Creating business opportunities for companies who see things differently.

The result of many years of research, nanocrystalline cellulose is a nanomaterial extracted from wood fibres. It can be made into films that are flexible, strong and easy to handle. The iridescent properties and colour of these films can be finely tuned, making it possible to revolutionize a wide range of applications.
“Going green” may be a commonly-used buzz phrase, but big businesses are increasingly finding the value in investing in sustainable initiatives.

The neighbourhood approach

When it comes to cities leading the way in sustainable living, Vancouver is at the forefront. But sustainability experts and local politicians warn that instead of resting on their laurels, it’s important to continue to set an example of how a sustainable city thrives.

Former BC Premier Mike Harcourt is the chairman of QUEST, a network of organizations that work together to make Canada a leader in integrated energy solutions. The self-proclaimed “sustainability warrior” thinks Vancouver is extremely conservation-minded and has been that way for as long as he can remember. But, he stresses that more can always be done.

A fresh perspective

Harcourt says the key is to rethink how communities are built. What doesn’t work in a sustainable, walkable community? Sprawling suburbs populated by single-family homes that rely on SUVs as their main form of transportation are an example.

“Vancouver’s process is, in my view, one of the best, but we need to look at a number of areas,” he says. “The old urban model has been so damaging to quality of life that people lead in terms of the community and the big houses, expensive car payments and the overuse of energy.”

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A neighbourhood effort

 Falko Johnstone, deputy city manager with the City of Vancouver, says the role of Vancouver is to “lead by example and improve our own practices.”

One such example of this is a pilot compost project in the Riley Park and Dunbar neighbourhoods. Participants have their organic waste picked up weekly, while solid waste is collected every other week. It’s an effort that encourages residents to compost more so they reduce their total waste.

“The key is to try more and more to look at the things we do to achieve multiple objectives,” he says. “To help shape the building of our city, to help increase density and particularity to help increase density around transit stops.”

Johnstone says it’s not only driven by bureaucrats that help make change. “Residents are becoming more aware of these issues and the opportunities that they can have to have an impact on this,” he says. Harcourt agrees, but adds that it’s essential that Vancouver continue on its path of leadership.

“We’ve been on the forefront of livability,” he says. “Now we’ve got to get out onto the forefront of that and become one of the most sustainable cities in the world.”

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**Waste Not: Creating New Fuel Possibilities**

Renewable natural gas

It’s naturally better for business

“"We signed up for renewable natural gas because it’s good for the environment and good for business."

FortisBC Green Leader, Morten Schroder, VP Operations, British Columbia, Van Houtte Coffee Services

Companies like B.C.’s Van Houtte Coffee Services want to be a part of green-minded initiatives. That’s why they signed up for FortisBC’s renewable natural gas, a carbon neutral source of energy—derived from local organic waste. It’s naturally better for the environment, so customers will love you for it. And that is ultimately good for business. Your organization can be a Green Leader too. Visit fortisbc.com/rng.

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Catalyst Power is a company that focuses on using a process called anaerobic digestion to capture methane from organic waste and convert it to natural gas for use in homes. Founder Chris Bush says the process is likely the key to finding an alternative to fossil fuels.

“I think it is the intelligent transition fuel into a green economy as a green power source,” he says. Catalyst has paved the way by building the first anaerobic digester for agriculture in BC and the first biomethane to pipeline facility in North America. “It’s the cleanest of all the fossil fuels by a long shot and with the pricing the way it is, it’s radically less expensive and we’ve got it locally.”

**Breaking it down**

Anaerobic digestion is a process whereby bacteria and organic waste are left to decompose in enclosed silos with the absence of oxygen, generating a different form of natural gas than conventional natural gas.

The process has been used in some way or another since the 1880s but in regards for biomethane, it is still fresh faced when it comes to playing its role as a fuel.

“Tons literally no policy (when we started) and the policy now is still emerging—we were moving forward on construction even prior to the utility commissioner approving it,” says Bush, adding that he had unwavering faith in its eventual use as a fuel and economic viability.

“Anaerobic digestion as a technology is necessary if we want to have sustainable agriculture.”

A renewable approach

Recently, energy company FortisBC has turned towards methane produced by landfills (which use a similar system with dirt rather than a silo) and anaerobic digesters to produce what it calls “renewable natural gas.”

The company buys the biomethane and purifies it by removing any harmful or unnecessary gases.

