequester carbon as well as reduce energy and water consumption
- For optimal results, consider tackling *both* community-wide targets (legislated) and corporate emissions (voluntary), by incorporating actions and policies that cover a range of government and private activities:
 - Operations;
 - Procurement;
 - Civic buildings and infrastructure;
 - Land use plans and development standards;
 - Transportation plans; and
 - Waste/integrated resource management.

New Opportunity for Global Warming GHG and Energy Reduction Action: Local governments now have the authority to designate a development permit area (DPA) for the purpose of establishing an objective to promote the reduction of greenhouse gas emissions.

Further to amended sections 919.1 and 920(10.1) of the *Local Government Act*, development permits may now be established to:

- Conserve water,¹¹
- Conserve energy, or
- Reduce greenhouse gas emissions,

⁹ For more information on integrated resource recovery, see *Resources from Waste: A Guide to Integrated Resource Recovery* (BC Ministry of Community Development, 2009) at http://www.cd.gov.bc.ca/lgd/infra/resources_from_waste.htm.

¹⁰ Eco-industrial networking means using strategies in locating and operating businesses and other activities to find efficiencies through co-location and shared use of infrastructure, capturing waste stream outputs as inputs, etc. For more information on eco-industrial networking in a municipal context, see Greater Sudbury, Ontario’s strategy described in www.ecoindustrial.ca/projects/Sudbury%20EINStrategy_ExecSum.pdf.

¹¹ The use of DPAs to promote conservation of water is discussed in detail in Section C, below.

and the conditions attached to such development permits can include requirements respecting:

- Landscaping;
- Siting of buildings and other structures;
- Form and exterior design of buildings and other structures;
- Specific features in the development; and
- Machinery, equipment and systems external to buildings and other structures.

Further to new section 920(10.2), development permit conditions may also establish restrictions on the type and placement of trees and other vegetation in proximity to the buildings and other structures in order to provide for the conservation of energy or the reduction of greenhouse gas emissions.

- Note that the new DPA powers are not limited to multi-family dwellings (as some of the other DPA purposes are). The DPA guidelines would therefore apply to single-family dwellings within the DPA area as well as to other development within the area. This opens up significant opportunities to shape single-family dwelling development that have not previously been available.

Strategies:

- Further to the general rules on DPAs, DPAs must be designated in the OCP, and DPA guidelines must be included either in the OCP or in a zoning bylaw, in order for the DPA to be rendered effective. The DPA guidelines establish the special conditions or objectives that justify the designation, as well as the manner by which special conditions or objectives will be addressed.
- Given an objective of GHG and energy reduction and given the possible scope for development permit conditions, a number of actions are possible using this power. DPA guidelines for GHG and energy reduction might specify, e.g. that:
 - A certain level of GHG emissions reduction is to be achieved as an objective within the DPA and that the development might use whichever technology it wishes to achieve that objective (e.g. permit holder might use renewable energy systems or other proven green technologies). (Because the technology is not prescribed, this does not run counter to restrictions on local government powers over building standards.) Local government might suggest that levels be achieved using proven innovative green technologies.
 - Buildings are to be oriented in relation to sun or wind, to reduce energy consumption and associated GHG emissions and capture sun energy (passive solar).
 - Landscaping shall take account of sun, shade and climate, to maximize energy reduction and reduction of GHG emissions.
 - Certain exterior design features may be considered desirable, e.g.:
 - colours, to either absorb or reflect sunlight,
 - higher window head height to maximize daylight penetration into room,
 - deep overhangs for sun and shade.

- District heat systems or geothermal systems shall be employed within the DPA as “systems forming part of the development.”
- Vehicle parking requirements are reduced (or stated as a maximum), or that parking is required for car cooperatives or bicycles.
- Water conservation measures (see Section C) will also have a secondary benefit of saving energy, given that moving water from one location to another consumes energy.¹²

New Opportunity for Global Warming GHG and Energy Reduction Action: Local governments now have the authority to enforce the new provincial Building Code standards concerning energy efficiency

This past fall (2008), the province implemented new water and energy conservation standards for new construction and renovations. The new *Building Code* standards, set out under the *Code's* new *Part 10 – Energy and Water Efficiency*, came into effect on September 5, 2008, and apply to all new construction and building renovation permit applications submitted on or after that date.

