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Sustainability + Greenhouse Gas Reduction Targets

Sustainability in this OCP

This Plan recognizes that community well being is dependent upon the well being of the environment.

Sustainability is integrated throughout the urban growth and land use plan, and each of the major policy directions, ranging from transportation and housing to natural areas and agricultural lands. For example, the largest source of municipal greenhouse gas emissions in Abbotsford is transportation, and one of the major priorities of this Plan is to embrace a multi-modal city through transformative land use, urban design, and transportation policies.

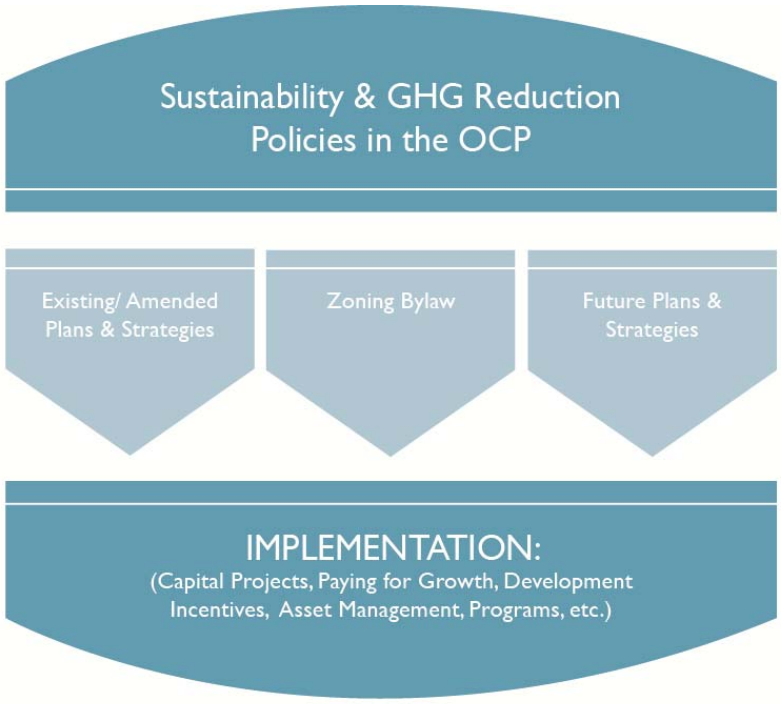
In 2013, the City adopted the Community Sustainability Strategy intended to be a guiding document providing a coordinated approach to sustainability. It established a sustainability vision through a set of 'future states' intended to be integrated into City policy.

- Our community is healthy and enjoys a good quality of life
- Our community's resources and assets are managed effectively and efficiently
- Our natural environment thrives
- Our local economy is prosperous
- Our community is compact, connected and complete

The Community Sustainability Strategy was used as a guiding document in the creation of the vision, policies and regulations of this Plan and the objectives of the strategy are embedded throughout.

As the overarching growth and development approach for the City, this OCP will help move Abbotsford toward sustainability as other municipal regulations and plans are updated and brought into alignment with the OCP, including the Zoning Bylaw, existing and new plans and strategies, and ensuing implementation efforts.

Figure I.4: Relationship Between OCP Sustainability Policies and Other City Tools



Greenhouse Gas Reduction Targets

COP21

In November, 2015, the Conference of Parties (COP) to the United Nations Framework Convention on Climate Change's 21st annual meeting took place in Paris. At this conference, The Paris Agreement was reached, where Canada and the majority of countries worldwide agreed to limit global warming to well below 2°C, and continue all efforts to limit global warming to below 1.5°C. Each country agreed to submit Intended Nationally Determined Contributions (INDCs), to review targets every 5 years, and increase as required.

How does COP21 relate to this OCP?

Canada's current INDC pledges a 30% reduction in Greenhouse Gas (GHG) emissions by 2030. A joint effort by all jurisdictions, from federal to provincial to local government, will be necessary to reach this goal. The Province of British Columbia is already a leader in this effort. In 2008, the Provincial Government enacted the Local Government (Green Communities) Statutes Amending Act ('Bill 27'). This legislation requires local governments in British Columbia to include GHG reduction targets in their OCPs, along with supporting policies to achieve these targets.