“There’s really no magic or chemicals involved” says Scott Gramm, business development manager for FortisBC. “You’re just pulling out the nasty stuff that could be harmful so you don’t want burning in people’s homes and you’re removing gases that really don’t play a heating value.”

The gas is then combined with natural gas and sold to residences and businesses that want a more sustainable alternative to natural gas.

Bush says he hopes that biogas will play a role in a more holistic approach to sustainability. He envisions buildings utilizing biofuel generated from the process in natural gas form for heating and electricity, which is then used in a cyclical fashion to power electrical cars. It’s an ambitious view but not too far off.

“We’re shooting for zero waste, that’s a good way to get to zero waste in energy utilization.”

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Bridging the gap between biomass and fuel is a key step in developing more sustainable fuel sources and creating new revenue streams.

For a society that produces as much waste as we do, utilizing that waste to create biofuels is looking to be an economically viable option for weaning us off fossil fuels.

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Water affects all organisms, but it is not an infinite resource. Initiatives are in place to use less water, and to protect the province's natural gems.

British Columbia is ahead of the fold when it comes to water conservation efforts, but the changing ethics of water sustainability suggest a new approach across industry and society as a whole is needed.

“Over a period of time the biggest realization has been that water is not infinite—there’s a finite amount and certainly a finite amount of good-quality water,” says John Allan, vice president of sustainable development at Goldcorp and an environmental scientist with 28 years of experience. “On the other side of that equation the number of potential users and the number of potential users is increasing.”

Allan says for Goldcorp, the basis for conservation has been in looking for more sustainable sources via recycling and reusing as well as looking for deep sources that have lesser effects on local communities water tables.

“With something like water—which everybody has a stake in—making sure you understand the amount of water you’re withdrawing, where you’re tapping that water from, and what you’re doing with it, just takes away any potential conflict,” says Allan.

The buddy system
Like Allan points out, water is a resource that concerns everyone—and everything—on the planet.

Organizations such as the Partnership for Water Sustainability in BC (PWSBC) help to drive the conversation on sustainable water use by major industries.

Kim Stephens, executive director of PWSBC, points out that for major industries, decisions are often driven by the economics of the situation.

“Rising water rates provide an incentive to use less water,” says Stephens. But Stephens is optimistic that partnerships and collaborations between industry, government and local communities will help build a more sustainable approach to water use.

Robert Sandford, EPIC Chair of the Canadian Partnership Initiative in support of United Nations “Water for Life” Decade, an author and a champion of water ethics, would even go so far as to say that government’s ability to impact water ethics is diminished when compared to the role of the general public.

“It’s important now that we realize that water policy and effective implementation of the laws managing water is not merely a government strategy anymore—it has to be a broader societal commitment which includes the average citizen who has an interest in what’s happening, or his or her waterwatched,” says Sandford. “It has to involve all those people who are impacting water by virtue of their activities, starting first with agriculture and then moving into the industrial and resource development sectors as well.

Going with the flow
He definitely agrees BC is progressive when it comes to water sustainability but like Allan and Stephens point out, there’s more work to be done.

But it has to start somewhere, and as Stephens adds, BC seems to be fostering a new water ethic across the country.

“(In general) new ideas and new approaches tend to emerge in BC and then move out,” he says. “It’s the people who are impacting water by virtue of their activities, starting first with agriculture and then moving into the industrial and resource development sectors as well.”
Three of BC’s largest industries—natural gas, mining and forestry—are leading the way in terms of sustainability and showing the rest of Canada (and the world) how it’s done.

Wood-oo it be nice?
"Canada has really gone beyond stepping up to the plate," says Michael Bradley, director of sustainable enterprise for Canfor Pellet, a global supplier of pulp and paper based out of Vancouver. "Really only in Canada have you seen this sort of collaborative dialogue between groups that were formerly adversarial—industry and the NGOs for example. You’ve really seen huge progress made in terms of working together to find the common good."

Bradley notes that although the concepts of sustainability have always been firmly rooted in the forestry industry—if the trees aren’t cut in a sustainable way, they don’t replenish in an economically viable way—it’s approach has shifted from what he calls a quantitative model to a qualitative one.

"Over the past couple of decades we’ve seen realisation in the industry that there could be better ways of doing this," says Bradley. "We’ve come to recognize that the forest isn’t only there for cubic meters of timber. It’s also there to purify the water supply, for its aesthetic and cultural values for our first nations peoples, hunters and society alike."

Efforts by Canada’s forest sector to ensure sustainability and responsible resource management has resulted in the creation of organizations like the Forest Stewardship Council.

