



Shape Your
Future Victoria

Climate Change and Energy

Definition and description

The Government of Canada defines **climate change** as a long-term shift in climate measured by changes in temperature, precipitation, winds and other indicators.

The leading world scientists on the Intergovernmental Panel on Climate Change (IPCC) have determined that climates around the world are changing and attribute the majority of the causes to human activity, primarily greenhouse gas emissions from burning fossil fuels for energy consumption, deforestation and waste¹.

Energy is a usable source of power, obtained from the transformation of renewable sources (such as sunlight or wind) and non-renewable sources (such as oil or coal).

¹ Intergovernmental Panel on Climate Change. 2007. Fourth Report of the IPCC.

Why is this topic important?

Cities are home to the majority of global energy use, making them important players in addressing climate change. Land use profoundly influences the big emission sectors of transportation and buildings. Land use policy and planning of neighbourhood design, land use mix, density, and connectivity are key variables having an impact on transportation related greenhouse gas emissions (GHGs).

Building type, size and access to renewable or lower impact energy sources for heating are land use variables with powerful impacts on energy and emissions in buildings.

As a result, climate action and preparedness are most effective when integrated into strategic and long term land use and transportation plans documents, like Official Community Plans (OCP), and represent the area where local governments can most greatly influence climate protection.

OFFICIAL COMMUNITY PLAN

Ideas and Options for the Future

June 25 and 26 - Topic Insert



Public Input on Climate Change and Energy

| Proposed Goal 1 From Public Input : <i>Transform the Urban Environment</i> | |
|--|--|
| Direction: <i>Sustainable Community Design</i> | Direction: <i>Green Buildings</i> |
| Ideas and Examples | Ideas and Examples |
| <ul style="list-style-type: none"> • Interdisciplinary approach to city – across City departments. • Invest in actions that make real change (e.g.: mode-shifting transportation, create parks and greenways, do not waste resources on fads like green roofs). • City uses a sustainability checklist for development review that goes beyond just parking provision. • Consider expanding the use of development permit areas as a tool re: sustainability (energy, water use) • Expand use of environmental development permits for biodiversity corridors. • Park dedication for taller buildings. • City pro-actively purchases green space proximate to where density is going. • Garden requirement for new development (incl. rooftops) • Restructure surface parking to put parking underground and productive/greener uses above. | <ul style="list-style-type: none"> • Establish uniform rules to level the playing field among developers. e.g. LEED silver standard • Bylaws for green building • Living buildings (beyond LEED) • More greenery on downtown buildings • Rooftop food gardens (with collaboration/education for engineers and building inspectors) • Technical solutions for energy efficiency in older buildings are in place • Building retrofit program • Existing buildings have been rehabilitated to be more energy efficient • More intensively used heritage buildings with more upper storey residential, more energy intensive heritage buildings • Local government leads by example in building to last and uses a combination of incentives and regulations • City / Community Centres as leaders in green buildings (Burnside Gorge Community Centre) |

| Related Victoria Sustainability Framework Subthemes and Goals | |
|---|--|
| Natural Diversity and Habitat: | <i>Biodiversity thrives in Victoria's urban environment, including urban forests, and public and private greenspaces.</i> |
| Building Energy & Air: | <i>Buildings and their component systems are energy efficient, produce few greenhouse gases and have good air quality for occupants.</i> |

Public Input on Climate Change and Energy

| Proposed Goal 2 From Public Input : <i>Achieve Targets for Clear Air and Energy</i> | |
|---|---|
| Direction: <i>Low Carbon, Energy Efficient Transportation</i> | Direction: <i>Green Energy</i> |
| Ideas and Examples | Ideas and Examples |
| <ul style="list-style-type: none"> • Shift in corporate mindset to achieve a higher modal shift for alternatives + allocate a greater percentage of capital budget for transportation to non-motor vehicle modes. • Modal split of 90% electric by 2041. • Reliable, non-motorized, efficient modes of transportation. • Infrastructure is in place for electric vehicles. • Electric-powered transit. • Electric plug-ins in new developments. • Non fossil fuel burning buses. • Walk-able, cycle-able, transit friendly city with dedicated space for sustainable modes. | <ul style="list-style-type: none"> • Set specific, measurable targets to achieve (e.g. 15 percent of energy from renewables; decrease overall energy demand by 30 percent). • Develop energy plan and utilize bio-philic design. • Allow community owned energy systems (PV, wind, solar, thermal, etc.). • Tools: carrot and stick, property tax levies for green infrastructure. • Renewable energy. • Victoria fuels itself largely from renewables including hydro. • Smart grid; PV infrastructure. • Design to incorporate wind and microclimates. • Maintain clean air. • More sustainability initiatives. |

