



Encouraging On-Site Renewable Energy

By now, most of us have heard of renewable energy — energy that comes from renewable natural resources, such as the sun, wind, water and even the earth beneath our feet. Often, we harness these sources of energy on a large scale, with hydroelectric dams or wind turbines, for example. But it also makes sense to generate energy on-site, exactly where you need it, when you need it.

There are lots of different ways to use renewable energy to help meet the everyday energy needs of our homes, businesses and neighbourhoods:

- Whistler's Meadow Park Sports Centre uses solar energy and geexchange systems to save up to \$115,000 in water heating costs each year.
- The FalseCreek neighbourhood utility recovers heat from the sewer system reducing the need for natural gas by 30%.
- Revelstoke burns wood waste from a local mill to generate heat for nearby industry and buildings.
- Homeowners can save more than 15% of their energy needs by installing a solar hot water system.

Making it Happen

Just as buildings must meet minimum energy efficiency or safety requirements, many jurisdictions now require buildings to meet minimum renewable energy requirements.

Renewable energy requirement policies are now widespread in the U.K., and similar policies are catching on throughout Europe. The London Borough of Merton took the lead by introducing a 10% renewable requirement in 2003, known as the Merton Rule. London followed with a 10% requirement in 2004. In Barcelona, Spain, solar water heaters are required on all new buildings.

Top 5 Benefits of Renewable Energy Requirements

- 1** Reduce greenhouse gas emissions. Renewable energy reduces the negative impacts of climate change already being seen in B.C communities.
- 2** Increase energy efficiency. The requirement can be designed to allow developers to partially meet the requirement by increasing the energy efficiency of a building.
- 3** Create jobs. Regional industries and local tradespeople will be needed to design, build and install renewable energy.
- 4** Improve air quality. Renewable energy can reduce air pollution linked to health issues such as asthma.
- 5** Help reduce the need for larger energy developments. Small-scale renewables reduce the need for new larger-scale projects.

What Can You Do?

To make sure renewable energy and energy efficiency are a part of every home and building, we'll need a new policy. You can contact the following officials to let them know what you think about a minimum renewable energy requirement.

- Your MLA
- Your local city councillor and mayor.
- Honourable Steve Thomson, Minister of Energy
- Honourable Naomi Yamamoto, Minister of State for Building Code Renewal
- Honourable Stephanie Cadieux, Minister of Community, Sport and Cultural Development

See greenbuildingleaders.ca for more information and updates on this project.



The Dockside Green development in Victoria uses a biomass-fuelled district energy system.

How to Encourage Renewable Energy in Your Community

One way to encourage the use of on-site renewable energy is to make it a requirement for buildings to meet a certain percentage of their energy demands with these sustainable energy sources. The province and municipalities could require anyone who is undertaking a major renovation or planning a new building to use renewable energy to meet part of the building's energy needs.

For example, a homeowner could be required to meet 10% of their home's heating and cooling demand with renewable energy, leaving the choice of technology to the builder. Another option is to require a specific technology (or combination of technologies) to be used to provide energy. For example, the requirement could call for half of a building's hot water needs be met through a solar water heater. A renewable energy requirement will also encourage more energy efficient buildings, because the less energy a building needs, the smaller (and cheaper) the renewable energy system needs to be. In this way, a renewable energy requirement creates an incentive to build more efficient homes and buildings.



How Much Does Clean Energy Cost?

- For residential buildings, most technologies can be expected to add as little as 2 to 8% to the total building costs. Homes with renewables can save, 19 to 38% on their annual energy expenses.
- For commercial buildings, the cost is best determined on a case-by-case basis, but studies have found installing renewables increases costs by between 0.1 and 3% of total building costs on average. Savings are estimated to be between 3 and 45% of annual energy expenses.



Courtesy, Dockside Green