Bradley points out that 90 percent of the world’s forests aren’t certified under a responsible management program.

"Of the 10 percent that are certified four percent are in Canada," says Bradley.

Clearer processes, cleaner fuels
The natural gas industry, one of BC’s fastest growing sectors, has faced some scrutiny over practices, especially in the United States.

But David Lye, Encana’s vice president of Corporate Environment, Health & Safety, Security and Corporate Responsibility, says BC’s natural gas sector is looking to nip criticism in the bud. Increased transparency regarding hydraulic fracturing (a technique used in extracting natural gas) and operating practices like the Forest Stewardship Council’s principles for hydraulic fracturing, are helping to drive sustainability in the mining industry through its operations in BC.

"In 2010, more than 13,000 tonnes of e-waste and cathode ray tube (CRT) glass—or over 1,300 truck loads of materials—were processed at our Trail Operations, diverting waste from landfills and improving the recovery of reusable materials," says David Parker, the company’s vice president of sustainability. "This urban ore is received at our Trail Operations and processed, filling and improving the recovery of valuable materials." Parker notes that the epicenter of Teck’s sustainability strategy is the community.

"Our objective is that communities consider themselves better off as a result of their interactions with us," says Parker.

Mindful mining
Teck, one of Canada’s largest mining companies, has helped to drive sustainability in the mining industry through its operations in BC.

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Water is vital to the earth. That’s why at Goldcorp, we’ve always looking for ways to use water as efficiently and responsibly as possible. At our Marlin site in Guatemala, we’ve decreased our groundwater consumption and increased the amount of recycled water used in our processing systems from 83% to 96% in the past 5 years. It’s just one way we’re demonstrating our commitment to being responsible, respected and welcomed, everywhere we operate.
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  - Calgary Herald
- Chemicals

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- Sustainability
- Corporate Social Responsibility
- Future of Labour
- B.C. Construction
- Life Sciences

- The Calgary Herald
- The Vancouver Sun
- The Province
- The Vancouver Sun

June
- Agriculture
- World Ocean Day
- First Time Home Buyer
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Harvesting a powerful resource

British Columbia has an esteemed reputation for responsibly developing its rich natural resources in ways that create sustainable practices and financial opportunity. But as the province faces a rise in the demand for energy, industry experts are striving to meet the challenge while keeping greenhouse gas emissions down and costs low. In order to do so, both environmental experts and alternative energy producers stress the importance of using a mix of clean energy sources, such as run-of-river facilities and wind power, which will not only provide the province with clean power but also benefit consumers.

The strength of wind

According to the Canadian Wind Energy Association (CanWEA), there is tremendous potential when it comes to renewable resources, particularly wind power. In the association’s recently published report “WindVision 2025: A Strategy for British Columbia,” it predicts that the province can satisfy 30 percent of its total energy demand through the development of wind energy projects. And that’s wind energy alone. Matt Horne, director of climate change program at The Pembina Institute, echoes the sentiment that renewable resources have the power to create more jobs but also stresses that it’s key to combine power sources to obtain optimal opportunity.

Wind tunnel vision

It would also result in $16 billion dollars of investment across the province between 2012 and 2025, with over $3.7 billion of direct benefits to BC communities during the construction phase alone. Implementing WindVision would also generate tens of thousands of job opportunities throughout the province, and the country.

The level of renewable energy in Canada is very low, there’s a lot to do still to bring more renewable energy to the mix,” he says. “Right now in Canada we rely too much on coal, nuclear or gas to procure energy for everyone. I think a lot of improving economic performance.

One of the most effective mechanisms for ensuring a sustainable practice is to meet environmental issues—says “environmental problems are business opportunities.

Working together

No one can create a symbiotic relationship between business and environmental interests effectively without a business that is committed to protecting its environment. We can help you protect and work to establish a more sustainable society, and work to support the environment-facing challenges.

Grow green.

Your stakeholders are asking tough questions. We can help you protect and grow your bottom line by creating the connection between sustainability and economic performance.

For more information contact Henry Stoch, Vancouver Leader Corporate Responsibility and Sustainability, at 604-609-1400 or visit deloitte.ca.
This is our Home

The places where we work are also where we live. That’s why Teck employees are focused on making the right choices for the environment, for communities and for future generations.

Learn more about our commitment to sustainability at: www.teck.com/sustainability

Photo: reclaimed area at Teck’s Copper River Operations

Setting Possibilities in Motion

Together

We stand for innovation and productivity

Delivering responsibly through business practices that protect the environment.