



Advanced Briefing of Options for Advancing Energy Efficiency for New Buildings

Prepared for:
The District of Squamish

Prepared by:
Compass Resource Management Ltd., West Coast Environmental Law,
Holland Barrs Planning Group, Shaun Martin Consulting

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Introduction

- This advanced briefing will prepare stakeholders to participate in the workshop on February 27. A more streamlined version will be presented at the workshop.
- The District of Squamish's Community Energy Plan includes a series of projects to practically reduce energy consumption and GHG emissions over 5-10 years.
- One of the proposed catalyst projects for the Action Plan is the development of an Energy Efficiency Strategy for New Buildings.
- The District commissioned a team of specialized consultants to develop an energy efficiency policy strategy. The development process is broken down into 2 stages. Stage 1 provides an overview of options and recommendations for more detailed analysis. Stage 2 will culminate in an energy efficiency policy (or suite of policies) to advance energy efficiency in new residential, commercial, institutional and industrial buildings.
- The DoS outlined the need for an energy efficiency checklist for new development. The checklist is dealt with separately in this presentation deck.
- The primary objective of this deck is to provide the District of Squamish and its stakeholders with the context, options, and guidance necessary to provide our team with the direction needed to develop an in-depth Energy Efficiency Strategy for New Buildings.



Background

- The District of Squamish is one of 34 local governments participating in the Community Action on Energy and Emissions (CAEE), a provincial initiative intended to advance energy efficiency in buildings.
- The DoS's Energy Efficiency for New Buildings Strategy is intended to help the District of Squamish achieve the following provincially endorsed CAEE targets:
 - Achieve an EnerGuide for New Houses rating of 80 for 100% of new detached single-family and row houses by 2010;
 - Achieve energy performance 25% better than the Model National Energy Code for 100% of new multi-unit residential buildings by 2010;
 - Achieve energy performance 25% better than the Model national Energy Code for 100% of new commercial, institutional, and industrial buildings by 2010.
- Though the focus of this consultation is new buildings, the DoS also adopted targets for municipal buildings



Consultation #1 Methodology

- Explain the provincial policy context municipalities operate within in order to understand the opportunities and limitations for advancing energy efficiency at the municipal policy level. Relevant legislation includes: the Local Government Act, the Community Charter, the BC Building Code, the Energy Efficiency Act.
- Provide overview of draft proposal to add an energy efficiency section to the 2006 BC Building Code.
- Present an overview of what other BC municipalities are doing to advance energy efficiency in new construction.
- Assess the pros and cons of policy instruments well-suited to the District of Squamish.
- Offer a recommendation for moving forward with phase 2 of the energy efficiency strategy.



Context: Legislative Authority

- The Local Government Act, Community Charter and Land Title Act are the main sources of municipal authority in this area. The legislation creates two categories of opportunity for municipalities to advance energy efficient choices in building construction: (1) direct authority over building construction standards and (2) land use planning authority that can influence building choices.
- The BC Building Code governs building standards - the Code in effect applies like a bylaw to all local governments (British Columbia Building Code Regulation (Reg 216/2006) under the LGA). Changes to the Code for both energy and water efficiency are underway (more on this later).
- Direct authority over buildings: in addition to the Code, local governments are given *apparent* authority to prohibit or impose requirements in relation to buildings, however in reality their regulatory authority is quite limited, due to restrictions that reflect the province's desire for a uniform approach to standards that will apply across the province. (Section 8(3) of CC, restricted by s. 9(1)(d) [concurrent authority], s. 53 [health, safety or protection of persons or property] and Buildings and Other Structures Bylaws Reg., BC Reg. 86/2004 under s. 9 CC - limiting to Code-exempt bldgs, without specific approval of Minister)
- Taken together, these statutory provisions mean that for a municipal council to impose stricter standards than the Building Code on Code-regulated buildings (but necessarily limited by section 53 to the sphere of health, safety or protection of persons or property) a council must obtain either the approval of the minister or enter into an agreement between the minister and one or more municipalities.



