# Climate Change and Energy 12

## GOALS

- 12 (A) Victoria and Victorians are resilient to the impacts of climate change.
- 12 (B) Victoria relies on 100% renewable energy sources.
- 12 (C) All Victorians have equitable access to efficient, affordable and renewable energy options.
- 12 (D) New and existing buildings are energy efficient, and produce few greenhouse gas emissions.
- 12 (E) Transportation options reduce fossil fuel dependence, help conserve energy and produce low greenhouse gas emissions and other air contaminants.
- 12 (F) Greenhouse gas emissions associated with waste are eliminated.

## OVERVIEW

Climate change is one of the greatest challenges that we face today, and the impacts are already being felt in Victoria. With the release of the Sixth Assessment Report from the Intergovernmental Panel on Climate Change in 2021, there is no longer any doubt that the impacts of climate change are occurring in every region of the world and that the burning of fossil fuels and mass deforestation are the primary causes. The report makes clear that greenhouse gas emissions must be rapidly and aggressively cut before weather extremes worsen.

Responding to the threat of climate change by mitigating greenhouse gas emissions and building climate resiliency has become an increasingly high priority for cities. Cities are key contributors to climate change as urban activities are major sources of greenhouse gas emissions. Estimates from the United Nations Environment Programme identify cities as being responsible for 75% of global emissions, with transportation and buildings being among the largest contributors.

In 2018, the City of Victoria released its Climate Leadership Plan which committed to an 80% reduction in greenhouse gas emissions from the 2007 baseline year and a transition to 100% renewable energy by 2050. In 2019, Victoria declared a climate emergency, promising to take accelerated action on climate change and defined additional measures to reduce greenhouse gas emissions and achieve carbon neutrality by 2030.

Cities are well positioned to intensify efforts to reduce greenhouse gas emissions through efficient land use management and policies geared toward improving energy performance in buildings and supporting the transition to zero emissions vehicles and active transportation. These actions in turn contribute to complete, connected, and vibrant communities that can be enjoyed for generations to come. This plan advances these efforts through its growth management concept, targeting most new development to walkable areas rich in services, amenities and low carbon mobility options. The City has further supported climate action through the installation of electric vehicle charging stations, encouraging residential emissions reductions, implementing a comprehensive waste reduction strategy and advancing energy efficiency when designing and constructing new residential and commercial buildings.

Cities also play a vital role in adapting to the impacts of climate change through investment in infrastructure upgrades and by providing information, incentives and regulations that assist businesses and the community to increase their resilience to projected impacts. Because climate impacts occur at the local scale, adaptation efforts must be location specific and tailored to local circumstances and vulnerabilities. Adapting to climate change will require further collaborative problem solving and coordination across sectors, involving all orders of government, local partnerships and the broader community.

## BROAD OBJECTIVES

[SEE ALSO SECTION 7 – TRANSPORTATION AND MOBILITY AND SECTION 11 – INFRASTRUCTURE]

The climate change and energy policies of this plan address four broad objectives:

12 (a) That Victoria acts with urgency to mitigate climate change and adapt to its impacts by developing comprehensive strategies that are aligned with global efforts that limit global warning to 1.5 degrees Celsius.

12 (b) That climate change is mitigated through the reduction of greenhouse gas emissions associated with the built environment, transportation, waste and other sources of community green house gas emissions.

12 (c) That the community is prepared for climate change through adaptation planning that reduces climate change impacts, including, but not limited to, impacts on public health, property and the natural environment.

12 (d) That the community is supported in the transition away from fossil fuels to 100% renewable energy.

## CLIMATE CHANGE PLANNING

12.1 Continue and enhance partnerships with senior, regional and local governments, Indigenous communities, public agencies, community organizations, businesses and individuals for the efficient and effective coordination of climate change mitigation and adaptation planning, including maintaining an understanding of:

- 12.1.1 Greenhouse gas emissions; and,
- 12.1.2 Risks and vulnerabilities of local climate change impacts.

12.2 Continue to work with the Capital Regional District on coordination and integration of regional and local mitigation and adaptation planning.

12.3 Provide direction for climate change mitigation and adaptation planning and actions through the regular review and update of Victoria's climate related plans, policies and initiatives to continue to:

- 12.3.1 Guide the integration and consideration of climate change mitigation and adaptation into all City plans, policies and projects;
- 12.3.2 Identify and refine policies, targets and actions for reductions in greenhouse gas emissions by sector;
- 12.3.3 Identify and refine policies, targets and actions for the transition to 100% renewable energy;
- 12.3.4 Identify and refine policies and actions for climate change adaptation that strengthen community resilience to the projected impacts of climate change based on local risk and vulnerability assessments [SEE ALSO SECTION 10 – ENVIRONMENT AND SECTION 18 – EMERGENCY MANAGEMENT]; and,
- 12.3.5 Maintain a relevant understanding of community greenhouse gas emissions and sources and the City's progress toward meeting established targets; and,
- 12.3.6 Maintain a relevant understanding of local climate change impacts, including how diverse sectors and populations are affected.

12.4 Consider the principles of equity, diversity and inclusion in the City's climate change mitigation and adaptation planning.

12.5 Continue to explore the feasibility and effectiveness of the designation of Development Permit Areas for the purposes of:

- 12.5.1 Establishing objectives to promote the reduction of greenhouse gas emissions;
- 12.5.2 Establishing objectives to promote energy conservation;
- 12.5.3 Establishing objectives to promote water conservation;
- 12.5.4 Protecting development from hazardous conditions, such as sea level rise; and,
- 12.5.5 Protecting the natural environment, its ecosystems and biological diversity which may be affected by climate change impacts.

