

Actions Taken to Reduce Energy Consumption and GHG Emissions in 2011

GENERAL INFORMATION

Fill in the boxes below

Name of Local Government
Member of Regional District (RD)
Regional Growth Strategy (RGS) in region
Population

City of Abbotsford
Fraser Valley Regional District
Yes
140,000

Report Submitted by

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COMMUNITY-WIDE ACTIONS

1.1 MEASURE

Community Wide Measurement Actions

QUESTION

Have you been using the *Community Energy and Emissions Inventory* (CEEI) to measure progress? What else have you been using instead of/in addition to CEEI?

ANSWER

Yes

ADDITIONAL INFORMATION

Assigned staff and worked with the Fraser Valley Regional District and a consultant to understand key components of the Community Energy and Emissions Inventory and its limitations. Staff identified where energy is being used and emissions created and included "Agricultural Methane" as an additional sector in the inventory. GHG reduction targets were established and integrated into the Official Community Plan in May 2010. Further work on community GHG baselines, forecasts and actions will be undertaken as part of a Community Energy and Emissions Plan (CEEP) that will be developed in 2012.

1.2 PLAN

Community Wide Targets

QUESTION

Do your OCP(s) have targets, policies and actions to reduce GHG emissions, as per the requirements under the *Local Governments Act* (LGA)? If yes, please identify the targets set. If no or in progress, please comment.

ANSWER

Yes

ADDITIONAL INFORMATION

*Buildings Target: 15% by 2025, 35% by 2040 (per-capita reduction)
Transportation Target: 20% by 2025, 50% by 2040 (per-capita reduction)
Solid Waste Target: 20% by 2025, 40% by 2040 (per-capita reduction)
Agricultural Methane Target: 25% by 2025, 50% by 2040 (per-capita reduction)
City-wide Target: 20% by 2025, 45% by 2040 (per-capita reduction)
See the OCP, Part 3, Section 3.3 for a list of OCP policies supporting GHG Targets, Sequestration and Adaptation
<https://abbotsford.civicweb.net/Documents/DocumentList.aspx?ID=16829>*

If you are a Regional District, does your RGS have targets, policies and actions to reduce GHG emissions, as per the requirements under the *Local Governments Act* (LGA)? If yes, please identify the targets set. If no or in progress, please comment.

1.3 REDUCE

Supportive Community-Wide Actions

Supportive Community-Wide Actions

Broad Planning (e.g. creation/revision of OCPs, CEPs, transportation plans)

Building and Lighting (e.g. developed green building policy, increased density in the downtown)

Energy Generation (e.g. signed on to provincial 'solar ready' regulation, explored options for bioheating for buildings)

Green Space (e.g. developed urban forestry policy, adopted park acquisition policy)

Transportation (e.g. developed sustainable transportation plan, completed bicycle master plan)

Waste (e.g. introduced composting and recycling education programs)

Actions Taken in 2011

Initiation of a Community Sustainability Strategy, a Community Energy and Emissions Plan, continued work on a Transit Future Plan, and adoption of an Agriculture Strategy.

Development of a U-District Vision which will include encouragement of transit-oriented development, alternative transportation, reduced building-related GHG emissions and energy consumption along with examining potential renewable energy sources.

Conducted a District Energy Pre-feasibility Study for the Civic Precinct and surrounding area. Bylaw and OCP amendments to allow the start-up of a small-scale anaerobic digester.

Commence work on an Sumas Mountain Environmental Management Plan that will support land use decision-making that balances growth with the need to protect natural areas. Commence work on the production of guidelines to assist with the implementation of Environmental Development Permits.

Continued work on a Transit Future Plan. Support of transit oriented development with enhanced pedestrian and cyclist-friendly public realm, review of development applications to ensure transit-friendly components are included.

Conducted composting and recycling education and public awareness initiatives. Completed a residential waste audit. Continued support for innovative waste management projects.

Proposed Actions for 2012

Completion of the Community Energy and Emissions Plan and the Transit Future Plan, continued work on the Community Sustainability Strategy, and commence OCP review/update and development of a Water Efficiency Plan for the region.

Continued work on the U-District Vision, commence work on design guidelines/checklists which will include sustainability components.

Commence work on a District Energy Feasibility Study for the Civic Precinct and surrounding area. Continued support and promotion of new alternative energy sources, especially anaerobic digestion opportunities in the agriculture sector.

Continued work on the Sumas Mountain Environmental Management Plan and the production of guidelines to assist with the implementation of Environmental Development Permits.

Completion of the Transit Future Plan. Continued support of transit oriented development with enhanced pedestrian and cyclist-friendly public realm, review of development applications to ensure transit-friendly components are included.

Continue education and public awareness initiatives. Develop ICI Recycling program. Continued support for innovative waste management projects.

Water/Sewer (e.g. participated in water smart initiatives, implemented Water Action Plan, introduced rebates on low flush toilets)

Water conservation education and awareness campaigns in the form of workshops, advertising and community-based social marketing. Offered irrigation and landscape assessments for residential municipal water users, conducted ICI water audits, and continued with high efficiency toilet and washing machine rebates (partnered with BC Hydro on the washing machine rebates). Grant provided to the Mission School District for retrofitting urinals.

