Photo: Courtesy, Jawl Properties Ltd.

The Business of Climate Change

The Selkirk Waterfront in Victoria, seen here, is owned and operated by Jawl Properties Ltd., which has implemented innovative energy efficiency measures.

We hear talk of a "green economy," but what does this really mean? This fact sheet is one of a three-part series that helps to illustrate a world where energy is less polluting, business thrives and jobs are plentiful.

To achieve this vision, we must continue to shift our economy to one that puts a real price on climate pollution and allows green businesses to thrive. If we make the right choices, British Columbia can become a leader in Canada and beyond.

Dynamic, Thriving and Clean: Excelling in a Green Economy

Identifying new business challenges and opportunities early is key to a company's success. Climate change is one of these opportunities.

Since the cost of greenhouse gas emissions will rise due to carbon pricing initiatives such as a carbon tax or cap-and-trade system, businesses that reduce their emissions or help others reduce emissions will thrive.

The six companies profiled in this fact sheet are facing the climate change challenge head-on, and they are part of a growing trend in B.C. They represent the future B.C. economy: dynamic, thriving and clean.

Case Study: Working Together to Cut Energy Consumption

Jawl Properties Ltd.

Location: Victoria, B.C.
Number of employees: 30
General description:
Commercial property developer

Background: Jawl Properties owns and operates 14 commercial buildings totaling 800,000 square feet. Working with BC Hydro, Jawl completed energy audits on its buildings to identify the most cost-effective ways to reduce energy consumption.

Actions: Jawl focused its energy reduction efforts on 1) increasing the efficiency of heating, ventilation and air conditioning systems and controls programming in its buildings, and 2) changing tenant behaviour through education programs.

Climate impact: Jawl anticipates that energy consumption in its buildings will decrease by approximately 23%, reducing 300 tonnes of greenhouse gases, equivalent to taking 61 cars off the road each year.

Financial impact: The building upgrades required capital investment. However, because the tenants are responsible for their own energy costs the resulting savings in energy costs also flow to the tenants. Therefore, Jawl could not use the money saved in energy costs to pay for the upgrades — a problem faced by many property owners. Jawl solved the problem by entering into innovative agreements with its tenants: the tenants will pay Jawl back for the upgrades with the savings from their energy bills. Once the original capital investment is paid off, estimated to take four to five years, the tenants will benefit from the savings.

> *"This initiative has been right for the business, right for the environment and rewarding for all of us."*
>
> – Karen Jawl, Jawl Properties Ltd.

Mountain Equipment Co-op studied its greenhouse gas emissions and found out most of its transportation emissions came from moving products from the B.C. warehouse to other stores by truck.

Photo: Courtesy, MEC

Case Study: From Truck to Train

Mountain Equipment Co-op (MEC)

Location: Across Canada
Number of employees: 1,500
General description: Outdoor recreation equipment and clothing retailer

Background: MEC studied its greenhouse gas emission patterns to find ways to reduce the company's impact on the environment. A surprising discovery was that most of their transportation-related emissions came from moving products from the B.C.-based distribution centre to stores and customers by truck (they expected overseas shipping to have a bigger impact).

Action: MEC changed the way it transports its products from a truck-based system to a "multi-modal" system that primarily uses trains, with trucks as a backup.

Climate impact: MEC's transportation emissions from the distribution centre to the stores decreased by 30% from 2008, though its overall emissions increased in 2009.

Financial impact: MEC found that a multi-modal transportation system cost less than a truck-based system, although delivery time is slightly longer.

"A key driver in our decision-making is the knowledge that the price of carbon will be increasing in the future. We want to be well-positioned to compete in a carbon-constrained world."

– Esther Speck, Director of Sustainability, Mountain Equipment Co-op

Case Study: Flying High on Fuel Efficiency

West Coast Air

Location: Vancouver, B.C.
Number of employees: 140
General description: Local charter airline

Background: West Coast Air is a locally owned and operated airline, offering floatplane service to Vancouver, Victoria, Vancouver Island and Sunshine Coast communities. In 2007, West Coast Air enrolled in the Climate Smart program (climatesmartbusiness.com) and completed an inventory of its emissions.

Actions: After discovering the majority of emissions came from their 17 planes, West Coast Air has worked to reduce those emissions through improving their maintenance program. They've also taken a further step to become carbon neutral through the purchase of offsets.

Climate impact: West Coast Air reduced its emissions by 12% between 2008 and 2009.

Financial impact: The reduction in energy use translated into a direct financial savings.

Photo: Courtesy, West Coast Air

"We are proud of the work that we're doing to reduce our emissions at West Coast Air. We have always believed that reducing emissions first and then buying offsets for the rest is the most responsible way to go. That's why we've focused so much on our maintenance and other programs."

– Rick Baxter, President, West Coast Air

West Coast Air improved its maintenance program to reduce emissions.

Case Study: Greener Fleets, Greener Streets

Azure Dynamics (AZD)

Location: Burnaby, B.C., across North America and Europe
Number of employees: 120+
General description: Designer, integrator and manufacturer of hybrid electric and electric components for commercial vehicles.