Strategies:

The *Building Code*, which is a regulation under the *Local Government Act*, has the force and effect of a duly enacted bylaw. Local governments in BC are authorized to enforce the Code¹³ by passing building regulation bylaws. Bill 10, the *Housing Statutes Amendment Act*, enables local governments to enforce the new Part 10 requirements. Whereas municipal councils were previously limited to enforcing building standards in relation to “health, safety or protection of persons or property”, councils are now additionally authorized to exercise authority in relation to the conservation of energy or water, or the reduction of greenhouse gas emissions.

Practically speaking, what this means is that existing or new efforts to implement and enforce a building permit system should lead to energy (and water) efficiency gains for the municipality, compared to the relatively inefficient usage that was the standard under the old Code. Such gains may provide an additional incentive for a local government to undertake Code enforcement activity.

- Related to building standards, landscape standards may also have a significant impact on energy consumption and GHG emissions as well as water conservation and related energy savings (see footnote 13 below).
- Similarly, where rainwater is managed onsite, it reduces the burden on drainage infrastructure and operation costs and energy needs.

¹² For further information on the significant linkages between water conservation and energy and GHG emissions reductions, see Carol Maas, 2009 “Greenhouse Gas and Energy Co-Benefits of Water Conservation” (Polis Project on Ecological Governance, 2009) at <http://www.waterbucket.ca/gi/index.asp?sid=9&id=431&type=single>; and Thirlwell et al., “Energy-water Nexus: Energy Use in the Municipal, Industrial, and Agricultural Water Sectors” at policyresearch.gc.ca/doclib/Thirlwell_energy_water_nexus.pdf.

¹³ Enforcement action is not mandatory, but is merely authorized. See e.g. *Community Charter*, section 8(3)(1).

- It is also possible to pass complementary bylaws associated with business operations, such as a bylaw requiring lights to be turned off when businesses are shut down.

New Requirement for Global Warming GHG and Energy Reduction Action: Bill 27 imposes a DCC exemption for small unit housing, defined as self-contained dwelling units with an area of 29 square meters or less. (Section 933(4.01) of the LGA)

See Part D – Sustainable Land Use Action for a discussion of this tool.

New Opportunity for Global Warming GHG and Energy Reduction Action: Local governments now have the authority to waive or reduce development cost charges (DCCs) for categories of development that include: (1) a subdivision of small lots that is designed to result in low greenhouse gas emissions, or (2) a development that is designed to result in a low environmental impact. (Local Government Act, section 933.1)

Strategies:

- A bylaw or regulation under this section must:
 - Define what will be an “eligible development” within the categories mentioned,
 - Further define the amount (or rate) of reduction offered for an eligible development, and
 - Set the requirements for obtaining a waiver or reduction.
- Note that the authority to offer a reduction or waiver is an exception to the normal prohibition against assistance to business, established under the LGA and CC.
- There is potential to be creative in crafting an incentive. For example, given that adherence to the standard is entirely voluntary, establishing the following eligibility criteria for a “development designed to result in low environmental impact development” may be authorized:
 - X % of materials are sourced locally [reducing transportation impacts]
 - Green roofs on [prescribed class of] buildings
 - Re-use of existing structures, materials or water
 - Meets X green building standard
 - Meets X energy or water efficiency standard
 - Provides district heating
 - Is close to public transit, provides X number of shared bikes, provides X number of shared cars, etc
 - Is mixed use and provides opportunity to live/work/shop all on-site
 - Etc.
- One of the concerns that local governments have raised regarding the exercise of this new authority is the fact that it results in a loss of much-needed DCC income – which raises a legitimate question for local governments on how they will compensate for that loss of revenue. The province has responded to this concern by noting that DCCs are an optional vehicle for local government revenue and that the amendments merely provide more flexibility in using the DCC tool. The province has further noted that local governments

may still raise funds to cover costs otherwise covered by DCCs, through other means, such as user charges.