Expand the ICI water audits and residential/commercial irrigation and landscape assessment program. Continuation of residential rebate program. Implementation of ICI rebate program. Investigate potential of a rainwater harvesting program and Blue Built Program. Grants for both Abbotsford and Mission School Districts for retrofits to low-flow fixtures.

Other Actions

Plan to develop a Climate Change Adaptation Plan. Plan to establish an Economic Prosperity Task Force that will amongst other tasks, explore the opportunities to promote and support the transition to a Green Economy.

Direct Community-Wide Actions

Community-Wide Direct Actions

Buildings (e.g. implement use of sustainability checklists and development permit guidelines for new buildings)

Energy Generation (e.g. implement district energy, geothermal, solar)

Transportation (e.g. implement bike lanes, pedestrian paths, upgrade transit service and infrastructure, improve roads, parking fees etc.)

Actions Taken in 2011

Partner in a LEED Gold social housing apartment building.

Major transit expansion (12,000 extra hours and 5 new buses). Improvements made to 30 transit benches and one transit shelter. Development of new enhanced transit stops. Continued construction of additional accessible transit stops (tactile strip and grab bars). Eleven sidewalk construction projects totalling 2000m in length. Installation of 3 pedestrian crosswalk signals and 1 staggered crosswalk. Construction of 3 traffic roundabouts, reducing vehicle delays and idling.

Proposed Actions for 2012

Continued development of new enhanced transit stops and review of development applications for transit-friendly compatibility, planning of transit route re-alignment to service the new High Street development.

Waste (e.g. introduce composting and recycling programs)

Expanded pilot project for curbside collection and composting of food waste and optimization of participating.

*City-wide expansion of curbside collection and composting of food waste (in addition to existing yard waste program).
Implementation of program to encourage increased recycling in the business sector.*

Water/Sewer (e.g. implement water conservation and reduction initiatives)

Completed installation of smart water meters. Introduced residential tiered seasonal water rates and bi-monthly utility billing.

Review ICI water rates.

Green Space (e.g. plant trees, conserve forest etc.)

Implementation of the City's Tree Protection and Streamside Protection Bylaws resulting in the conservation of trees and riparian zones. Planted trees in City Parks. 1700 linear meters of riparian enhancement and 450 linear meters of in-stream enhancement.

Continue implementing the City's Tree Protection and Streamside Protection Bylaws. Continue planting trees in City Parks and enhancement efforts along and within watercourses.

Other Actions

Implement select recommendations from the CEEP (recommendations will cross several categories, i.e. buildings, energy generation, transportation, waste, water/sewer, even green space).

1.4 COMMUNITY-WIDE INNOVATION

Is there any activity that you have been engaged in over the past year(s) that you are particularly proud of and would like to share with other local governments? Please describe and add links to additional information where possible.

Answer

Recent installation of smart water meters, initiating seasonal tiered water rates and implementing bi-monthly billing has resulted in increased resident participation in conservation programs: a 30% increase in the uptake of rebates, over 700 indoor water saving kits were sold after the first bi-monthly bill was distributed and a waiting list has been created for the irrigation and landscape assessment program.

CORPORATE ACTIONS

2.1 MEASURE

Corporate Measurement Actions

QUESTION

What steps has your local government taken toward completing its corporate emissions inventory (e.g. corporate assets gathered related to energy and fuel data and calculated GHG emissions from energy use)?

Answer

A corporate Energy and Emissions Baseline Inventory was completed by Pembina Institute in 2006. Subsequently, staff have developed/modified software tools to allow the production of energy and emissions inventories for 2007 through 2010 and for the current year, 2011, with recorded data based on the "traditional service areas" identified by the Province.

What tool are you using to measure, track and report on your corporate emissions (e.g. SMARTtool, other tools including excel spreadsheets)?

An excel-based spreadsheet.

2.2 REDUCE

Supportive Corporate Actions

Supportive Corporate Actions

Broad Planning (e.g. developed corporate climate action plan)

Actions Taken in 2011

Council endorsement of Energy Policy. Corporate Climate Change Policy and Action Plan (adopted in principle 2006). Continued partnering with BC Hydro to access funding for an Energy Manager to focus on Energy Savings. Continued work from the Green Team.

Proposed Actions for 2012

Update Corporate Climate Change Policy from 2006. Develop CARIP Rebate Policy. Develop Carbon Neutral Plan. Continued partnering with BC Hydro for funding of an Energy Manager. Continued work from the Green Team.

Building and Lighting (e.g. developed energy reduction plan for all corporate buildings)

Continued consultation with BC Hydro on implementation of energy efficiency opportunities. Building and lighting energy efficiency reports and presentations to employees.

Continued consultation with BC Hydro on implementation of energy efficiency opportunities. Continued building and lighting education and awareness.

