

2011 Climate & Energy Action Awards – Applicant Executive Summaries

Corporate Operations	
Village of Burns Lake	<p>Bioenergy Retrofit of the Tom Forsyth Memorial Arena</p> <p>With the reality of rising energy prices and climate change, the importance of finding ways to reduce energy costs and CO2 emissions is of increasing importance to local governments. Recognizing these challenges, the Village of Burns Lake Council established the municipal goal of “being a leader in energy-self sufficiency.” In July 2011, the installation of a new biomass heating system began at the municipally owned and operated Tom Forsyth Memorial Arena (TFMA) in Burns Lake, BC. The system will be fully operational by mid-October, and will replace the majority of natural gas and electricity currently used to heat the arena. For the Village of Burns Lake, the arena biomass project is a stepping stone to a broader energy self sufficiency project. The arena is the first of what Village Council hopes to be many municipal buildings heated by a renewable energy source.</p>
City of Campbell River	<p>Completion of Tidal Power Feasibility Study</p> <p>Campbell River is the first municipality in Canada to complete a tidal power feasibility study to look at the potential for small scale tidal demonstration. The Discovery Passage, upon which Campbell River is situated, has 6 of the top 50 tidal energy sites in Canada. This study, completed as of July 2011, examines the potential for promoting renewable energy, research and development in tidal technology, reducing municipal greenhouse gas emissions, and demonstrating leadership in our commitment to the BC Climate Action Charter. The study results indicate that Campbell River has the potential to develop a community project in partnership with industry and senior government to showcase tidal technology research and development. As the technology is very early in development stages, there is an opportunity for Campbell River to showcase tidal energy opportunities by serving as a test and demonstration site for industry. The GHG emissions saved and costs and benefits will depend on the scale of the tidal turbine project developed in Campbell River. The initial aim of the feasibility study was to look at a site specific project that could offset municipal greenhouse gas emissions. However, the study revealed that in order to be economically viable, deployment of a tidal turbine would be best supported by a partnership for industry for research and development.</p>
Capital Regional District	<p>The Saanich Peninsula Wastewater Thermal Heat Recovery Project</p> <p>The Saanich Peninsula Wastewater Thermal Heat Recovery Project captures renewable energy from wastewater effluent to heat the swimming pool at the Panorama Recreation Centre. This innovative project was completed in March 2011. By displacing natural gas with a clean, renewable energy source, this project helps to save \$77,000 in operating costs and reduces more than 500 tonnes of greenhouse gas emissions each year. The district energy and heat recovery system was designed to maximize its renewable energy potential and can be expanded in the future to serve other users in the community. Through the vision and foresight from the municipalities of North Saanich, Central Saanich and the Town of Sidney, and with financial support from the Gas Tax Agreement Innovations Fund, this project serves as a new benchmark for integrated resource recovery in the capital region.</p>

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City of Coquitlam	<p>A Holistic Approach to Reducing GHG Emissions from City Buildings</p> <p>A holistic approach to reducing GHG emissions from the City's corporate building portfolio has been developed with five integrated components: 1) installation of capital-intensive renewable energy systems; 2) development and implementation of a staff behavioural change campaign; 3) real-time monitoring of building energy systems; 4) retrofits of existing building systems; 5) planning of future energy and carbon reduction initiatives; and 6) development of strategic partnerships. A total of 39 energy conservation measures have been implemented since 2008, reducing building GHG emissions by 899 tonnes or approximately 13% of total corporate emissions, while simultaneously reducing energy costs by \$175,000 annually. The sizable reductions achieved were only possible by pursuing a broad array of integrated energy conservation measures. Moreover, engaging all City staff in Climate Action activities and embedding energy conservation in the organizational culture continues to be a central theme of the City's integrated approach to energy and climate action. By September 2011 the City will exceed 40 energy conservation projects, and is targeting to reach 50 by the end of the year.</p>