- One means for managing an anticipated reduction in DCC revenue would be to conduct some planning to estimate whether the small lot development or low environmental impact development will result in lower development servicing costs, and if so, to quantify that anticipated reduction, and then determine how to capture any needed revenue shortfall through other means.
- Note that under the law governing DCCs, DCCs may be imposed to assist the local government with the cost of providing the service to the development in question, whether directly or indirectly. Particularly in situations where DCCs reflect only minimal cost-recovery in respect of the provision of a service, it may be¹⁴ legitimate for a local government when establishing a DCC reduction or waiver bylaw to simultaneously review its DCC rates bylaw and set rates in a manner that more fully cost recovers for any non-exempt additional capital cost burden [demand] on the (water, sewage, drainage, roads) services, whether existing or new.
- DCC-exempt properties could, by bylaw, be made subject to an equivalent user fee instead¹⁵ of a development cost charge. However, while this takes the burden off the developer, it places the burden on future residents of the development.
- According to best practice, DCCs should also allocate fairly between new growth and existing population – i.e. some costs can be paid by existing rate payers.

¹⁴ Note it is not clear whether enough flexibility exists to structure DCCs in this way and some direction from the courts may be required to clarify legality. While this would be inequitable as between exempt and non-exempt properties, it would seem the legislative amendment directly authorizes this very kind of inequity. Similarly, such a DCC should be construed as a charge and not as a tax, so long as it relates, directly or indirectly, to cost recovery in respect of the capital costs associated with servicing the property charged.

¹⁵ Section 363 of the *Local Government Act* provides: **363** (1) A board may, by bylaw, impose a fee or charge payable in respect of (a) all or part of a service of the regional district, or (b) the use of regional district property.

- Bear in mind that the provincial DCC Best Practices Guide¹⁶ says that the guiding principles of good DCCs are:
 - integration (with land use plans, community plans and financial and infrastructure strategies)
 - benefiter pays
 - fairness and equity (distribute costs between existing and new development)
 - accountability
 - certainty
 - consultative input.
- Note that DCCs can be municipality-wide or area-specific.
- DCC development should be transparent and accountable.
- The assist factor¹⁷ must be at least one percent of the service costs.

New Opportunity for Global Warming GHG and Energy Reduction Action: Local governments now have authority to use the Off-Street Parking Reserve Fund for Alternative Transportation Infrastructure

Section 906 of the *Local Government Act* allows owners or occupiers of land or buildings who are required under a bylaw to provide a certain number of off-street parking spaces or loading spaces, to instead pay that money into an off-street parking reserve fund.

However, recent amendments to section 906 enable local governments to use off-street parking reserve fund money for the provision of “transportation infrastructure that supports walking, bicycling, public transit or other alternative forms of transportation.” This provides new flexibility for that fund.

Strategies:

- Given this new authority to use the parking reserve fund in this manner, local governments may wish to consider establishing a “sustainability policy” that stipulates that one-half or more of all new off-street parking funds will be used for the sustainable transportation infrastructure identified in subsection 906(7)(a)(ii), according to its priorities and consistent with the expenditures authorized for such a reserve fund.
- An additional, related strategy would be to adopt a bylaw stipulating a *maximum* on the amount of off-street parking to be provided rather than a minimum amount, or alternatively or in addition, to require a certain level of alternative transportation infrastructure to be provided in all new developments. These options will not only promote the use of alternative transportation modes but also reduce the likelihood of neighbourhood

¹⁶ *Development Cost Charge Best Practices Guide* (BC Ministry of Community Services, 2005), at pp. vi-vii.

¹⁷ “The assist factor is the contribution that the existing municipality and/or regional district must provide to help growth in meeting its service cost obligations. The assist factor is over-and-above the portion of the infrastructure cost that is allocated to the existing population. Under the *Local Government Act*, the assist factor must be at least one percent.” *Development Cost Charge Guide for Elected Officials* (BC Ministry of Community Services, 2005), at p. 14.

business development proposals being refused on the grounds that there are an “insufficient” number of parking spaces for cars.