Cities and their residents account for almost half of GHG emissions in British Columbia. By including targets in their OCPs, local governments like Abbotsford can contribute to meeting the Province's GHG reduction targets. Action at the local government level has already helped the Province reach its first interim target of a 6% GHG reduction below 2007 levels by 2012.

Abbotsford's GHG Reduction Targets

The targets set by the City of Abbotsford in 2010 have been updated through the development of this OCP, based on the Province of BC's Community Energy and Emissions Inventory (CEEI). The updated targets in *Table I.2* aim to reduce GHG emissions by 40% by 2040, when Abbotsford's population is estimated to be approximately 200,000 residents. Interim targets for the year 2025 have been included to gauge progress towards the 2040 goal. *Figure I.5* shows Abbotsford's 2007 GHG inventory, against which future GHG emissions reduction targets are compared.

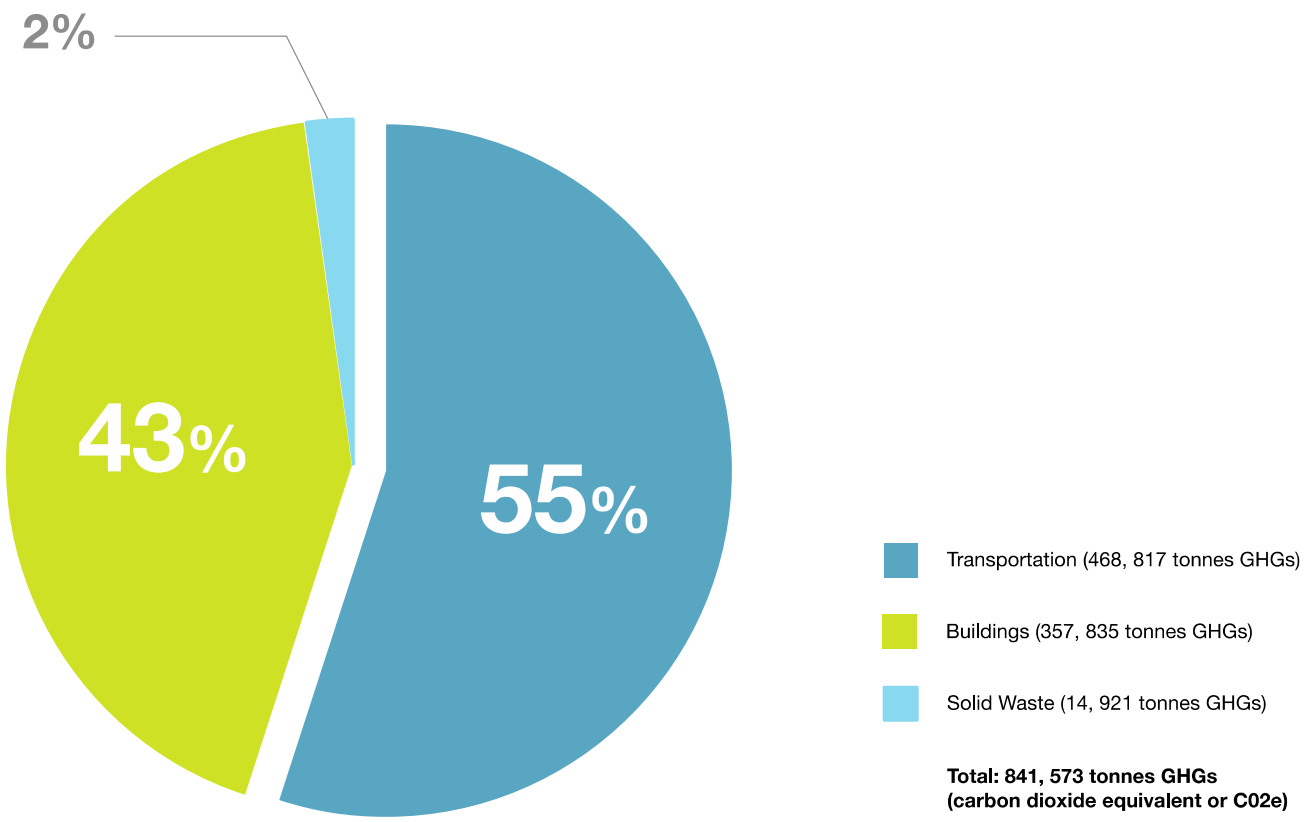
Although these targets relate specifically to carbon dioxide emissions, this Plan also contains policies about protecting air quality in the Fraser Valley airshed and working with the agricultural sector for improved farm management related to methane emissions, as described further in Part III.