City of Courtenay	<p>Reducing GHG Emissions from the Courtenay and District Memorial Pool</p> <p>In December, 2010 City of Courtenay staff initiated a partnership opportunity with FortisBC to provide funding for innovative technologies that will reduce operational costs and emission from the Courtenay and District Memorial Pool. A study completed in 2008 by Stantec Engineering determined that the outdoor pool was one of the most inefficient facilities owned and operated by the municipality. The combined technologies to address these inefficiencies would include 16 solar panels and a high efficiency thermal pool cover. The outcomes of the combined measures include a financial savings of around \$15,000 per year, and an emissions savings of around 50 tonnes (roughly \$1,300/yr in carbon offsets). This initiative was completed in June 2011 with the support of Courtenay Council, FortisBC, and the City's Climate Action Analyst Allan Gornall. This initiative supports the City's Corporate Climate Action Plan and will assist in achieving our emissions reduction targets leading towards carbon neutrality by 2012. This partnership project has already encouraged residents in the Comox Valley to examine inefficiencies within their own homes, and develop solutions for future low impact living. With an average attendance of over 18,000 people in the 4 months of operation, the solar retrofit at the outdoor pool will benefit not only the municipality, but ultimately the residents of the City of Courtenay and the users.</p>

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City of Dawson Creek	<p>Creating an Internal Carbon Fund to Finance GHG Emission Reduction Projects</p> <p>To further demonstrate leadership and to facilitate further emissions reduction actions, Dawson Creek has established an internal Carbon Fund designed to set aside funds annually to finance greenhouse gas (GHG) emission reduction projects. Dawson Creek will earmark \$100 per tonne (based on our annual corporate greenhouse gas inventory) that will be used to implement emissions reduction projects at both the corporate and community scale. This fund may also be used to finance projects that will lead to emissions reductions (such as research and education) but may not be used to purchase offsets. Dawson Creek is committed to implementing GHG reduction projects to reduce our overall emissions and to minimize our offset liability first, and then to purchase offsets (if necessary) to meet our Climate Action Charter commitment of carbon neutrality by 2012. To finance the Carbon Fund, Dawson Creek's CARIP rebate will be deposited into the Carbon Fund; however, since the CARIP rebate will be less than \$100 per tonne, the difference will be made up from Dawson Creek's general revenues. Dawson Creek's Carbon Fund is estimated to be \$360,000 per year.</p>
Corporation of Delta	<p>Implementing Delta's Building Efficiency Plan</p> <p>Delta's Climate Change Initiative was adopted by Delta Council in July 2007. It is a plan to reduce Delta's vulnerability and contribution to climate change. The Initiative was endorsed with the intent that it remains a fluid document, changing over time to adapt to emerging technologies, opportunities and priorities. The Initiative includes the goal of reducing corporate greenhouse gas emissions by 20% of the 2007 levels by 2015 as well as nine action plans. One of the action plans is the Building Efficiency Plan.</p> <p>In early 2011, the Sungod Recreation Centre was the first building to be retrofitted to reduce energy and GHG emissions. At a cost of \$790,000, Delta was able to reduce emissions by 466 tonnes of GHG annually from this facility alone, which represents a 27% reduction for the facility and more than a quarter of Delta's overall goal of 20% reduction by 2015. A similar GHG emissions reduction retrofit project is underway at the Ladner Leisure Centre, slated for completion by the end of 2011. This \$745,000 project will reduce GHG emissions by 360 tonnes annually, or 34% of the building's GHG emissions. This equates to a 5% reduction in Delta's overall corporate GHG emissions.</p> <p>These retrofits, which include energy efficiency measures, heat recovery, solar hot water, and geexchange reflect Delta's commitment to reducing its contribution to climate change and providing leadership to the community by demonstrating quantifiable energy and GHG saving measures. The combined reduction of these projects along with fleet and other building GHG reduction projects currently underway are projected to reduce Delta's corporate GHG emissions by 18% by the end of 2012.</p>