Context: Legislative Authority (cont'd)

- Opportunity for an energy efficiency bylaw is potentially created by section 692(e) of the LGA, which authorizes the Minister to make special regulations that vary the standards applicable to certain persons, areas, buildings or classes of buildings. A precedent here is the Water Conservation Plumbing Regulation. A couple of municipalities have explored working with the Ministry to develop their own energy efficiency bylaw for buildings (Dawson Creek, North Vancouver) but so far, none has done so. A desire for (and the practicalities of) cross-provincial consistency and predictability are strong barriers. We caution Squamish that this option would be very time consuming and the outcome is beyond Squamish's control.
- Note the City of Vancouver has a unique power among BC municipalities to establish its own energy code for buildings. (Vancouver Charter, s. 306(w)) On September 1, 2004, Vancouver council mandated ASHRAE 90.1 - 2001 for new buildings within City limits.



Context: Legislative Authority (cont'd)

Land use planning authority that can influence building choices: (most ready power for LGs)

- Setting OCP or Regional Growth Strategy policy (Part 26 LGA, ss. 849, 875, 877)
- Development Permit Area Guidelines (LGA, s. 919.1)
- Requiring Building Energy Performance Standards via Rezoning (LGA, s. 895)
- Incentives
- Revitalization Tax Exemption Bylaw (for Energy Efficiency features) (CC, s. 226)
- Density Bonusing (LGA, s. 904)
- Phased Development Agreements (s. 905.1 through 905.5 LGA)
- Heat Loss Calculation for Building / Heating Permit
- Development Permit / Rezoning Energy Efficiency Checklist

Complementing these powers are:

- Covenants (Land Title Act s. 219)
- Imposition of contractual terms (e.g. on municipal land sale RFPs)
- Bonding or security provisions in associated bylaws

- Other provincial legislation that is relevant to energy efficiency in building construction is the Energy Efficiency Act.



Context: Proposed Additions to the Code

- Provincial government recently proposed adding a new section to the 2006 BC Building Code
- Section 10 would include energy and water efficiency requirements for Part 3 and Part 9 buildings. 'Part 9' generally refers to SFD and other residential buildings that are 4 stories or less though there are non-residential buildings that are classified at part 9. 'Part 3' generally refers to high-rise multi-family residential buildings and larger industrial, commercial and institutional buildings.
- The energy-related proposed changes for the Squamish region are:

Part 9

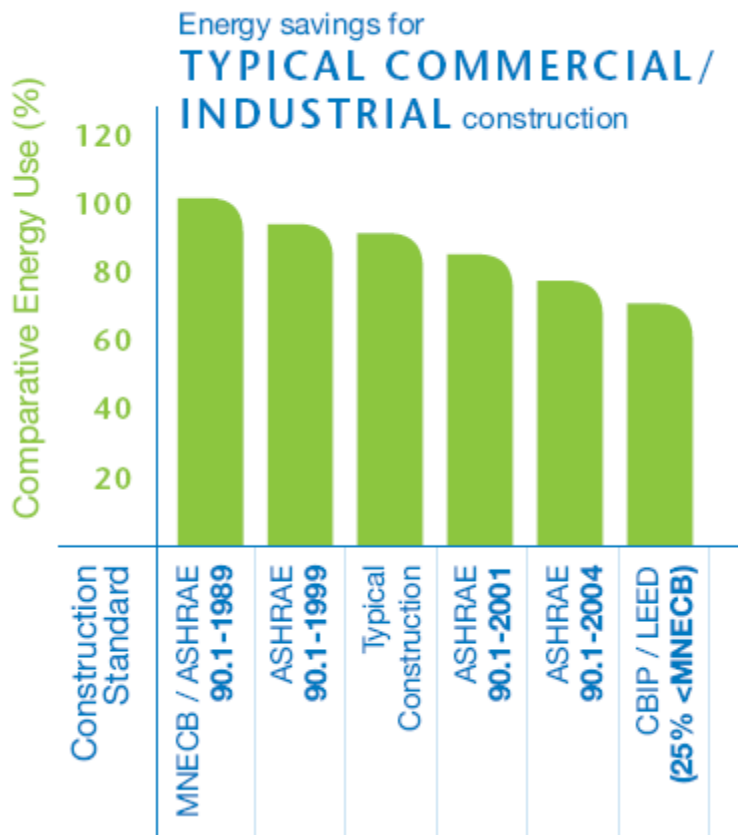
- RSI 3.5 (R-20) of frame wall insulation, achieved through 2x6 construction with insulation in the walls, or by adding 1 inch of extruded polystyrene insulation sheathing to the outside of a 2x4 assembly that has R-14 in the framing
- RSI 2.1 (R12) of full height basement insulation (rather than to 0.6 meters below grade)
- Alternatively, meet EGNH 77