| Related Victoria Sustainability Framework Subthemes and Goals | |
|---|--|
| <i>Transportation Energy & Air Contaminants:</i> | <i>Transportation options reduce fossil fuel dependency, help conserve energy and produce low greenhouse gas emissions and other air contaminants.</i> |
| <i>Energy Supply:</i> | <i>Victoria relies on clean, renewable and efficient energy sources.</i> |

Existing Policies on Climate Change and Energy

| Victoria Sustainability Framework (2010) | | |
|--|---|---|
| Natural Diversity and Habitat: | <i>Biodiversity thrives in Victoria's urban environment, including urban forests, and public and private greenspaces.</i> | |
| Building Energy & Air: | <i>Buildings and their component systems are energy efficient, produce few greenhouse gases and have good air quality for occupants.</i> | |
| Official Community Plan (1995) | Downtown Core Area Plan (draft 2010) | Other Plans / Policies |
| <ul style="list-style-type: none"> Adopts the provincial target for GHG emissions reductions of 33% by 2020 based on 2007 levels, as Victoria's interim target | <ul style="list-style-type: none"> Preserve and enhance the functioning of natural systems by encouraging environmental sustainability in land development and re-development, building design and transportation. | <ul style="list-style-type: none"> Civic Green Building Policy requires all new civic buildings to be at least LEED Silver |
| <ul style="list-style-type: none"> Will develop and implement a: <ul style="list-style-type: none"> Carbon Neutral Plan for municipal operations (buildings, fleets, infrastructure) and; Climate Resiliency Plan towards a low-carbon economy and climate resilient community | <ul style="list-style-type: none"> Encourage developers to adapt and re-use existing buildings. | |
| | <ul style="list-style-type: none"> Develop building design guidelines that maximize active and passive solar gain and protect solar access. | |
| | <ul style="list-style-type: none"> Encourage waste facilities (three stream) in new multi-residential development. | |
| | <ul style="list-style-type: none"> Develop energy-efficiency standards for new and existing buildings. | |

Existing Policies on Climate Change and Energy

| Victoria Sustainability Framework (2010) | | |
|--|--|------------------------|
| Transportation Energy & Air Contaminants: | <i>Transportation options reduce fossil fuel dependency, help conserve energy and produce low greenhouse gas emissions and other air contaminants.</i> | |
| Energy Supply: | <i>Victoria relies on clean, renewable and efficient energy resources.</i> | |
| Official Community Plan (1995) | Downtown Core Area Plan (draft 2010) | Other Plans / Policies |
| <ul style="list-style-type: none"> Adopts the provincial target for GHG emissions reductions of 33% by 2020 based on 2007 levels, as Victoria's interim target | <ul style="list-style-type: none"> Actively promote alternatives to the single occupant vehicle. | |
| <ul style="list-style-type: none"> Encourage market transformation for a clean energy economy through studies in feasibility and development of policies and programs supporting district energy and distributed generation systems and greater adoption of renewable energy. | <ul style="list-style-type: none"> Explore the use of incentives to encourage private development that includes renewable district energy systems able to serve the Downtown Core Area. | |
| <ul style="list-style-type: none"> Will develop and implement a: <ul style="list-style-type: none"> Carbon Neutral Plan for municipal operations (buildings, fleets, infrastructure) and; Climate Resiliency Plan towards a low-carbon economy and climate resilient community | <ul style="list-style-type: none"> Encourage all new development to incorporate high levels of energy efficiency. | |
| | <ul style="list-style-type: none"> Develop a sustainability precinct in Rock Bay. | |
| | <ul style="list-style-type: none"> Direct green demonstration projects to the Rock Bay District through the use of development incentives, such as tax benefits and density bonuses. | |