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City of Fernie	<p>Implementing Fernie’s GHG Emission Reduction Plan</p> <p>On June 22nd, 2009, the City of Fernie Council endorsed the City of Fernie GHG Emission Reduction Plan. The Plan provided the City with a community and municipal baseline emissions inventory, GHG emission reduction targets and a series of recommended strategies for action. As part of the Plan development, high-level opportunity assessments were performed on the Aquatic Centre and Arena/Curling Rink to identify potential energy and emission savings actions. This process allowed the City of Fernie to move forward very quickly with implementation of the first major GHG emission reduction project - a heat recovery/dehumidification system at the Aquatic Centre.</p> <p>The City of Fernie recognized the need to coordinate further implementation of the GHG emission reduction strategies through a process that would be supported by City staff, community members and key stakeholder groups. The "GHG Reduction Plan Implementation Committee" was formed and met for the first time on March 31st, 2010. Over the past year, the Committee has prioritized municipal GHG reduction strategies, and presented a recommended budget to Council. On February 7th, 2011, \$388,000 was approved by Council for allocation to GHG emission reduction actions to meet the municipal reduction target of 20% below 2007 baseline by 2020. The City of Fernie is well on the way to meeting and exceeding the GHG reduction target for municipal operations, having already reduced emissions by 10.5% from 2007. The success is primarily due to the proactive leadership demonstrated by Council and staff to support the implementation of important energy and emission reduction projects.</p>
City of Langford	<p>City Centre Park – An Energy Efficient Multi-use Recreation Facility</p> <p>Through extensive community engagement and public involvement, the City of Langford developed a plan called “City Centre Park Recreation 2010.” City Centre Park, located in the heart of the community and in close proximity to residential neighbourhoods, schools, shops, workplaces and transit, is recognized as an energy efficient multi-use recreation facility. The complex will realize year round energy savings from a host of leading edge technologies aimed at reducing energy consumption and greenhouse gas emissions, including an energy efficient ice arena and a waste heat recovery system and geothermal heating system.</p> <p>The most innovative technology is the state-of-the-art waste heat recovery system where excess energy from the ice arena is used to heat/cool the Sportsplex, adjacent buildings and approximately 74 homes in the new Westhills Community. The system at City Centre Park will capture 100% of its heat and use it to heat the dressing rooms, floors, bowling facility and public areas. The ice arena is equipped with ultra-efficient ammonia heat pumps used to create hot water and power equipment such as the dehumidifier, a machine that keeps the ice dry and traditionally runs off natural gas. This is the first of its kind on Vancouver Island. The heat pump system will also extract energy to run air conditioning through the bowling facility, Eagle Ridge dry floor arena, and the ice arena’s public areas. A geothermal system was installed deep beneath Langford’s Goudy Turf field where hundreds of boreholes draw heat from the earth, funnelling it into a pump house and used to heat approximately 75 homes in the adjacent Westhills Green Community.</p>

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District of Maple Ridge	<p>Creating and Using Zero Emission Vehicles</p> <p>By creating and using zero emission vehicles, District of Maple Ridge staff are doing their part to reduce and remove greenhouse gas emissions from the atmosphere, thereby reducing the District’s carbon footprint. District Operations Centre staff rebuilt a 2001 GMC Sonoma creating a new ‘Zero Emission Vehicle’ and Parks & Leisure Services Youth Services staff obtained and put into regular service two pedal bikes reducing their reliance on the District’s fleet vehicles.</p> <p>The electric truck ranges 100 kilometres on a charge and costs approximately \$1.30 to charge. With its current use, the District would have expected to pay approximately \$6,000 a year for fuel and produce approximately 10 tonnes of greenhouse gas emissions (CO₂e). Using electricity will cost approximately \$1,200 with no emissions being produced.</p> <p>Implementation of pedal bikes as an alternative to using one of the District’s fleet vehicles has enabled staff to enjoy some exercise and fresh air when travelling to and from District programs and events, all while emitting zero emissions. By choosing to use the bikes instead of a fleet vehicle, staff will save about \$1,000 in fuel costs and prevent almost 2 tonnes of greenhouse gas emissions (CO₂e) from being released into our atmosphere.</p>
