

Cities show a better way

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Cities are a crucial piece of the puzzle when it comes to saving the planet. They deal with water, garbage, land use, energy, and transportation: the building blocks of environmental action. B.C. cities are tackling sustainability in a number of ways. Here are 10 innovators who are leading the way, whether it's with a specific project like organic composting, a community-wide plan for energy use, or an all-points strategy for a better environment.

1 PORT MOODY: European-style village centre. This small municipality started planning Newport Village 10 years ago with Bosa Development, when the term "sustainability" was barely a blip on people's consciousness in downtown Vancouver, let alone the suburbs. Now, the Greater Vancouver Green Guide cites Newport, which has 900 residential units clustered around a pedestrian square filled with shops and offices, all of it on transit lines, as a model of green development.

"There definitely was a conscious effort here to plan how this would all contribute to a complete community," says Colleen Rhode, Port Moody's director of economic and strategic planning. "Sustainability principles are definitely on the radar here and have been for a decade."

Port Moody has carried on with that kind of planning in the more recent Suter Brook development, which is grouping 1,250 housing units with shops and offices on a former industrial site. The development, being built by the Onni Group, will have as its main feature a large greenway that will protect Suter Brook, one of the few streams in the Lower Mainland that hasn't been paved over or damaged by intense development around it.

2 CITY OF NORTH VANCOUVER: District heating. Almost all new condominiums built in B.C. are heated with electric baseboards, a heat source that is not only expensive but inefficient.



CREDIT: Lorraine Hjalte, CanWest News Service

This wind farm west of Pincher Creek, Alta., harnesses the power of the wind to produce energy. B.C.'s first wind farm is slated to be built near Dawson Creek, as part of the Peace Energy Cooperative. Dawson Creek, an agricultural community for more than 60 years, has a policy that fosters the purchase of green power.

In 2002, the city of North Vancouver broke new ground by creating a district heating system to supply heat to new buildings, which meant it had to get involved in energy planning -- something cities don't typically do. The heating system, which burns natural gas in high-efficiency condensing boilers, is generated from two (soon to be three) mini-plants in different parts of the city. Those plants heat water that is then run through buildings in pipes, warming interior spaces the way old-fashioned radiators used to do, but with new technology and pipes in ceilings.

All new construction is required to use the heating system, with the result that more than 500 new units of residential space are now heated using the district plants. The city expects to be heating a million square feet of residential and commercial space by the end of this year.

Now the district, which has won numerous awards for its system, is looking at more innovations.

"We're developing solar-energy panels on roofs and we'll put that collected energy into our district system," says Bill Susak, the engineer in charge of the city's Lonsdale Energy Corporation.

3 VANCOUVER: Net-zero building. Vancouver has been a leader for years when it comes to green building and planning. It also keeps pushing the boundary incrementally, with innovations like sustainable-street experiments, new ways to do urban agriculture, and higher environmental standards for new buildings.

One of its latest green firsts is a "net-zero building" that is being planned for the Olympic athlete's village. That building, which will provide part of the 250 units of social housing on the site, will produce as much energy as it uses.

That happens two ways, says architect Stu Lyon, who is designing the 67-unit seniors' building, which will sit beside and on top of the village's grocery store. Some of the energy is saved passively, by having windows on both sides of all units to increase natural light and cross-ventilation. The units will also have high-efficiency walls and windows that reduce heat loss, and energy-efficient appliances.

On the active side, the complex will also have photovoltaic cells installed, to capture solar energy and put it into the grid. And it will take waste heat from the adjoining grocery store's refrigeration units and use it to heat the residential units.

4 SURREY: Urban transit village. Surrey is often pictured as the epitome of unsustainable sprawl. But it is home to East Clayton, a new suburban neighbourhood planned to be sustainable, and it is working on a "sustainable truck parking" policy. But one of its biggest efforts is happening in the heart of this huge municipality. Its planners, with the help of a Transport Canada and TransLink program, have spent the past two years planning to transform its Surrey Central SkyTrain neighbourhood in Whalley into a pedestrian-friendly urban centre.

"There's been a lot of redevelopment around the station, but at the core, there are a lot of smaller properties on very big street patterns," says Judy McLeod, Surrey's long-range-planning manager. The idea is to turn that intimidating landscape into an area that feels more like a real downtown, which will encourage people to walk around.

If council gives final approval to the plan this month, Surrey will start work on that project, creating a new street network that breaks up the big blocks around the station. To complement that, TransLink will move the connecting buses out of the giant loop and onto the nearby streets

5 MAPLE RIDGE: Sustainable town centre. This suburb is one of the few in the Lower Mainland that, thanks to its history, has a real downtown. Now it is reshaping that downtown to be more sustainable, by turning it into a place where people live and walk around. The city is planning to house half of the 25,000 new residents it expects by 2021 in the downtown area. It is offering tax exemptions to developers who will build higher than four storeys, as part of its plan to integrate 7,000 new housing units into its existing centre. And it is working to make that denser downtown more livable by putting in new sidewalks, paths and bike routes.