Part 3

- Meet requirements of the ASHRAE 90.1 - 2004 energy standard. ASHRAE 90.1 2004 includes standards for building envelope; heating, ventilating and air conditioning (HVAC) systems; service water heating; and power, lighting, and other equipment. ASHRAE standards vary for different climate zones.
- Note that even with the new energy efficiency requirements to the BC Building Code, the District of Squamish will not meet its target for new buildings.



Target Shortfall - Part 3

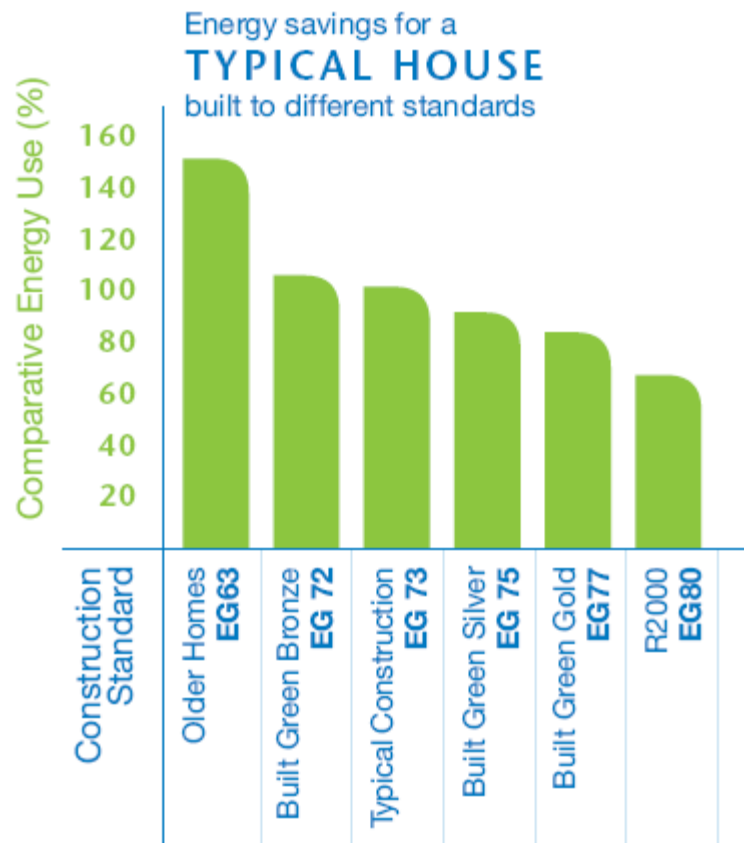


- The DoS has a target to achieve energy performance 25% better than the Model National Energy Code for all new multi-unit residential and commercial (part 3) buildings by 2010.
- The table shows the relative energy savings of varying levels of energy standards.
- 25% better than MNECB is about 5% better than ASHRAE 90.1-2004 (the new code). Thus, the new code will still leave Squamish short of its target.
- Enabling policies and incentives will be required to meet Squamish's target.

Source of illustration: Fraser Basin Council. 2007.
Energy Efficiency & Buildings: A Resource for BC's Local Governments.



Target Shortfall - Part 9



- The DoS has a target is to achieve an EnerGuide for New Houses rating of 80 for all new detached single-family and row houses by 2010.
- The table shows the relative energy savings of varying levels of energy standards. In this graph, EG 77 (new code) is about 10% less efficient than EG80.
- A recent analysis commissioned by MoEMPR show that energy savings from EG 77 compared with EG 80 for the lower mainland range from 8%-15% (depending on whether it is gas or electric heating).
- Enabling policies and incentives will be required to meet Squamish's target.

Source of illustration: Fraser Basin Council. 2007.
Energy Efficiency & Buildings: A Resource for BC's Local Governments.