Green goods/services: AZD has developed electric and hybrid electric drive technology for light to heavy-duty commercial vehicles, including delivery trucks for companies such as FedEx and Purolator, short school buses and shuttle buses.

Climate impact: Customers can reduce their operating costs and greenhouse gas emissions significantly by using AZD technology in their vehicles. For example, the AZD hybrid electric drive system can reduce maintenance costs by 30% and increase fuel economy by 40%. AZD estimates that use of its technology has already resulted in a total reduction of over 32,000 tonnes of greenhouse gas emissions. This technology could reduce global road vehicle greenhouse gas emissions by up to 2%, even if confined to commercial vehicles.

How to go further: AZD needs to find employees with the skills to work in this emerging market.

Future prospects: AZD is excited about the future. They predict that the market for electric and hybrid electric vehicle technology will continue to increase as the price and social costs of energy rise.

> *"Our mission statement is 'driving a world of difference.' We have a responsibility to leave a better world for our kids."*
>
> – Mike Elwood, Vice President, Marketing, Azure Dynamics

Photo: Courtesy, Azure Dynamics

Azure Dynamics' electric and hybrid drive technology for commercial vehicles can reduce maintenance costs by 30%, while increasing fuel efficiency by 40%.

Case Study: Shining a Light on Conservation

Quantum Lighting Inc.

Location: Coquitlam, B.C.
Number of employees: 35
General description:
Lighting and electrical services

Key green goods/services: Quantum Lighting specializes in designing, modernizing and servicing energy-efficient lighting systems and lighting controls in the commercial, institutional and industrial sectors in B.C.

Climate impact: The lighting technologies offered by Quantum Lighting can reduce total electricity use by up to 30%. They've completed more than 700 upgrades and installations on schools, shopping malls, churches, hospitals, large industrial plants and multi-residential properties, adding up to significant energy savings.

How to go further: Quantum Lighting sees increasing energy conservation programs offered by utilities and incentives from governments as key pieces to going further.

Future prospects: Quantum Lighting is looking forward to the future. Graduates of B.C.'s energy management programs are increasing their knowledge and skills in energy efficiency and Quantum is snapping them up as well as offering its own electrical trade apprenticeship program.

> *"The technology can take you a long way, but unless people are committed to changing their behaviour, we're not going to see big changes."*
>
> – Len Horvath, M.Sc.,
> President, Quantum Lighting Inc.


Courtesy, Quantum Lighting Inc.

Quantum Lighting completed a lighting redesign at the Vancouver Convention and Exhibition Centre. The new design uses the latest technology, with energy-efficient dimmable fluorescent lighting and computerized lighting controls.

Case Study: Savings on the Home Front

Complete Home Energy

Location: Kelowna, Penticton and Vernon, B.C.
Number of employees: 4
General description: Home energy renovations

Key green goods/services: Complete Home Energy offers home renovation and retrofit services focused on increasing the energy efficiency of homes. Its services include upgrading windows, doors, insulation and heating, ventilation and air conditioning systems, as well as installation of home solar systems.

Climate impact: Complete Home Energy estimates that every major home renovation it completes reduces greenhouse gas emissions by between 1.5 and 3 tonnes.

How to go further: Complete Home Energy feels that stronger policies to encourage renewable energy generation and a stronger carbon tax to encourage innovation would increase the demand for home energy efficiency solutions.

Future prospects: The company sees a bright future ahead. It is growing quickly and a sister company, Sola Renewable Energy, has been created.

> *"Our work renovating hundreds of units of low-income social housing has shown that what's good for the environment is also good for people."*
>
> – David Mayes, Owner, Complete Home Energy

Photo: Courtesy, Complete Home Energy

Complete Home Energy installs solar panels as part of its energy effient home renovation services. To keep pace with demand, Complete Home Energy recently created a sister company, Sola Renewable Energy.

Making Decisions that are Good for Business and the Environment

The businesses featured here have made choices that reduce emissions, either in their own operations or by offering goods and services that help others reduce their emissions. These choices have been good for the environment, and they've also been good for business. The financial rewards they are seeing today will only increase as the cost of energy increases, the price on carbon increases and regulations to reduce energy use in our buildings and vehicles become stronger. The businesses featured here are just an example of the creative and forward-looking companies popping up all across B.C. As these businesses grow, so will the numbers and types of jobs they offer.

What you can do

Here are some ways to support a thriving green economy in B.C.:

1. Look for business and service providers who are choosing a cleaner path.
2. Learn about the emissions from your business and think about how to use less, and cleaner, energy. Reducing fossil fuel use will also help you pay less carbon tax.
3. Support stronger policies and regulations that drive innovation and help green businesses thrive, such as a stronger carbon tax, increased conservation programs from utilities and increased incentives for clean energy technologies.

Want More Information?

- A changing economy will also impact our homes and how we get around in our communities. Find out more in our fact sheet for families, *Walking the Green Talk.*
- B.C.'s carbon tax helps drive positive investments in reducing greenhouse gas emissions. Find out more about the carbon tax in our fact sheet, *Putting a Price on Pollution.*
- To find out more about Pembina's work in B.C., visit bc.pembina.org

www.pembina.org

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