- Other related alternative transportation strategies include:
 - Establishing policies to ensure that all new development, whether residential or commercial, has public transit and other alternative transit options available to serve it (e.g. avoiding industrial parks that are only accessible by car).
 - Embarking on a retrofit program, to incorporate sustainable transportation modes into existing developments.
 - Concentrating new development around transportation hubs or centres, and ensuring sufficient densities to support the transportation infrastructure.
 - Amending zoning bylaws to prohibit drive-through businesses, such as drive-through restaurants, dry cleaners, beer stores, etc.
 - Providing bike commuting infrastructure, such as bike lanes and bridges, traffic light priority for cyclists, traffic lights timed to match cyclist speed, bicycle lock up and shower facilities, etc. Require bike facilities in multi-family and commercial development and loaner bicycle fleets at all hotels.
 - Working with public transit authorities to come up with strategies to encourage transit use and discourage car use, such as establishing dedicated bus lanes, “ride for free” zones or reduced fare neighbourhoods; increasing the price of parking meters, encouraging car-pooling and giving priority parking to bicycles, van-pool vehicles and hybrid vehicles. Aim to reduce the number of two-car households and increase the number of no-car households. Educate people on the energy, GHG and health benefits of walking and cycling instead of driving.

B. Climate Change Adaptation: What actions are now required or possible?

No New Requirement for Climate Change Adaptation Action: There are no requirements concerning adaptation.

This is a missed opportunity in the Bill. It would have been commendable if the recent legislative amendments had established an explicit requirement for adaptation targets to be included in the OCP and RGS. Unfortunately, they did not.

Opportunity for Climate Change Adaptation Action

Although Bill 27 does not provide new opportunities explicitly directed toward adaptation, the Bill does provide some opportunity for action on this issue. For example, Bill 27 does provide some new powers and opportunities related to water conservation. Given that our changing climate is leading to reductions in the water supply, and even sometimes to drought, water conservation opportunities are highly relevant to climate change adaptation action. For details on which water conservation actions the Bill enables, please refer to the Section C – Water Sustainability Actions.

Second, quite apart from the legislative amendments, local governments already enjoy a number of opportunities for taking action on adaptation. The strategies outlined below are just a few of the possibilities. Action and accountability are the priorities.

Strategies:

- The occasion of updating a Regional Growth Strategy or an Official Community Plan, specifically to add policy regarding climate change greenhouse gas emissions reduction targets – also provides a timely opportunity to insert parallel policy regarding climate change adaptation targets and measures.
- For ensuring implementation, councils or boards may wish to consider allocating budget to hire a dedicated staff person to watchdog and steward climate change adaptation objectives.¹⁸ To maximize the chances of success, this staff member should be given visible support from key elected representatives/leaders.
- Prudent¹⁹ local governments will incorporate local climate change impact adaptation considerations into the following planning and decision-making processes:
 - Liquid waste management plans, plan updates and other drainage and sewerage plans,
 - Infrastructure planning (rain and drinking water infrastructure, roads and other utilities, etc.),
 - Energy plan updates,
 - Subdivision and development standards bylaw update,
 - Ecosystem mapping and updates to zoning (e.g. for environmentally sensitive areas, flood risk zones, other hazard zones, etc.), and
 - Operations, including emergency response planning (e.g. to heat wave or severe wind storm).

¹⁸ See for example, the Corporation of Delta, which has not only established a Climate Change Action Committee and an Office of Climate Action and Environment, but has also hired an Energy Efficiency Consultant/Coordinator. Both Vancouver and Victoria have established and staffed sustainability offices.

¹⁹ It is possible that a failure by a local government to consider the potential future impacts of climate change or global warming could give rise to a liability at some point in the future.

C. Water Sustainability: What actions are now required or possible?

No New Requirements for Water Sustainability Action: There are no new requirements for action on water sustainability.

In light of the Province's recent *Living Water Smart Plan*, which establishes many goals²⁰ for water sustainability, the fact that the Green Communities legislative amendments did not prescribe any *imperative* action for local governments to increase water sustainability seems to have been a missed opportunity. Local governments still have an array of powers with which to address water sustainability issues but it is disappointing that senior government was not explicit in requiring action in this important area.

The Living Water Smart Plan, however, does state that in the future “adapting to climate change and reducing our impact on the environment” will be a condition for receiving provincial infrastructure funding. This suggests that at some point in the future, a failure to implement sustainable approaches may lead to funding being declined. Therefore, while senior government may not be legislating sustainability, funding criteria may in some cases advance the sustainability agenda.