Energy Generation (e.g. undertook feasibility study of green energy generation for civic buildings)

Continued preparation for the replacement of the existing JAMES Plant co-gen system with a new methane co-gen system that maximizes the recovery of the biogas.

Transportation (e.g. created anti-idling policy for city vehicles, bike to work week promotion)	Implementation of anti-idling policy. Continued examination of hybrid technology. Continuation of carpool program including dedicated carpool parking spots. Green Team developed on-line commuting map tool where City employees could search for carpool, walking, and/or biking partners. Participation in ride-share week and bike-to-work week.	Continued implementation of anti-idling policy. Explore potential to increase renewable content of diesel from B5 to B15-20. Continuation of carpool program and participation in ride-share week and bike-to-work week.
Waste (e.g. completed waste audit of City Hall)	Green Team support and encouragement of food waste composting at all City meetings/functions. Waste reduction education and awareness.	Continued support for reduced generation of waste at City meetings/functions and waste reduction education and awareness.
Water/Sewer (e.g. completed study of sewer and water energy use)	Continued development of a carbon-reducing ammonia removal pilot project (Anammox).	Continued development of a carbon-reducing ammonia removal pilot project (Anammox).
Other Actions		Plan to develop a Climate Change Adaptation Plan.

Direct Corporate Actions	Actions Taken in 2011	Proposed Actions for 2012
Building and Lighting (e.g. energy efficiency retrofits to municipal buildings)	Numerous building and lighting energy efficiency retrofits (i.e. greater than 15) implemented at several corporate facilities. PC management at City Hall. Field lighting control at Exhibition Park.	Numerous building and lighting energy efficiency retrofits planned for corporate facilities including improving controls of the pool, ice plant and HVAC at ARC, energy studies of the Airport and the Entertainment Centre.
Energy Generation (e.g. implemented heat recovery systems, solar)	Install heat reclaim system on exhaust at MSA arena. Re-activated existing heat reclaim systems on arena chiller plants and are using some of the recovered heat to heat hot water for the Zambonis.	Increased methane capture and conversion to electricity at the JAMES Plant.
Fleet (e.g. anti-idling policies for fleet vehicles, purchasing of hybrid)	Fleet reduction where under-utilized vehicles were removed from pool. Continued use of B5 bio-diesel for heavy trucks/equipment fuelling at the Works Yard. Continued use of LED lights in emergency vehicles to reduce battery drawdown and need for idling. Initiate replacement of old pre-Tier 3 diesel equipment to voluntarily comply with Metro Vancouver "Public Fleet Non-Road Diesel Emission Standards". Radio read of water meters to reduce driving and idling.	Expand acquisition of hybrid and alternative fuel technology for cars and trucks. Continued fleet reduction through removal of under-utilized vehicles from the pool. Continued use of B5 bio-diesel for heavy trucks/equipment fuelling at the Works Yard. Continued use of LED lights in emergency vehicles to reduce battery drawdown and need for idling. Install inverters to cut down on unnecessary idling. Install timers on truck plug ins for engine block heaters. Continued replacement of old pre-Tier 3 diesel equipment to voluntarily comply with Metro Vancouver "Public Fleet Non-Road Diesel Emission Standards". Continued radio read of water meters to reduce driving and idling.

Waste (e.g. introduction of composting and recycling programs and education)

Food waste composting program expanded to all employee areas of City facilities. Pilot project on washroom paper towel composting program. Moved individual workstation garbage pick-up schedule from daily to weekly. Expanded recycling collection programs.

Continuation of the food waste composting program and weekly workstation garbage pick-up. Further expansion of recycling programs.

Water/Sewer (e.g. initiated water conservation and reduction initiatives)

Expanded production of the enhanced Val-E-Gro bio-solid-based soil. Conducted water audits of 4 municipal facilities and are currently undergoing retrofits. Rainwater harvesting systems installed at the Works Yard for filling Parks water trucks. Rainwater harvesting system installed at the Abbotsford Entertainment and Sports Center for making arena ice.

Continued expansion of the production of the enhanced Val-E-Gro bio-solid-based soil. Investigating uses of rainwater for other applications at municipal facilities (e.g. toilet flushing, pool makeup and irrigation).

Green Space (e.g. planting of trees)

Continued use of on-site groundwater source with direct discharge to aquifer for Mill Lake water spray park (replaced energy intensive municipal water source for park).

Continued use of on-site groundwater source with direct discharge to aquifer for Mill Lake water spray park (replaced energy intensive municipal water source for park).

Other Actions

2.3 CORPORATE INNOVATION

Is there any activity that you have been engaged in over the past year(s) that you are particularly proud of and would like to share with other local governments? Please describe and add links to additional information where possible.

Answer

Using collected rainwater for filling Parks watering trucks where a 35,000 litre system was installed at the Works Yard to fill Parks watering trucks for watering City boulevards and street trees. Installing a 20,000 litre rainwater harvesting system at teh Abbotsford Entertainment and Sports Centre to make arena ice is the first professional arena to use rainwater for ice.