City of Nelson	<p>Dedicating Resources to Climate Action in a Small City</p> <p>This submission focuses on the climate action initiatives of the Corporate Greenhouse Gas (GHG) Reduction Plan, one of many action plans, programs and sustainability planning initiatives currently underway in Nelson that work towards achieving the priorities outlined in “Path to 2040”.</p> <p>The City of Nelson contracted a part-time Corporate Climate Action Coordinator in 2009 to develop and implement the Corporate GHG Reduction Plan. In hiring a resource dedicated to climate action, the City of Nelson has taken an innovative approach in the establishment of a Corporate GHG Reduction Plan. Communities of a similar size to Nelson are challenged by the limited resources available to dedicate towards developing a program of this breadth and magnitude. This responsibility can be very demanding for staff who are already experiencing time and energy constraints on their workload.</p> <p>Through the estimated operation and maintenance savings that will arise from energy conservation projects at the City of Nelson, the expense of hiring an individual specifically committed to the implementation of an emission reduction plan can be recouped. The average payback for this corporate program, including the cost of a coordinator, is nine years. This project allows the City the opportunity to lead the way within the community by achieving measurable goals in corporate GHG reductions. Before asking residents to work toward reductions at the community level through the Community Energy Plan, the municipality has led by example, by spending two full years minimizing the ecological footprint of its own operations.</p>

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City of North Vancouver	<p>A Comprehensive and Cost-informed Implementation for the Corporate Climate Action Plan</p> <p>Climate action and energy sustainability have long been part of the City of North Vancouver’s core values, policies and programs. In January 2009 the City established an interdepartmental energy management team. This team has established a mechanism for annual reporting and has produced a comprehensive Corporate Climate Action Plan.</p> <p>This ambitious yet practical plan was developed by staff working with technical consultant support (Enerfficiency Consulting). Process and plan highlights are as follows:</p> <ul style="list-style-type: none"> • Extensive staff engagement identified key barriers and how they could be overcome. This included direct interviews with 30 staff and the participation of half the City’s workforce through questionnaires and workshops. • The plan received strong support from upper management and Council: workshops and interviews were held with the City’s senior management team and the process included extensive Council engagement leading up to unanimous adoption. • Rigorous technical analysis led to specific, practical, measurable, and achievable actions with separate sectoral assessments. Actions were developed in partnership with staff responsible for their implementation, ensuring broad support. • A critical policy review identified opportunities to strengthen existing City energy policies, ensuring effectiveness in meeting the City’s ambitious targets. <p>Importantly, the plan was fully costed so that Council could understand the budget implications of implementing the plan: both the costs and benefits were outlined. By adopting the plan, Council committed to funding elements contained in the plan. The City’s updated corporate climate action plan provides an example of a collaborative, team-based, interdisciplinary approach to climate leadership.</p>
Peace River Regional District	<p>Regional Collaboration between Five Local Governments for Energy and Emissions Planning</p> <p>This application is in regard to a collaborative energy and emissions planning initiative involving 5 local government jurisdictions: 1) Peace River Regional District (PRRD); 2) District of Taylor; 3) District of Tumbler Ridge; 4) District of Chetwynd; 5) Village of Pouce Coupe. The result has been a corporate and community energy plan for each jurisdiction and regional synthesis plans for all 8 local government jurisdictions in the PRRD. The objective achieved, was to facilitate the capacity of all local governments in the PRRD in meeting the Bill 27 and Climate Action Charter obligations, within a collaborative regional framework that could support implementation of actions.</p> <p>Additional results have included:</p> <ul style="list-style-type: none"> - Corporate and Community energy and emissions inventories for each participant. (5) - 20 local government building evaluations (Opportunity Assessments). - Energy and Emissions modeling tool for each local govt (5) <p>Copies of all reports can be view on our website at: http://www.prrd.bc.ca/services/development/projects/community_energy_plan/index.php</p>

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City of Pitt Meadows	<p>New LEED Gold Community Centre and Energy Upgrades to Existing Arena</p> <p>Pitt Meadows is excited to open the doors of the new South Bonson Community Centre, a Gold LEED building. Residents and visitors to our Community can experience the advanced environmental and energy efficient design of this magnificent building, located on re-claimed industrial land. Captured rain water will re-fill toilets and provide some irrigation for the regional native draught resistant vegetation. Sunshine offers natural light through large energy efficient windows facing south. When lights are required, they are triggered by motion sensors and shut off when the rooms are not used. Air to air heat pumps combined with operable windows and high insulation values will allow for natural heating and cooling, but we also practise heat recovery off fans and equipment for re-use as needed. The highly reflective roof keeps out extra heat and supports the solar hot water and solar photovoltaic cells. Regional construction materials were used where available and interior wood finishing was formally a historic Pitt Meadows barn. There is so much more about this building that we will share through our Green Education program.