Policy Context - Policy Direction in the OCP

- Including energy efficiency objectives in the OCP gives important guidance for future bylaw and policy development and development-specific negotiations.
- The OCP provides broad policy direction to 3 groups of actors.
 - Council - the OCP provides a policy foundation to 1) require a little more from developers on specific projects and 2) develop more progressive policy.
 - Staff - the OCP provides a policy foundation when negotiating with developers, and staff will often reference current policy when going to council with request for more progressive policy. Having the OCP objectives help justify more aggressive energy policies.
 - Developers/community - makes it clear to everyone that the community values energy management and expects energy efficient built environment.
- The District of Squamish includes a stand-alone section in its OCP (August 2007, draft) on energy and air emissions (Section 17). Some relevant objectives include:
 - Foster the conservation and efficient use of energy and other resources in buildings, vehicles, and infrastructure;
 - Encourage high performance building* design and practices that are energy efficient;
 - Minimize the use of fossil fuels and foster increased use of renewable energy sources;
 - Minimize greenhouse gas emissions from District operations and community-wide; and
 - Demonstrate municipal leadership in energy conservation, energy efficiency, and reducing greenhouse gas emissions.
- Given the District's high level policy foundation, it is well positioned to develop policy measures that will result in tangible energy-related benefits.



Policy Options

- We focus on policies that can advance energy efficiency in Part 9 and Part 3 buildings.
- There are a range of regulatory and policy instruments available to the District of Squamish to advance energy efficiency in MURBs and commercial buildings. The most viable are:
 - Development Permit Area Guidelines
 - Requiring Building Energy Performance Standards via Rezoning
 - Incentive for Building Permit Fees
 - Revitalization Tax Exemption Bylaw (for Energy Efficiency features)
 - Density Bonusing
 - Phased Development Agreements
 - Heat Loss Calculation for Building / Heating Permit
 - Development Permit / Rezoning Energy Efficiency Checklist
- For each regulatory or policy instrument, we provide a brief description and an example of where it is being used.
- Following these descriptions, we highlight their pros and cons.
- We also include a summary of whether the policy applies to Part 9 or Part 3 buildings.

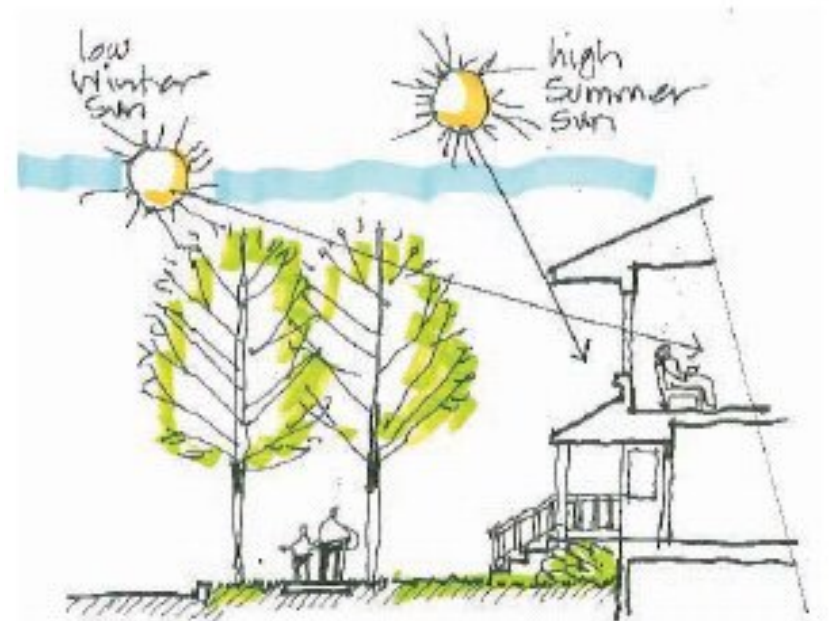


Policy Options - Development Permit Area Guidelines

- The Local Government Act authorizes the establishment of development permit areas (DPAs) and the use of development permits.
- Local governments are authorized to establish guidelines for form and character of developments that occur within pre-designated DP areas.
- From an energy perspective this will typically translate to design guidelines that result in passive solar gains and natural ventilation (to reduce cooling loads).
- This tool can apply to intensive residential, MURBs, commercial, and industrial buildings.