New Opportunity for Water Sustainability Action: new “green” Building Code may be enforced

The new “green” *Building Code* Part 10 establishes new water efficiency standards for new building construction or major renovations. The Code applies like a bylaw in local governments across BC, but as was noted *infra*. BC local governments are not required to take enforcement action to uphold the Code's provisions. They are *authorized* to do so but are not *required*.

The fact that the Code now establishes water efficiency standards means that a decision to enforce the Code is likely to result in water conservation gains for the community. If water is a concern for your community (and it should be for every community), a straightforward way to make water sustainability gains is therefore to establish a building permit system.

Strategies:

- For smaller local governments that would like to embark on a building permit system but are concerned about their capacity to implement such an inspection and approval system, keep in mind that all of the building inspection expertise need not be employed “in-house”. The LGA enables local governments to rely on certifications from qualified professionals (professional engineers and architects) that legislated building standards have been met.²¹

²⁰ Living Water Smart Plan goals include reducing municipal water use by 50% and improving stream health.

²¹ Section 290 of the *Local Government Act* provides immunity from liability for a local government that relies on a certification from a professional engineer or architect that a development has been built in accordance with the Building Code or another prescribed enactment, provided there was no knowledge on the part of the municipality that the person providing the certification was not, at the time of certification, registered as a professional engineer or architect under provincial legislation. See also section 55 of the

- Recent legislative amendments also now authorize professional organizations to establish specialized qualifications for their members, e.g. “water efficiency engineer”.²²
- Before embarking on a building permit system that relies on outside expertise, local governments should consider liaising with professional organizations to determine the organizations’ member capacity to fulfill local government requirements for professional sign-off. Such consultation is likely also to increase both parties’ understanding of the opportunities to certify that buildings are meeting the stipulated standard(s).
- The Code’s new “green” provisions could provide a convenient “communications theme” for launching a complementary initiative related to making development activities or public water use more sustainable,²³ for example:
 - Establishing a minimum topsoil requirement for new building sites;
 - Instituting green infrastructure design requirements, such as reduced impervious surface area, onsite rainwater management using infiltration and detention technology, rain gardens, narrower roads and use of permeable surfaces/pavers, etc.;
 - Implementing irrigation and watering bylaws; and
 - Launching universal water metering and consumption-based pricing (i.e., the more the consumer uses, the higher the cost per litre).
- To increase the chances that a green infrastructure program will be delivered in the way that it was planned, local governments should work to establish good internal communications and administrative processes to ensure that all of the local government’s staff or departments have similar expectations related to the shape of development. The building inspection department in particular, is a key department to ensure that appropriate inspections are conducted throughout the process, to verify that the green infrastructure installations that were promised are indeed delivered. Note that further to their licensing and standards authority under section 15 of the *Community Charter*, a council may by bylaw establish occupancy permit terms and conditions related to the installation of green infrastructure elements, against which building inspectors may make inspections to verify compliance.

Community Charter which allows a council to by bylaw require a building permit applicant to provide the municipality with the certification of a qualified professional, as defined in that section.

²² See e.g. section 24(2) of the *Architects Act* and section 10(1) of the *Engineers and Geoscientists Act*, which now respectively permit designation of specialized areas of architecture, professional engineering or professional geoscience, and establishment of qualification and certification requirements related to such specialties. See also section 55 of the *Community Charter*.

²³ E.g. by reducing demand, reducing runoff into pipes and streams, encouraging infiltration and preserving and maintaining abundant groundwater and clean stream water.

New Opportunity for Water Sustainability Action: Local governments are now empowered to designate a development permit area having the purpose of the establishment of objectives to promote (among other things) water conservation.

According to the new authority, development permits for land may include requirements respecting:

- (a) Landscaping,
- (b) Siting of buildings and other structures,
- (c) Form and exterior design of buildings and other structures,
- (d) Specific features in the development, and
- (e) Machinery, equipment and systems external to buildings and other structures

in order to provide for energy and water conservation and the reduction of greenhouse gas emissions.

