



CITY OF QUESNEL NEWS RELEASE

City applauds \$4.1 million energy funding commitment

For Immediate Release

April 3, 2009

Quesnel, B.C. – Quesnel City Council is applauding a \$4.1 million commitment made by the provincial government's Innovative Clean Energy (ICE) fund to support the Quesnel Community and Economic Development Corporation's (QCEDC's) work on a Community Heat and Electricity System. Premier Gordon Campbell made the announcement earlier today at a bio-energy plant in Burnaby. The commitment supports the first step towards a \$13.4 million system that would make use of existing industrial heat sources to generate electricity and provide heat for multiple downtown facilities.

"This is very exciting news for the City of Quesnel. We know there are many opportunities for us to maximize the potential of our resource base," said Mayor Mary Sjostrom. "This project could eventually provide us not only with a green, environmentally responsible source of heat and power, but could be a significant source of revenue for the City that is not reliant on property taxes. We're supportive of green and innovative energy projects and look forward to seeing this one develop."

The City of Quesnel began work on this initiative in 2005 by conducting feasibility work. QCEDC obtained support for more detailed feasibility work from Western Economic Diversification Canada and BC Hydro in 2007, which culminated in the ICE funding opportunity.

"We are very pleased with this announcement and the potential it holds for Quesnel," said QCEDC Board Chair Brian Black. "We're committed as a Board to the continued development of a sustainable and diverse economy in Quesnel. By bringing together multiple partners we believe there are many more opportunities for advancement and growth."

QCEDC will now work on securing additional financing for the project, and industrial and other partners to develop and operate it. If the project proceeds as planned, the potential exists for the City to reduce operational costs for it and other major businesses and institutions, reduce CO2 emissions, add infrastructure to attract other firms, meet greenhouse gas reduction targets and gain national or even international recognition for clean energy innovation.

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Editor's Note: One City backgrounder, as well as the provincial government news release and backgrounders are attached. This release is available online at www.city.quesnel.bc.ca

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Backgrounder

Summary

QCEDC has obtained a \$4.1 million commitment from the Innovative Clean Energy (ICE) Fund towards a \$13.4 million project. The funding and the project are provisional on raising the balance of financing, concluding commercial arrangements with partners, and other critical tasks. ICE funds would help create a combined heat and power (CHP) project in Quesnel: a biomass-fired energy system at a sawmill, which already heats lumber kilns, would be augmented to generate electricity and produce hot water. A 2.8-km pipe loop would deliver hot water for space heating to industrial buildings and a dozen or more large buildings in downtown Quesnel (a “community energy system”, or CES). Technical and business feasibility work was funded by Western Economic Diversification and BC Hydro. The project appears to be a first in North America.

From 0.7 to 4.0 megawatts (MW) of electricity could be generated by the proposed system using Organic Rankine Cycle engines. The scale depends on economics. At 0.7MW, no additional biomass fuel would be required: the system would piggyback on existing use of biomass fuel at the sawmill. The capital cost noted above is based on generation of 1.35MW. Higher production would require approximately \$2 million per additional megawatt generated. Electrostatic precipitators (ESPs) already ensure that stack emissions are extremely small.

This project is part of a comprehensive strategy, in the context of the pine beetle and other challenges, to develop green energy and bio-product opportunities for Quesnel. See the attached “bio-economy vision.”

Benefits to the community

1. Non-tax revenues for the City to help reduce pressure on taxes.
2. Infrastructure that will reduce operational costs for businesses and institutions, reduce the effects of volatile natural gas prices, and reduce emissions of CO₂.
3. Economic development benefits by reducing leakage of energy payments out of the community.
4. Infrastructure to aid attraction of firms (e.g., food processors, greenhouses) that could utilize waste heat.
5. Publicly-owned buildings (e.g. the Hospital, City Hall) will be able to meet Provincial greenhouse gas reduction targets (Bills 18, 27, and 44) at reasonable cost.
6. Recognition for innovation on green energy and sustainability.