Example - District of Saanich

- "Community Design Principles and Guidelines" (2007) - HollandBarrs Planning Group
- Currently being considered by Council
- Intent is to apply to commercial nodes (which include significant residential)
- Section on Solar Orientation, Energy Efficiency, Views and Shadows





Policy Options – Building Energy Performance Standards via Rezoning

- Often a developer will want to build a structure that is of a greater density than the current zoning allows, or that requires a zoning variance. In these situations, the developer will approach the municipality with a rezoning application.
- Council is not required to grant a rezoning, yet can allow rezoning and exercise its discretion for what land use and density are permitted on the site.
- Sometimes municipalities agree to accept additional amenities or community benefits (e.g., energy efficient building features) in connection with rezoning.
- The bargaining conducted by staff cannot contractually bind council to provide the rezoning. Council must maintain its right to exercise its discretion (i.e., have and make a choice) on whether or not a zoning bylaw amendment will be allowed.
- The amenity should be secured for public benefit by way of a covenant.
- Some local governments are considering broad down-zoning strategies to trigger discretion available through the rezoning process.
- This tool can apply to all building types.

Example - Municipality of Bowen Island

- Developed a Council rezoning policy that requests Built Green™ “Gold”, and EnerGuide for New Houses 80 for new residential development





Policy Options - Incentives

- Local governments can offer rebates on building permit fees for “green” buildings
- CAUTION on Cross-subsidization: cannot raise building permit fees for a “non-green” building to offset the discount offered to “green” buildings. This is a cross-subsidy and may be viewed by the courts as a tax on “non-green” building permit fee applicants. Municipalities do not have such taxing authority.
- Can package rebates with ‘top of the pile’ or “fast track” permit processing and match builders with utility incentive programs.
- Can be complimented with a recognition/awards program.
- This tool can apply to all building types.



Example District of Saanich

- Priority permit processing, up to 30% rebate on building permit fees, designated an employee as an energy adviser
- Since Sept. 2007 about 70 builders taken advantage of the free one hour energy advisor consultation and 20 homes registered in the green building stream, for a potential rebate. Most are going Built Green Gold (i.e. EG 77)



Policy Options – Revitalization Tax Exemption Bylaw (for Energy Efficiency features)

- Provides a financial incentive for developers to build in a specified area of the municipality and/or to a specified building standard.
- Environmental revitalization, including energy efficiency, is listed by the Province as being within the intent of the legislation.
- Can be complimented by a recognition/awards program.
- This tool can apply to all building types.

Example - District of Maple Ridge

- Offers a property tax exemption for high-rise residential development that occurs within the pre-designated revitalization area (created through bylaw).
- Residential development that meets basic criteria is eligible for a two-year tax exemption. Developments that are LEED® Silver, Gold or Platinum qualify for a four-year tax exemption.



Property Tax Exemptions for Designated High-Rise Residential

Year	Basic Exemption	Green Exemption
1	100%	100%
2	50%	75%
3	0%	50%
4	0%	25%



Policy Options - Density Bonusing

- Section 904 of the Local Government Act allows the provision of additional density where specified amenities are provided. This must be set out in a zoning bylaw. The bylaw must describe the conditions that, if met, will entitle the developer to additional density (e.g., energy efficiency features).
- When developing a density bonus regime, due diligence is necessary to consider the impact greater density may have on services and the neighbourhood, and at what density developers will be enticed to provide an amenity in exchange for more floor space.
- Squamish is in the process of developing a downtown neighborhood plan and a new zoning bylaw. Zoning for the downtown area will likely max out at 4-6 floors. There may be some room for “bonusing” but not as much as in metropolitan areas.
- This tool can apply to all building types.



Example - SFU UniverCity Community Trust

- Developed a green building bonus (w/ City of Burnaby, which has regulatory jurisdiction) that allows an additional density for:
 - Enhanced stormwater management (5% floor area ratio (FAR) bonus)
 - Enhanced energy efficiency (5% FAR bonus)
 - Alternative energy systems (10% FAR bonus)
- Verification by an approved green building consultant is required (through a three-phase verification procedure (preliminary permit approval, building permit and occupancy permit)).