"We're trying to be different by making sure our density goes where it belongs," says planner Jane Pickering. That town-centre plan is the result of a collaboration between Maple Ridge and a program called Smart Growth on the Ground. That program is a collaboration between Smart Growth B.C., the Real Estate Institute of B.C. and the Design Centre for Sustainability at UBC. That group is working with 10 communities in the next decade to help them plan greener towns as they grow.

Maple Ridge was a natural. "This community is very interested in pursuing environmental and sustainable programs. They want to do things differently than it's been done."

6 DAWSON CREEK: Alternative energy. The province's first wind-power project is being planned here, with that initiative from the Peace Energy Cooperative getting enthusiastic support from the city. Solar panels on the city hall building and the firehall heat the water for those buildings. The city has a policy that fosters the purchase of green power.

All of that is the result of a decision a couple of years ago, after holding a string of public meetings, to develop a community energy plan and to focus on environmental issues.

"This has been an agricultural centre for 60-70 years, and there is some harmony with the land that is respected in the community," says Mayor Calvin Kruk. Although the 12,000-resident town is close to B.C.'s oil fields, it wasn't content to rely on that energy supply. "You have to look broader than just one source."

The town is planning to keep putting solar panels on buildings. It is also trying to support the creation of a green-technology centre at the local college. Northern Lights College, in keeping with the town's alternative-energy focus, has made the subject of solar heating a core course in its plumbing program.

7 OLIVER: Protecting local agriculture. "We want to protect our farmland and grow up, not out," says Oliver Mayor Ron Hovanes. That's not just for sentimental reasons. The wine industry throughout the Okanagan continues to boom and is a key part of the economic base.

Spurring them on, the planners and politicians in Oliver have seen what's happened to other communities throughout the valley. "Oliver is in kind of a good position," says Hovanes. "We have not had the unprecedented growth that others have so far. It's just starting here."

In order to prevent future sprawl into the rural areas around town, Oliver has worked with the local regional district and Smart Growth on the Ground to come up with strategies to encourage people to live within the town limits. It has changed its zoning policies to allow secondary suites and carriage houses, to encourage multi-family housing. And it is contemplating establishing an urban-growth boundary, adjusting those boundaries at the same time to make sure agricultural land isn't included inside the limits.

All of that complements past work Oliver has done to protect its local environment, like its efforts to recycle treated sewage by using it to water the local golf course and cemetery, rather than putting that water back into the local river.

8 WHITE ROCK: Recycling rainwater. When White Rock staff were making the decision to build a new operations plant for basic city functions -- garbage, roads, sewers -- it decided to go green (with the help of federal government funding aimed at creating green infrastructure). That meant using recycled materials, designing the building to take advantage of natural light and ventilation, putting on a green roof and incorporating other elements that are becoming standard in green building. But designers also worked creatively with one unusual component -- the former sewage-digestion pond that was on the site.

Instead of digging up the old concrete tank, the designers re-routed one of White Rock's storm sewers into it. Now the rainwater that collects in the tank is used for flushing the building's toilets, washing down the city's utility vehicles and filling up tanks in the city's street-washing trucks. As a finishing touch, heat from the water is extracted with a heat-transfer pump and used in the building.

The building uses 60 per cent less energy than standard. Dave Pollock, White Rock's operations manager, says none of that is particularly noticeable. The only difference about the building: "It's very pleasant to work in with the amount of natural light, and there's no air conditioning. It's a very pleasant building."

9 LADYSMITH: Organic composting. Residents here don't just have the blue box. They have the green box, which is the step beyond recycling and composting.

Ladysmith is the first B.C. town to have introduced organic composting, which means taking everything from the standard compost material like fruit peels and eggshells to items like pizza boxes, flour bags, and soiled paper towels.

The impetus for this pioneering environmental move was money. Ladysmith had been paying to truck all its garbage to Cache Creek for the previous eight years, and organic material accounts for up to 50 per cent of garbage.

When it came time to renew the contract, the city decided to go with a private company that had started an organic-composting business, International Composting Corp. in Nanaimo.

Since the program started last February, it's been a huge success.

"It's easier to implement than recycling because people don't have to wash anything," says Mayor Rob Hutchins.

The town's regular garbage volume has now dropped by almost 40 per cent in the past year. Oddly, people also started putting more into their regular recycling boxes at the same time. The result is that the town now sends only 43 per cent of its total solid waste to Cache Creek, instead of the previous 71 per cent.

10 PORT COQUITLAM: Sustainable development. The city introduced a policy a year ago to have all building projects go through a "triple bottom line" checklist -- that's economic, environmental and social sustainability -- before they get approved.

For developer Onni, that has meant not just talking about floor space and parking requirements for the 26-storey tower it is planning in Port Coquitlam's downtown.

It also means discussions about using recycled building materials, building units of different sizes to bring in residents with different income levels, putting in low-flow toilets, and planning ways to absorb stormwater.

The tower now being planned will have, to use one tiny example, a green roof over its parkade, using plant species specifically chosen for their capacity to absorb storm water.

"A lot of other places you go, you hear a lot of talk, but not that much follow-through. This is different," says Onni development manager Daniel Diebolt.

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