12.6 Consider climate change and energy resilience in infrastructure asset management with respect to maintenance, repair and replacement over time [SEE ALSO SECTION 11 – INFRASTRUCTURE].

## REDUCING GREENHOUSE GAS EMISSIONS

12.7 Enable and promote the reduction of community greenhouse gas emissions through:

- 12.7.1 Compact land use patterns such as walkable and complete, connected communities [SEE ALSO SECTION 6 – LAND MANAGEMENT AND DEVELOPMENT];
- 12.7.2 Transit-oriented development patterns and diverse transit service delivery models [SEE ALSO SECTION 6 – LAND MANAGEMENT AND DEVELOPMENT, SECTION 7 – TRANSPORTATION AND MOBILITY];
- 12.7.3 Networks and amenities for cyclists, pedestrians and other forms of personal mobility [SEE ALSO SECTION 6 – LAND MANAGEMENT AND DEVELOPMENT, SECTION 7 – TRANSPORTATION AND MOBILITY];
- 12.7.4 Expansion of the City-owned public electric vehicle charging network to support the transition to zero emissions vehicles [SEE ALSO SECTION 7 – TRANSPORTATION AND MOBILITY];
- 12.7.5 Implementation of the British Columbia Energy Step Code;
- 12.7.6 Promotion of energy efficiency, building performance measures and carbon pollution standards for new building construction;
- 12.7.7 Development of a suite of resources and programs to support deep energy retrofits of existing buildings;
- 12.7.8 Reduced community waste streams that contribute to landfill emissions [SEE ALSO SECTION 11 – INFRASTRUCTURE AND SECTION 17 – FOOD SYSTEMS];
- 12.7.9 Implementation of zero waste strategies [SEE ALSO SECTION 11 – INFRASTRUCTURE]; and,
- 12.7.10 Demonstration of leadership on corporate climate initiatives to encourage community action.

## ENERGY CONSERVATION AND EFFICIENCY

12.8 Continue to work with the Capital Regional District on energy conservation and efficiency.

12.9 Work with the Capital Regional District, utility providers, the private sector and community organizations to encourage energy conservation and efficiency.

12.10 Engage residents, business and community groups to increase public literacy and community initiatives that foster and result in reduced household and workplace energy consumption in Victoria and the Capital Region.

12.11 Work with community and business partners to explore opportunities for on-site technologies that re-use waste heat and to generate energy from waste recovery.

## RENEWABLE ENERGY TRANSITION

12.12 Support and enable the feasibility of renewable energy at the district scale through objectives and policies for land management and development in this plan, that [SEE ALSO SECTION 6 – LAND MANAGEMENT AND DEVELOPMENT]:

- 12.12.1 Encourage large-scale mixed use development with adequate density to support district energy systems, and where energy demand is diverse;
- 12.12.2 Consider all available tools and incentives that could enable and support on-site renewable energy technology and district energy systems;
- 12.12.3 Explore opportunities for district energy systems and identify effective and appropriate locations for facilities; and,
- 12.12.4 Work with the Capital Regional District, utility providers, businesses and private developers to explore the feasibility of renewable energy as a utility on a district scale.

12.13 Consider opportunities to enhance the regulatory environment to support local energy generation capacity and distribution systems that use renewable energy sources such as solar or waste heat to mitigate climate change and increase community resilience.

12.14 Support and enable fuel switching from fossil-based energy sources to renewable energy sources in buildings and transportations systems through:

- 12.14.1 Enabling access to electric vehicle charging infrastructure;
- 12.14.2 Managing rights-of-way to incentivize zero emissions vehicles;
- 12.14.3 Providing incentives and increasing awareness of renewable energy alternatives for existing buildings; and
- 12.14.4 Promoting the use of renewable energy technologies as they become available.

## BUILDING PERFORMANCE

12.15 Ensure that all new civic facilities are renewably powered and that retrofits to existing civic facilities are aligned with the City's climate plans, policies and objectives to reduce corporate emissions.

12.16 Continue to monitor and evaluate the performance of civic facilities through energy audits and to improve low-performing buildings.

12.17 Continue to support and accelerate increased energy efficiency and the reduction of emissions in the development of privately owned buildings through the implementation of the British Columbia Energy Step Code and carbon pollution standards, subject to development control and building regulation.

12.18 Continue to support and enable green features and practices in new development and retrofits of existing buildings through the periodic review of the City's bylaws. Green features may include, but are not limited to:

- 12.18.1 Alternative transportation facilities;
- 12.18.2 Sustainable landscaping;
- 12.18.3 Building retention and re-use;
- 12.18.4 Passive building systems;
- 12.18.5 Energy efficiency and low-carbon technology;
- 12.18.6 On-site renewable energy technology;
- 12.18.7 District renewable energy systems;
- 12.18.8 Efficient plumbing fixtures and systems; and,
- 12.18.9 Electric vehicle charging infrastructure.

12.19 Encourage new developments to incorporate readiness for future clean energy technologies into building design.

12.20 Support and enable the continued use and re-use of buildings and building materials through municipal regulations and incentives, as appropriate.

12.21 Support and accelerate deep energy retrofits to existing buildings that eliminate fossil-based and inefficient heating and cooling systems to achieve the City's climate targets, including through the development of programs, incentives and bylaws.

12.22 Advocate for senior government to enable the construction of green buildings and energy retrofits through incentives, supportive legislation and funding mechanisms.

## MEASURING PROGRESS

12.23 The following targets should be considered in measuring progress towards the plan's climate change and energy objectives:

- 12.23.1 That community-wide greenhouse gas emissions are reduced by 50 percent by 2030 and 80 percent by 2050 from 2007 levels; and,
- 12.23.2 That Victoria will shift away from fossil fuels to 100% renewable energy by 2050.