Policy Options - Phased Development Agreements

- Phased Development Agreements (PDAs) are new (sections 905.1 through 905.5 of the LGA).
- Local governments may enter into a PDA with a developer on adoption of a bylaw, subsequent to the holding of a public hearing and public review of related documents.
- PDAs enhance local governments' scope to negotiate amenities, specifically authorizing them to "freeze" zoning for a developer into the future, with some exceptions (to maximum PDA term of 10 years/20 years with consent of Inspector of Municipalities).
- PDAs must identify the land that is being developed and specify the provisions of a zoning bylaw which, if amended or repealed, will remain unchanged while the agreement is in effect, unless the developer agrees in writing that the changes apply.
- Additional terms and conditions of phased development agreements may include:
 - The inclusion of specific features in the development [e.g. could include green buildings];
 - The provision of amenities [e.g. could be energy efficiency related];
 - The phasing and timing of the development and of other matters covered by the agreement;
 - The registration of covenants under section 219 of the Land Title Act;
 - Subject to certain restrictions, provision that minor amendments will be dealt with by local government resolution;
 - Provisions related to dispute resolution or early termination of the agreement, either automatic upon non-performance, or by mutual agreement.
- Tool can apply to all building types, and to large and small (even site level) projects.



Policy Options – Heat Loss Calculation for Building / Heating Permit

- Local governments deliver and enforce the BC Building Code. As per s. 9.33.5.1(1), local governments should include a requirement for a heat loss calculation in their municipal building bylaw.
- A heat loss calculation ensures the building's heating equipment meets the actual heating requirements of the structure and avoids installation of "oversized" furnace or hydronic equipment.
- This tool can apply to all building types.

Example - City of Burnaby

- Prior to the installation of any heating system in single- or two-family dwellings or townhouses or in multi-family units that have individual, self-contained heating systems for each unit, the City of Burnaby requires contractors to apply for and obtain heating system permits from the City's building department. A heating system permit is required for a building permit.
- In the case of hydronic (hot water) heating systems, applicants are required to provide an appliance selection worksheet and a heat loss summary worksheet (among other things).
- If a forced air heating system is to be installed, applicants are required to provide an appliance selection worksheet, a heat loss summary worksheet, a supply air duct summary and a return air duct summary as well as adhere to specified guidelines.



Policy Summary

- Development Permit Area guidelines can be used to encourage passive solar design and natural ventilation. Cooling loads in BC are very low, so natural ventilation isn't a large gain. If pursued, this tool should focus on passive solar gains. It could also be argued that using DPA guidelines for energy efficiency purposes is beyond the original intent of the legislation. Squamish's OCP (draft) supports a review of DPA guidelines to incorporate energy considerations, such as solar orientation.
- A rezoning policy is not regulatory. One way to ensure developers honour their commitment at the time of rezoning is to require a restrictive covenant on the property that stipulates the agreed upon building standards must be adhered to. This however adds an administrative burden to the District.
- Building permit fee "grants" and tax exemptions essentially amount to the District subsidizing green buildings. Council would need to consider whether this is an appropriate allocation of resources, to reward developers interested in innovation. Squamish's OCP (draft) indicates the District will consider incentives for high performance buildings.
- Density bonusing can be an effective way to encourage energy efficiency improvements. Careful analysis is required to make sure that 1) the net benefit to the developer is enticing and 2) offering bonuses for energy efficiency doesn't trump other 'amenities' that may be part of a density bonusing regime (e.g. affordable housing, green space).
- Phased Development Agreements constitute a new regulatory tool available to municipalities and appear to be an effective way of securing energy related features in new construction. Conceived to address large, complex (lots of infrastructure considerations), long-term projects to ensure various constituent components of projects required to make the entire project work don't fall by the wayside. Likely best applied to large, complex developments, e.g. Oceanfront, Waterfront. Probably not well suited to rest of Squamish.
- A heat loss calculation is required as per the BC Building Code. If it is currently not required it ought to be.



Development Permit / Rezoning Checklist

- A checklist is a non-regulatory measure that can help encourage energy efficient buildings.
- Completion of the checklist is required as part of a development permit application and/or an application for an amendment to the zoning bylaw (rezoning).
- Completion of the checklist is mandatory, but pursuing specific actions is not mandatory. For this reason, the checklist is very “developer friendly.”
- The checklist is part of the municipal development review process and helps council to ensure development proceeds in accordance with the community’s values.
- Typically, SFD are not within Development Permit Areas. If they do not require a rezoning there is not an opportunity to require completion of the checklist. For this reason, it is very difficult to target SFDs with this tool.