The authority also exists to establish restrictions on the type and placement of trees and other vegetation in proximity to the buildings and other structures in order to provide for water conservation.

Strategies:

Given the water conservation objective and the new statutory parameters for guidelines, the question then becomes, what sort of water conservation actions might be sought using development permit guidelines? The following might be considered:

- Establishment of a water conservation target to compare to “business as usual” water use (and leave it up to the proponent to determine how to meet the target using proven technologies or strategies);
- Landscaping using xeriscaping²⁴ principles;
- Requirement to landscape with trees, to retain moisture;
- Mandatory disconnection of roof leaders and use of rainwater collection systems to capture rain and reuse it for outside watering or irrigation (at minimum);
- Installation of equipment and infrastructure for reuse of treated water (“purple pipe”) on a neighbourhood scale;
- Grey water reuse encouraged;
- Green infrastructure features (i.e., reduce impermeable surfaces, increase infiltration) to encourage recharge of water table and mitigate the urban heat island effect.

²⁴ Xeriscaping refers to the use of native, water conserving or drought resistant plant cover for landscaping, to avoid the need for supplemental watering and thereby promote water conservation.

A compatible policy initiative would be to promote adoption by the region of an ecosystem-based approach to watershed planning and establishment of watershed targets, with guidance that would be linked.

New Opportunity for Water Sustainability Action: Local governments are now empowered to grant a waiver or reduction of development cost charges for an “eligible development” in the category of a development that is designed to result in low environmental impact (Section 933.1 of the Local Government Act)

It is up to the local government to decide how to define “low environmental impact” and to establish the eligibility criteria for such a DCC reduction or waiver. This ability to define those criteria creates an opportunity to provide a DCC reduction or waiver (incentive) for water sustainability action.

Strategies:

The kinds of water sustainability actions that might be encouraged through the use of a DCC incentive include:

- Use of water-saving technologies in building construction – technologies that would otherwise exceed the BC Building Code standards.²⁵
- All the water conservation measures described *infra* with respect to establishing a development permit area with a purpose of establishing a water conservation objective, e.g.:
 - Topsoil layer requirements, or
 - On-site rainwater management and other green infrastructure, e.g. narrower roads or use of pervious paver technologies instead of concrete or asphalt, green roofs, etc.

In addition to the foregoing, one can imagine that the establishment of a DCC incentive could be a way to advance the installation of water conservation systems that have traditionally been more challenging to get uptake on. For example, water reuse is not nearly as widespread as it could be if a program was designed and set up to “shepherd” developers through the approval processes.

An unrelated but *complementary* water sustainability initiative, which reduces loads on sewer infrastructure and lessens the chances of sewer overflows and pollution of our waterways, would be to establish a private sewer lateral bylaw or incentive program, to encourage homeowners to inspect and renovate their private sewer laterals. Local governments could consider establishing a revitalization tax exemption program to provide an incentive for this sort of infrastructure upgrade.

Similarly, other market-based incentives for water sustainability, specifically demand-side management, include metering programs and bylaws where price is correlated positively with

²⁵ Note that establishing voluntary actions that are tied to incentives does not establish local building standards that are more rigorous than the Code. Because compliance is entirely voluntary, there is no violation of the concurrent authority provisions concerning building standards.

volume consumed, i.e. the higher the volume consumed, the higher the unit price per volume. The District of West Vancouver has implemented universal metering with such scaled pricing.

D. Sustainable Land Use: What actions are now required or possible?

New Requirement for Sustainable Land Use Action: Bill 27 imposes a DCC exemption for small unit housing, defined as self-contained dwelling units with an area of 29 square meters or less. (Section 933(4.01) of the LGA)

For units that meet the dwelling area criterion, the developer will automatically receive a DCC exemption in respect of those units only (i.e., not the whole building). Note that it is possible under the legislation for a local government to (within prescribed limits²⁶) establish a unit size larger than the unit size to which this legislated exemption normally applies.

Strategies:

Concerns may arise about the automatic DCC exemption and what implications this may have for municipal revenue and the ability of the municipality to recover its development costs. See *infra* for a discussion of this issue and strategies for using other cost recovery mechanisms (user fees, etc.) to recover servicing costs.