</p> <p>In addition to 'greening' the new, we also 'green' the old. The City has been upgrading a three sheet ice arena (built in 1992) which was recently purchased by the City. To reduce energy use, a new insulated roof and insulated walls have been installed, the refrigeration system has been upgraded (saving already \$1000 per month in energy costs from ice making alone), and HVAC systems will be upgraded to reduce energy consumption.</p>
Village of Sayward	<p>A Green Energy Upgrade of the Kelsey Recreation Centre</p> <p>The project for consideration under Community Energy was a green energy upgrade/rehabilitation to the Kelsey Recreation Centre (KYC) located at 652, K'Husam Way, Sayward, BC. The KYC was a 35 year old building with original furnaces, HVAC, electric hot water boilers, lighting and control systems. The rehabilitation of this major building component added new technology including two energy-efficient furnaces and the replacement of many components including electronic control valves and heat exchangers which previously operated inefficiently or not at all. The project also included the installation of solar hot water heaters which eliminated the use of electric boilers.</p> <p>The new upgrade provided an immediate increase in 'user comfort' issues because all publicly used floor spaces such as the gymnasium, swimming pool, program rooms and fitness area which did not have heat or ventilation regulated appropriately. The controls were either ineffective or inoperable and therefore the spaces were often alternatively too hot or too cold or ineffectively ventilated depending on the season. The new system allowed occupant use with a web-based SCADA system control as well as automatic override of controls when not in use.</p> <p>The new upgrade to the building also made it possible to amalgamate services as the former Village Office operation was moved to the KYC building and municipal administration offices were set up in the basement area. The upgrade made this amalgamation of services possible and the Village Office, which was originally located in a separate building, was able to share in the fuel savings in effect in the KYC facility.</p>

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District of West Kelowna	LEED Certification of the NEW West Kelowna RCMP Detachment <p>The 1762.47-square-metre, LEED™ certified West Kelowna RCMP Detachment at 2390 Dobbin Road, was completed in October 2010 at a cost of \$8.46 million. The project, which started in June 2009, was the first major capital building project in the District of West Kelowna, which was incorporated in December 2007. The landmark RCMP Detachment is a benchmark achievement for this young municipality, being the first building, private or public, ever to receive LEED™ certification within West Kelowna's boundary. The District of West Kelowna displayed environmental, political and financial leadership by being the first to construct an energy efficient building, despite facing cost pressures, which might have led other organizations to eliminate environmentally responsible building components. The building serves as an example of the municipality's commitment to carbon emission reduction, sets a high construction standard in the community and aims to serve as a catalyst for environmentally friendly and energy efficient design and projects in the municipality.</p>
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Community Planning and Development	
City of Colwood	<p>A Residential Retrofit Program for Energy Efficiency and Renewable Energy Upgrades</p> <p>The City of Colwood prepared a Community Energy and Emissions Plan in 2009, which identified significant potential GHG emissions savings through energy retrofits to existing single family homes. The challenge was how to encourage individual homeowners to undertake retrofits – not just a few homeowners, but creating a community-wide movement towards clean and renewable energy options. To achieve this, Colwood built an extraordinary series of partnerships, with Royal Roads University, T’Sou-ke First Nation, BC Hydro, FortisBC, the provincial government, the West Shore Chamber of Commerce, local developers, Horizon Technologies, and others, framed around finding ways to encourage up to 1,000 homeowners and businesses in Colwood (one sixth of the housing stock) to convert to solar hot water heating, install ductless split heat pumps, and/or undertake other energy-saving retrofits. Funding from Natural Resources Canada is helping to make this possible, and already over 300 homeowners have expressed interest in participating in the project and its incentive program, even though installations have only just begun. The City of Colwood is showing leadership in many aspects: it is the most significant retrofit program of its kind in Canada; it is the pilot project for ductless split heat pumps in British Columbia; and it will be a pilot for the repayment of energy retrofits through utility bills. The City is showing municipal leadership through installation of solar hot water and solar photovoltaic systems at its Fire Hall with a demonstration area available to the public to show how both systems work and the benefits they provide.</p>