Checklist cont'd

All applicants for rezoning and development permits in the City of Port Coquitlam are required to complete a Sustainability Checklist.

Key attributes

- The checklist is explicitly linked to the broader sustainability objectives identified in the Official Community Plan and Corporate Strategic Plan.
- The checklist's scope is broader than energy efficiency.
- The checklist employs a scorecard approach rather than a pass/fail approach.
- The point system makes the checklist more "measurable" and easier to evaluate
- Criteria for different sections are weighted differently to emphasize their level of importance.
- Supplementary information is required, including the completion of the LEED-NC 1.0 Project Checklist

Submission and review process

- Proponents submit the checklist and supplementary information as part of the rezoning and/or development permit application.
- Staff review the checklist and discuss further with the proponent. Following that, staff prepare a final checklist and submit it to the Community and Economic Development Committee and council, as part of the application process.





Checklist cont'd

All applicants for rezoning and development permits in the City of New Westminister are required to complete a Smart Growth Development Checklist.

Strong in Tradition, Committed to Service
City of New Westminister
British Columbia, Canada

Key attributes

- Staff and council are more likely to look favourably upon applications that incorporate the areas of interest outlined in the checklist.
- The checklist is explicitly linked to broader sustainability objectives identified in the OCP.
- It is based on best practices in other North American jurisdictions.
- The checklist is not a pass/fail testing instrument. Proponents are asked to provide yes/no and qualitative answers.
- The checklist's scope is broader than energy efficiency.

Submission and review process

- The checklist is submitted as part of the pre-application process.
- Staff provide comments on the initial submission and give it back to the proponent.
- The checklist and supplementary material are resubmitted with the proponent's formal application for permit or rezoning.
- The checklist is forwarded to the Advisory Planning Commission and design panels, and attached to staff's report to council.



Checklist - Discussion

- The completed checklist accompanies the Development Permit or Rezoning application. It is intended to assist Council to determine whether the development is striving to meet broader community objectives (e.g. social, economic, environmental well-being).
- Changes to municipal bylaws are not required. A council resolution requiring completion of the checklist for development permits or rezoning is recommended. Ideally, there will be a linkage in the OCP.
- New Westminster conducted a review six months after establishing a requirement to complete the checklist. In most cases, the checklist incited little or no adherence to Smart Growth practices, and in particular to environmental objectives. In most cases, developers suggested they would consider environmental practices “at a later date” yet did not.
- Port Coquitlam’s checklist is a point-based and said to be more effective. This is not confirmed with verifiable data.
- To encourage learning and greater uptake, both New Westminster and Port Coquitlam use an iterative review process. A completed checklist is submitted as part of a DP/Rezoning pre-application package. Staff reviews the package and provides comments, which the developer is expected to address in the revised checklist and final DP/Rezoning application.
- Checklists are an educational, not a regulatory tool, therefore there is no legal recourse if checklist promises not fulfilled. (Local government *may* have legal recourse if amenity is otherwise secured further to a regulatory power (e.g. bonding under a bylaw, contractual penalties, occupancy permit condition, covenant w/ rent charge negotiated with a rezoning or required under DPA Guideline)



Checklist - Discussion cont'd

- The District of Squamish recently collaborated with West Coast Environmental Law to develop a Smart Growth checklist. A draft is now available. The SG checklist is more of a Q&A format.
- Squamish's OCP (draft) indicates the District will develop a sustainability checklist, including identifying energy considerations to be used in rezoning applications.
- The natural environment section asks whether the development will achieve green building standards (e.g. LEED or BuiltGreen). That is the only reference to energy efficiency.
- Port Coquitlam's checklist requires the developer to complete a supplementary LEED Canada-NC 1.0 Project Checklist. The checklist has a stand-alone section on Energy and Atmosphere.
- New Westminster's checklist does not require the LEED checklist but includes 2 specific questions on energy use
 - Energy Efficiency (e.g., building location responding to daily sun/shade patterns, high performance envelopes, passive solar gain, solar shading, natural ventilation, ground heating/cooling, high efficiency fixtures, consideration of heat island effect)
 - Use of renewable energy alternatives (e.g., geothermal, solar, offgrid, BC Hydro Green Power)
- LEED covers Part 3 buildings. For Part 9 buildings, the BuiltGreen BC checklist could be required as supplementary material. Both checklists are extensive and would require considerable forethought to complete properly.
- Using LEED and Built Green would require staff training for each rating system.
- The effectiveness of a checklist is completely dependent on Council's willingness to incorporate it into the decision-making process. Thought should be given to this point.