Table I.2: City wide and Sector GHG Targets (per-capita, below 2007 City Inventory)

Target Year	City Wide Target	Buildings Target	Transportation Target	Solid Waste Target
2025	20%	15%	20%	20%
2040	40%	35%	50%	40%

*The 2010 targets included an additional target for agricultural methane, which has been removed as this data is not tracked in the provincial Community Energy and Emissions Inventory.

Figure I.5: City of Abbotsford's 2007 GHG Inventory



Progress So Far (as of 2015)

The City of Abbotsford tracks GHG emissions using the CEEI, which monitors GHG emissions from transportation, buildings, and solid waste. The most recent CEEI data available is for 2010. Projections based on the 2010 CEEI data, the City's transportation model outputs and the 2013 Solid Waste Annual Report were derived to make estimates for 2015. According to these projections, as of 2015, Abbotsford has achieved a 10% reduction in city wide CO2e (t) emissions per capita over 2007 levels, including a 16% reduction related to buildings, a 5% reduction related to transportation, and a 31% reduction related to solid waste (*Table I.3*).

Table I.3: Percent Reduction in CO2e (t) (per-capita, below 2007 City Inventory)

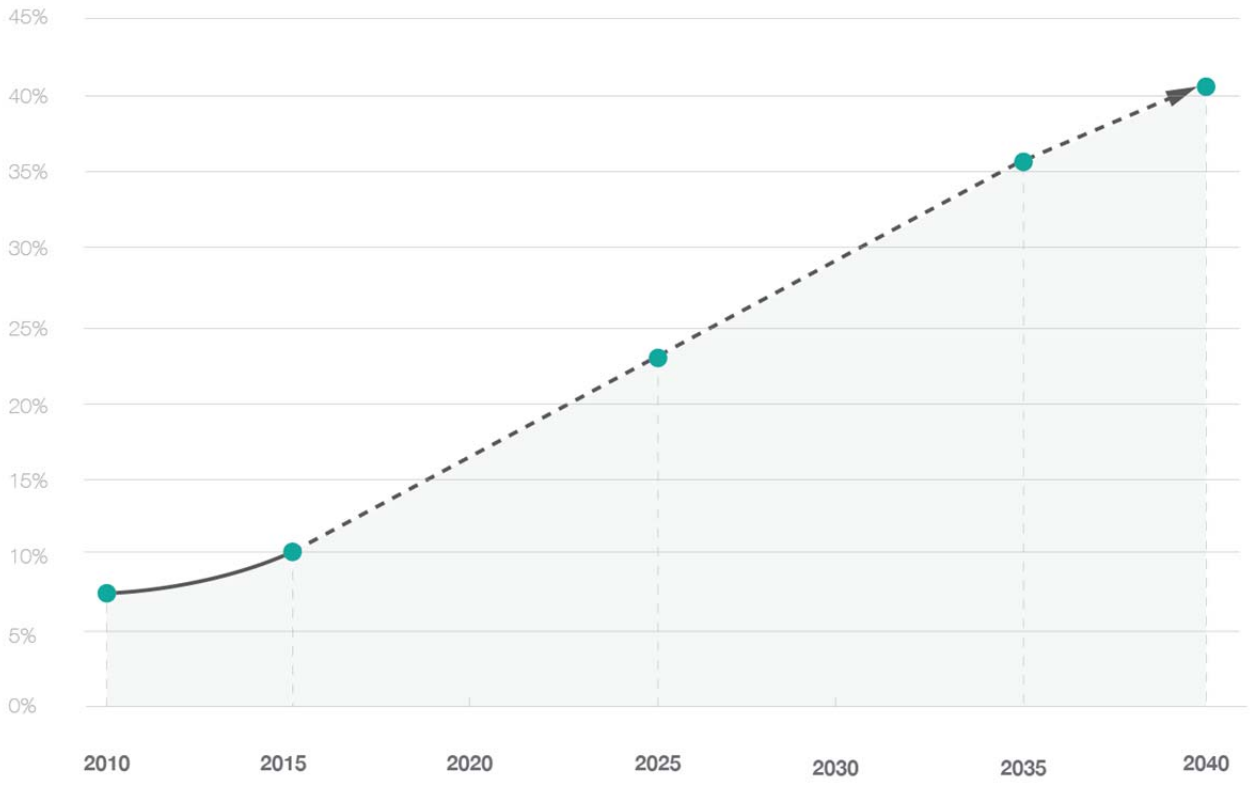
Year	Population	City Wide GHG Reduction	Building GHG Reduction	Transportation GHG Reduction	Solid Waste GHG Reduction
2010	138,179	7%	10%	4%	30%
2015	140,000	10%	16%	5%	31%