Peace River Regional District	<p>Regional Collaboration between Five Local Governments for Energy and Emissions Planning</p> <p>Regional Collaboration between Five Local Governments for Energy and Emissions Planning</p> <p>This application is in regard to a collaborative energy and emissions planning initiative involving 5 local government jurisdictions: 1) Peace River Regional District (PRRD); 2) District of Taylor; 3) District of Tumbler Ridge; 4) District of Chetwynd; 5) Village of Pouce Coupe. The result has been a corporate and community energy plan for each jurisdiction and regional synthesis plans for all 8 local government jurisdictions in the PRRD. The objective achieved, was to facilitate the capacity of all local governments in the PRRD in meeting the Bill 27 and Climate Action Charter obligations, within a collaborative regional framework that could support implementation of actions.</p> <p>Additional results have included:</p> <ul style="list-style-type: none"> - Corporate and Community energy and emissions inventories for each participant. (5) - 20 local government building evaluations (Opportunity Assessments). - Energy and Emissions modeling tool for each local govt (5) <p>Copies of all reports can be view on our website at: http://www.prrd.bc.ca/services/development/projects/community_energy_plan/index.php</p>

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City of Richmond	<p>Creating the City-owned Alexander District Energy Utility</p> <p>In November 2010, City Council approved construction of the first district energy system in the City of Richmond – the Alexandra District Energy Utility (ADEU). ADEU will provide renewable geothermal energy for space heating and cooling and domestic hot water in serviced buildings. It will be owned and operated by the City; the City has partnered with the private sector to design and build the first phase. At the full build out, ADEU will service 3,100 residential units (total 3.9 mil. sq. ft. of residential, commercial, office and institutional space) with 19 MW peaking load.</p> <p>With the ADEU, the City has taken a leadership role to shift towards sustainable energy systems which reduce dependency on non-renewable energy sources and reduce greenhouse gas emissions. Sustainable energy systems are a key component of a sustainable community, which is central to the City of Richmond’s long-term community development strategy. It is estimated that at build out, ADEU will result in reduction of 2,000 to 6,000 tonnes of GHG annually, which is equivalent to moving 700 to 2,000 cars off the road each year.</p> <p>ADEU is planned to be the first of many sustainable district energy systems in Richmond. The River Green DEU and North City Centre DEU are in the final stage of the due diligence phase, while effluent heat recovery from the Lulu Island Waste Water Treatment Plant has been assessed for its potential to provide thermal energy source for a Steveston DEU.</p>
Squamish Lillooet Regional District	<p>The Energy Resilience Task Force</p> <p>In 2010, the Board of Directors at the Squamish-Lillooet Regional District (SLRD) took a bold political step and embarked on the first regional Energy Resilience (Peak Oil) Task Force (ERTF) in Canada. The Task Force is one component of the SLRD’s Climate and Energy Action Planning process that is aimed at both reducing greenhouse gases and building regional resilience in the face of climate change and peak oil.</p> <p>The SLRD’s Energy Resilience Task Force has brought together over 20 knowledgeable residents and stakeholders from within the SLRD from a wide variety of sectors in order to generate ideas and formulate solutions in order to build resilience in the face of declining liquid fuel supplies. The Task Force was charged with the task of reviewing credible information about peak oil and fossil fuel depletion and was provided with a significant reading and resource list. Guest speakers were brought in to speak to the Task Force at each meeting, in order to provide them with information on key subjects. Taking into consideration issues of equity and the environment, the Task Force investigated and discussed all sectors of the region, including transportation, built form and land use, agriculture, emergency and social services, resource issues, the economy and tourism.</p> <p>The final report was approved in principle by the SLRD Board and an implementation plan has been created in order to tie the recommendations strategically to the SLRD staff work program and budget process. The implementation plan spans a 4 year time horizon.</p> <p>The ERTF represents the first time that a regional government in Canada has embarked on planning for peak oil and energy descent</p>