New Requirement for Sustainable Land Use Action: Local governments are now required to institute in the Regional Growth Strategy (by 2011) and in the Official Community Plan (by 2010) greenhouse gas emission reduction targets, and actions and policies for achieving those targets.²⁷

While this requirement explicitly refers to GHG emissions reduction targets, it has close connections with, and implications for, land use planning, given the close correlation between the shape of a community's development and the level of GHG emissions generated.

Strategies:

Please see Section A on the variety of planning strategies that are available to local governments to respond to the challenge of establishing GHG emissions reductions targets.

Sustainable land use planning considerations that are complementary to this requirement include:

- Establishment of an urban containment boundary, to reinforce compact community goals and reduce transportation distances.
- Zoning for compact, mixed-use developments, to reduce development footprints and to reduce the distance to be traveled between home, work and shopping destinations. If zoning

²⁶ Limits may be prescribed by regulation pursuant to section 933(4.2)(d) of the *Local Government Act*.

²⁷ This is an amendment to sections 850 and 877 of the *Local Government Act*.

is not mixed-use, ensuring that adjacent zoning is compatible with reducing the number and length of trips traveled.

- Land use plans that support sustainable transportation modes – public transit, walking, bicycling, and ride-sharing.
- Establishment of zoning and incentives (like a revitalization tax exemption) that support in-fill development, especially for brownfield sites, and in-town redevelopment.
- Establishment of parking maximums instead of parking minimums.

New Opportunity for Sustainable Land Use Action: Local governments may now designate development permit areas for a range of purposes, including establishment of objectives to promote water conservation or energy conservation, or reduction of greenhouse gas emissions.

Amendments to the Act also authorize a range of development permit conditions that may be imposed in order to achieve the DPA objectives.

Strategies:

A local government may in a DPA establish objectives for all three of the new sustainability purposes (water, energy and greenhouse gas emissions) or one only. To ensure land use is as sustainable as possible, there is justification for advancing all three purposes in a DPA, but it may not always be feasible to do so. See sections A and C for ideas on creating guidelines in relation to each of these purposes.

- Note that the new DPA powers are not limited to multi-family dwellings (as some of the other DPA purposes are). The DPA guidelines would therefore apply to single family dwellings within the DPA area as well as to other development within the area. This opens up significant opportunities to shape single family dwelling development that have not previously been available.

New Opportunity for Sustainable Land Use Action: Local governments may now reduce DCCs for “eligible developments” that they define as having “low environmental impact”.

Strategies:

This enabling power is designed to be a flexible tool that local governments may use to encourage the kind of low impact development they want and need, rather than having a senior government define their low impact development priorities.

As was noted in discussions *infra*, this power offers local government significant scope to creatively define eligibility criteria for “low environmental impact” developments. Because the criteria are not mandatory standards (unlike building bylaws, or area-specific standards as in a DPA), the government is not constrained legislatively in what it can solicit or try to encourage, through the offer of such an incentive:

- One can imagine that with an offer of an “eligible development” incentive, developers who are otherwise developing within an “energy conservation”-purposed DPA *might* choose, because of the incentive, to push their development to be a bit more broadly “green”, in order to meet the criteria for a “low environmental impact”-eligible development and to obtain the DCC reduction or waiver. In this way, two of the new tools under Bill 27 might work harmoniously to achieve sustainability outcomes.
- A local government might also wish to target specific low environmental impact objectives. For example, flooding may be a concern, or there may be a specific concern around water supply during anticipated periods of drought. Because local governments define their own eligibility criteria for the program, within the limits of reasonableness the sky is the limit on what criteria may be established.

E. Conclusion

Taken together with existing powers, the Bill 27 amendments to the *Local Government Act* and *Community Charter* provide BC local governments with a range of opportunities for advancing action on community sustainability goals. This paper has reviewed the opportunities and strategies in the following action areas: global warming greenhouse gas and energy reduction, climate change adaptation, water sustainability and sustainable land use. It has identified areas where action is required, as well as opportunities where action would be voluntary. The paper has suggested strategies for advancing action more effectively, and especially recommends the implementation of complementary initiatives to advance goals.