Recommended Next Steps - Energy Policy

Energy Efficiency Policy

- We recommend the District and stakeholders select a policy for further development.
- Assess a short-list according to pre-determined evaluation criteria.
- For each policy we will provide legal context and sample language.
- We will contextualize each policy within a long term strategy that will help the District achieve its environmental objectives. The discussion will include potential linkages with district energy and local electricity production.
- Note: some policies will require additional analysis to develop. E.g. an effective density bonus policy requires further analysis into growth impacts, real estate values, impacts on other desired amenities, etc. This would have to be completed as part of a subsequent analysis.



Policy Comparison

Policy	Application	Pros	Cons
Development Permit Area Guidelines	All except low density residential	Can address passive solar	Questionable interpretation of legislation, expensive to develop and update, guidelines only
Rezoning Policy	Buildings in rezoning process	Flexible, has 'teeth'	Additional administrative layer, additional costs to developers
Building Permit rebates	Open to all types	Carrot approach	Requires the District to subsidize green buildings
Tax exemption bylaw	Open to all types	Carrot approach	Requires the District to subsidize green buildings
Density bonusing	Open to all types	Palatable to developers	Competes with other amenities, e.g. affordable housing, libraries, etc
Phased development agreements	Open to all types	Flexible, offers certainty to both developer and LG	Each agreement requires a bylaw and public hearing to consider
Heat loss calculation	All	Required by BCBC	Required by BCBC
Energy efficiency checklist	Buildings part of rezoning or DP process	Developer-friendly	Cannot be enforced.



Recommended Next Steps - Checklist

Energy Efficiency Checklist

- Provide direction to consultants on either developing stand-alone energy efficiency checklist or incorporating an energy efficiency section to the draft Smart Growth checklist
- Select an option for developing a checklist:
 - Add several energy specific questions to the draft Smart Growth checklist. This option is probably the least onerous but would likely yield the least effective outcome
 - Adopt the LEED (Part 3) and BuiltGreen (Part 9) checklists as a supplementary checklist item as per Port Coquitlam. This option would require additional staff training in LEED and BuiltGreen in order to provide meaningful comments to applicants, and proper guidance to Council. The LEED and BuiltGreen checklists are updated regularly and would ensure the energy checklist is current (and thus alleviating staff from the responsibility of updating the checklist regularly).
- Determine whether it is useful to link a checklist or scorecard to a recognition program that would award specific developments with a “sustainability” accreditation.
- Provide the consultants with direction on whether the district prefers a scorecard approach, a yes/no approach or more of a questionnaire like the current Smart Growth checklist.



Policy Criteria

The following criteria would be useful in the evaluation of an Energy Efficiency Policy or suite of policies:

Criteria	Metric
Administrative burden on the District of Squamish	Qualitative
Administrative burden on Developers	Qualitative
Energy savings to reach target (EG80 or 25% better than MNECB)	kWh and/or GJ
Incremental capital cost imposed on developer	\$/m ²
Incremental life cycle costs associated with upgrade	\$/m ²
GHG reductions	MT/m ²
Enforceability	Qualitative
Opportunity for updating the standard over time	Qualitative



Next Steps – Education and Recognition

- Successful premium building standard programs involve education and recognition.
- Educational materials will be developed to reinforce the new policies that will be developed.
- During step 2 of this strategy development process as policies are more clearly defined the following materials will be developed:
 - New Housing Best Practices Guide - to provide guidance to builders going beyond the BC Building Code. Audience: home builders.
 - New Housing Construction Guide - designed to help developers meet the new policy Squamish implements. Audience: all.
 - Energy Efficiency Learning and Communication Materials - technical resources to support Squamish staff.
 - Energy Efficiency Construction Resources List - support material intended for the general public.
- Leadership could be recognized by developing a “Squamish Sustainability” certification that could be applied to building site signage and promotional material for that specific development, and similarly published by the DoS. Top developments could also be recognized through awards.