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City of Surrey	<p>Development of the City Centre District Energy System</p> <p>To demonstrate energy policy leadership, and meet its GHG reduction commitments, the City of Surrey has charged forward in the implementation of district energy (DE) in its City Centre area. The City Centre DE Strategy and Surrey Central DE Feasibility reports provide a framework for an integrated renewable DE network that will provide thermal energy for use in residential, commercial and institutional buildings in the City’s growing downtown core.</p> <p>Surrey Mayor and Council have recently authorized the establishment of a City-owned DE utility to manage and operate the planned DE system. Funding for the early phase of DE system has been approved and construction is currently underway on the first renewable energy centre located at the New City Hall.</p> <p>This initial phase of DE will result in significant energy savings and GHG emissions reductions while providing long-term financial returns on the City’s investment in renewable energy.</p>
City of Vancouver	<p>The Greenest City Action Plan</p> <p>Ambitious. Necessary. Possible. Vancouver’s ten Greenest City goals, 2020 targets and the action plans that accompany them set out a vision that is critical to a healthy and sustainable future for the city.</p> <p>The Greenest City Action Plan (GCAP) adopted by Council in July 2011 describes the path Vancouver will need to take to achieve a bold vision - to become the greenest city in the world by 2020. It sets direction to achieve ambitious targets in ten goal areas: green economy, climate leadership, green buildings, green transportation, zero waste, access to nature, clean water, lighter footprint, clean air and local food.</p> <p>The GCAP was the result of over two years of consultation with residents, sustainability thought leaders, city staff, non-profit organizations, industry, government, business leaders, academia and more. It represents thousands of hours of volunteer time and input from more than 35,000 people.</p> <p>The plan is particularly remarkable for the level of cross-departmental and cross-organizational integration and collaboration that was involved in its development and will aid the achievement of the targets. More than 70 City staff worked in inter-departmental teams to create the action plans drawing on input from the public and external advisory groups. This coordinated approach enabled opportunities to surface that achieve multiple targets with a single strategy. Although this is not explicitly a land use plan, smart land use planning has long been recognized as critical in the achievement of a sustainable city. Smarter land use, density and design will be essential to achieving many of the targets in GCAP.</p>

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Collaboration	
Carbon Neutral Kootenays Project	<p>Regional Collaboration for Carbon Neutrality</p> <p>The Carbon Neutral Kootenays (CNK) project is a partnership between three regional districts (Central Kootenay, East Kootenay, and Kootenay Boundary) and Columbia Basin Trust (CBT), a public sector organization. It is a unique example of a locally-focused, collaborative initiative that has the primary mandate of supporting public organizations in achieving carbon neutrality.</p> <p>In 2008, the four funders recognized that, due to the rural nature of Kootenay communities, many local governments lacked the capacity and funding to effectively implement emissions reductions, or to otherwise meet their Climate Action Charter commitments. The regional districts and CBT agreed that a joint project would help efficiently guide all Kootenay local government towards climate action.</p> <p>The project's goals are defined as "Measure, Act, Lead". Phase 1 of CNK involved:</p> <ul style="list-style-type: none"> - compiling energy use and GHG inventories for all participating local governments; - engaging local government staff and elected officials through outreach and education initiatives; and, - developing Corporate Greenhouse Gas Emissions Reduction Plans for the regional districts. <p>The Phase 2 (current) focus involves implementing regional district action plans, supporting development of municipal action plans, maintaining inventories, facilitating collaboration on GHG reduction actions, and identifying local offset opportunities.</p> <p>As a result of the project, all participating organizations (3 regional districts, 28 municipalities, 5 First Nations) have made solid progress toward reducing emissions and becoming carbon neutral. In addition to achieving corporate climate action goals, CBT and Kootenay local governments have demonstrated leadership to area residents and provided motivation for similar activities at the community level.</p>