Looking Forward to 2040

As part of the background research and analysis for this OCP, the City of Abbotsford looked forward to reaching a population of 200,000, and considered the impacts of different development and land use scenarios on GHG emissions. Taking improvements into account with respect to building energy efficiencies, vehicle efficiencies, solid waste diversion rates, and currently planned transportation infrastructure, a 38% reduction in city wide GHG emissions would be anticipated by 2040.

When impacts on transportation from the additional growth policies included in this OCP are taken into consideration, slightly greater reductions are anticipated: 41% by 2040 (*Figure I.6*). This analysis demonstrates that Abbotsford's target of a 40% reduction in city wide GHG emissions by 2040 is realistic for the community to achieve. Implementing the policies and strategies laid out in this OCP will be a critical component of Abbotsford's progress towards achieving the community's GHG reduction targets over the next 25 years.

Figure I.6: Projected Percent Reduction in CO2e (t) (per capita, below 2007 City Inventory)



Further GHG reductions are possible through a variety of additional strategies such as the implementation of district energy systems, adoption of renewable energy sources, and improvements to regional transit systems. Such strategies have not been included in current projections to 2040, but should be implemented over the next 25 years and would be expected to have significant positive impacts on the reduction of Abbotsford's city wide GHG emissions. In doing so, the City of Abbotsford could surpass its existing per capita GHG emissions reduction targets, and further support progress towards achieving provincial and federal targets for the necessary reduction of overall GHG emissions at the national scale.

OCP Policies Supporting GHG Reduction Targets

Parts II to IV of this OCP describe the City of Abbotsford's land use plan (Part II), associated policies (Part III), and strategies for implementation (Part IV), all of which contribute to the achievement of Abbotsford's GHG emissions reduction targets.

Part II presents the City's urban structure, growth plan, and land use plan, all guided by efficient land use management strategies that are anticipated to reduce vehicle use and help shift toward walking, biking, and transit, while accomplishing many other community goals.

Part III provides the detailed policies to support the land use plan, encouraging: the provision of diverse, affordable housing close to jobs and services; an accessible transportation system, that seeks to make walking, biking, and transit not only attractive but preferred options; and mixed use centres that provide the density, mix of uses, and connectivity necessary to further reduce vehicle travel and encourage other transportation options. Additional GHG emissions reductions are associated with policies to foster natural areas in both urban and rural parts of Abbotsford, expand the urban forest and ecological greenways, protect waterways and aquifers, conserve water, reduce solid waste, incentivize green building approaches, promote integrated stormwater management, and support local agriculture and food systems.

The implementation strategies described in Part IV will help ensure that the policies laid out in this OCP are accomplished through updates of other City plans and strategies that translate into GHG emissions reductions over the long term.