

SECTION 8 – CLIMATE CHANGE AND ENERGY¹

Bill 27, enacted by the Government of British Columbia (Province) in 2008, requires official community plans (OCPs) to address how the Regional District of Nanaimo (RDN) will provide direction and take action to reduce GHG emissions in its electoral areas. Specifically, OCPs must include targets for the reduction of greenhouse gases and policies and actions with respect to achieving those targets.

The Province has set a target to reduce GHG emissions to 33% below 2007 levels by 2020 and 80% by 2050. The amount of GHG emitted is influenced by many factors. The RDN can directly and indirectly influence the level of emissions generated due to land use patterns, housing form, transportation systems, construction standards, and landfill operations. The RDN can also be instrumental in:

- Recognizing the role sustainable forestry practices play in offsetting GHG emissions by storing carbon;
- Helping to slow global warming and supporting adaptation to the impacts of climate change by protecting the health of ecosystems; and
- Promoting and supporting the use of renewable energy and district energy systems.

Energy consumption is strongly influenced by land use patterns, density and mobility choices. Subdivision design, site planning, building design, and construction technologies are also significant factors in the amount of energy consumed. Reducing energy consumption means building compact, complete communities that are not auto-dependent, increasing the number of multi-unit dwellings, supporting (near) net-zero building design and construction, and supporting the use of renewable energy and district energy systems.

The RDN is in the process of preparing a Community Energy & Emissions Plan (CEEP) that will provide a framework for reducing energy consumption and GHG emissions within the region and establish specific targets for the reduction of emissions in specific areas - for example, building construction, transportation, and energy source. This information will be used to help develop more detailed area specific targets, policies and actions to be included in this Plan.

It is also important to plan for adaptation to the potential impacts of climate change. In particular, OCPs may include policies that address the need to adapt to potential sea level rise, water deficits, flooding, and wildfires, etc.

Policy Target

Support Province targets to reduce greenhouse gas emissions 33% below 2007 levels by 2020, and 80% below 2007 levels by 2050.

¹ Bylaw 1055.04 adopted May 25, 2010

Policies

- 1. *Growth Management*** - Encourage population growth within village centres to reduce transportation based greenhouse gas emissions.

Encouraging the majority of growth in village centres helps to facilitate more people living close to existing services, which decreases their need to drive. Designated growth areas coupled with policies to increase population densities in areas with improved services should decrease transportation related emissions, which are the largest source of emissions in the region.

Actions

- Support redevelopment in village centres which will result in higher densities and a greater mix of uses;
- Support changes to the Urban Containment Boundary only if the result is a decrease in GHG emissions.

- 2. *Compact Communities*** - Support neighbourhood form that provides opportunities for energy efficient modes of transportation such as walking, cycling or public transit.

When dwellings are located close to shopping, work and leisure activities residents are less reliant on driving. Higher population densities within existing communities can also support both improved public and commercial services within walking distance of residences.

Actions

- Support a variety of housing types within village centres;
- Support a mix of land uses that will contribute to having more complete and compact communities;
- Support the establishment of commercial or retail services in village centres that will provide for the needs of the residents in the village centre and in the immediate surrounding area;
- For development proposals within village centres consider how land use and transportation can be coordinated.

- 3. *Buildings and Energy*** – Encourage the incorporation of green building features into the siting and construction of buildings.

Compact communities include more energy efficient forms of housing. By sharing walls, attached dwellings require less energy for space heating, the largest household energy expenditure. Specific green building features should be incorporated in the siting or design of buildings to make them more energy efficient and also make use of renewable energy sources.

Actions

- Consider green building features as a community amenity for zoning amendments consistent with this plan;
- Review the site layout in zoning amendments to consider how buildings may use energy more efficiently;
- Consider partnerships with the private sector for green building demonstration projects;
- Support the development and use of locally produced renewable energy.

4. *Forest Land and Carbon Sinks* - *Recognize the importance of natural areas for carbon absorption and develop tools to encourage development in existing developed areas as a means to redirect development away from greenfield sites.*

Plants, and in fact all living biodiversity within natural areas capture and store carbon from the atmosphere. A growing forest is a carbon sink capable of absorbing emissions from other sources such as transportation and settlement. But these areas are threatened by land use change and deforestation. The RDN should develop tools and incentives to encourage development in existing developed areas as a means to redirect development away from greenfield sites.

Actions

- Develop tools and incentives to facilitate the encouragement of the redirection of development from greenfield sites to village centres;
- Develop tools and incentives to encourage the retention of trees and vegetation on private property.

5. *Food Production* – *Support efforts to maintain a sustainable locally produced source of food.*

Escalating costs, competition with cheap imported foods and cumbersome regulations on operations have all diminished local agriculture and the ability of farmers to maintain viable farms. Support for local agriculture will cut the number of commercial vehicles transporting food into the region and provide the security to local farmers to adopt more sustainable practices.

Actions

- Review the zoning bylaw to reduce obstacles to maintaining efficient farming operations, agricultural processing or compatible land uses;
- Support the provision of services and infrastructure necessary to the efficient and sustainable farming operations;
- Support the development and provision of resources to support agricultural sales;

- Encourage the retention of land in the Agricultural Land Reserve and other productive farm lands.

6. *Transportation and Infrastructure* – *Promote private and public infrastructure that may use energy more efficiently.*

Infrastructure and services provided in compact complete communities provides opportunities for personal and institutional choices that conserve energy. Efficient use of infrastructure may reduce transportation related emissions through integrating active transportation with existing road networks or it may reclaim energy resources from waste streams to service public and private facilities.

Actions

- Provide trails and pathways that are functional and support efficient pedestrian movement;
- Support transit and transportation alternatives that will reduce greenhouse gas emissions;
- Recover energy and materials from both public and private sector waste streams that may be used to service communities or facilities.