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City of Colwood	<p>A Collaborative Framework for the Solar Colwood Initiative</p> <p>The City of Colwood's Solar Colwood initiative is a unique collaboration between the City and over a dozen partners, including Royal Roads University, the Province of British Columbia and BC Hydro. The program goal is to demonstrate whole community change to clean and renewable energy sources, including solar hot water, ductless split heat pumps and electric vehicle charging infrastructure. This is coupled with encouraging energy- and money-saving retrofits to homes in the community. The City of Colwood is showing leadership in many aspects. It is the most significant retrofit program of its kind in Canada (targeting 1000 homes in this 6000 home community). In partnership with BC Hydro, Colwood is piloting ductless split heat pump technology to displace electric resistance heat in British Columbia and it will be the first pilot for the repayment of energy retrofits through utility bill savings. Royal Roads University is leading the research and marketing aspects of the program, and the Province is providing assistance through its LiveSmart BC program as well as support for the electric vehicle infrastructure. The City is showing municipal leadership through installation of solar hot water and solar photovoltaic systems at its Fire Hall; and Royal Roads University has installed solar hot water system on its residential buildings. Funding from Natural Resources Canada is helping to make this possible, and already over 300 homeowners have expressed interest in participating in the project and its incentive program, even though installations have only just begun.</p>
District of Squamish	<p>Creating a Template for District Energy Governance Workshops</p> <p>Since 2007, the District of Squamish has been considering the potential of integrating an alternative energy system in the downtown core and surrounding brownfield redevelopment areas. In July of 2010, a full feasibility study was completed, with findings determining that Squamish is a good candidate for a Neighbourhood Energy Utility (NEU) system from a triple-bottom-line perspective. Partners in the feasibility study included BC Hydro and Lonsdale Energy Corporation.</p> <p>Following the feasibility study, Squamish Council was interested to know how any potential NEU development could take local government-specific considerations into account, such as: borrowing capacity, staffing and labour issues, infrastructure installation, ownership and maintenance, greenhouse gas reduction targets, and economic development potential.</p> <p>In the spirit of pursuing the established partnership with Squamish, BC Hydro identified the opportunity for Squamish and BC Hydro to partner in a workshop template to determine Ownership and Operating Options, with Squamish as the pilot community.</p> <p>Working with Compass Resource Management as the consultant, the components of a triple-bottom-line workshop to determine the best ownership and operating structure for a NEU were established. Another key consideration was the inclusion of senior technical staff, to ensure that Council had access to technical considerations, and the ability to ensure all the decisions they were making were consistent with the Squamish context.</p>

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<p>City of Vancouver</p>	<p>Collaborating for Sustainability: The Vancouver and UBC Partnership</p> <p>The City of Vancouver has been actively seeking out and engaging with academic partners to collaborate on making advancements in Vancouver's ambitious goal to be the Greenest City in the world by 2020.</p> <p>Many of the strategies and actions described in the Greenest City Action Plan (approved July 2011) can only be delivered through City led policy, programs and regulations in relationship with other levels of government, non-profit and private sector partners, as well as the community at large. The City is very conscious of the extent to which the City will need to work with partners, and how essential these partnerships will be, to achieve the Greenest City targets.</p> <p>The University of British Columbia is a leader in sustainability teaching, research, technology, community development, and workforce education. UBC and the City of Vancouver have signed an MOU as a framework for collaborating on sustainability efforts. Several innovative collaborative projects are underway, helping to foster knowledge-sharing and providing real-world experience for students. From academic research on public engagement techniques, to student mentorships with City staff, these collaborations will have a positive lasting impact on Vancouver for years to come.</p>
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