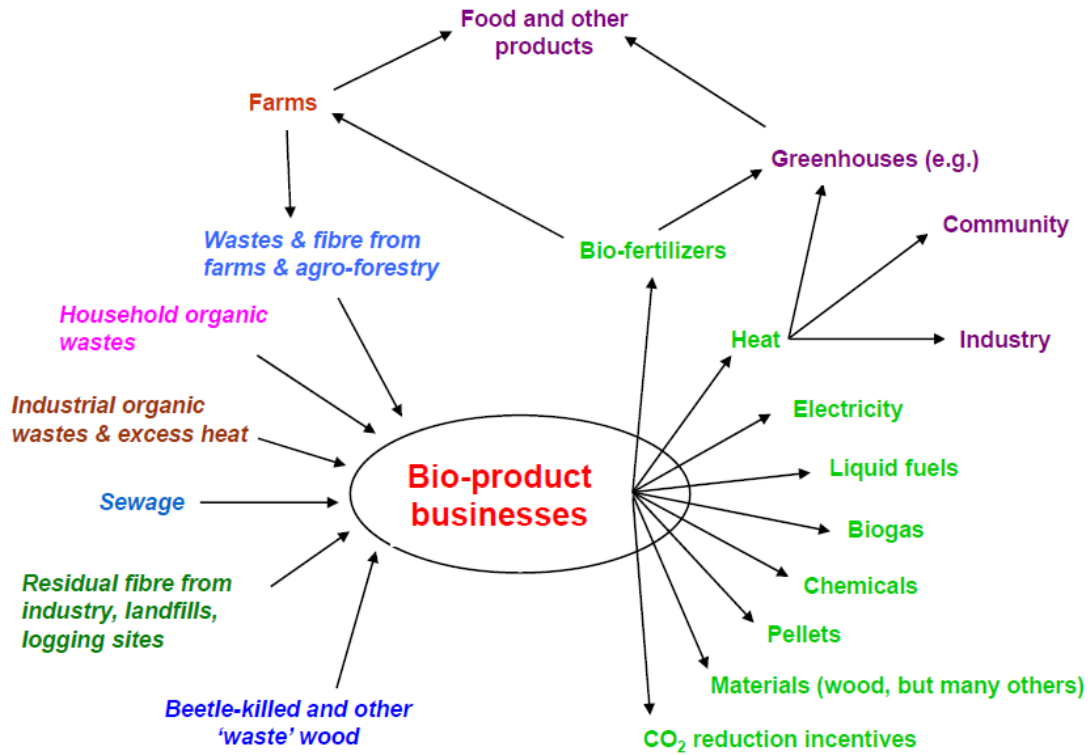
Key next steps

1. Seek financing partnerships with additional parties.
2. If the foregoing efforts are successful, finalize a commercial arrangement with the industrial partner and determine a governance structure for the project.
3. Seek final approval from Quesnel City Council and other parties as required.

Time required for the above steps: likely six to eight months.

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Quesnel bio-products economy: 15 year vision



For more technical information related to the background information, please contact:

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NEWS RELEASE

For Immediate Release
2009OTP0061-000611
April 3, 2009

Office of the Premier
Ministry of Small Business, Technology and Economic Development

CLEAN ENERGY PROJECTS TO CREATE 1,200 JOBS IN B.C.

BURNABY – The provincial government will invest over \$32.6 million to help commercialize British Columbia’s clean, alternative energy technologies, reduce greenhouse gas emissions, and create about 1,200 jobs in over 30 B.C. communities, Premier Gordon Campbell announced today.

“British Columbia’s alternative energy and biofuel sectors are becoming world-leaders in pioneering cutting-edge clean, green technology,” said Premier Campbell. “By focusing on leading-edge technology, we’re supporting the creation of good jobs in communities across the province; building a home-grown clean energy sector that will market proven innovations to the world; and helping meet the growing demand for green power here in B.C.”

New clean energy investments will come from two sources: over \$22.6 million from the Innovative Clean Energy (ICE) Fund and \$10 million to support the production of liquid biofuels with demonstrated low greenhouse gas emissions. The projects have a combined value of almost \$200 million.

“By working with British Columbia’s dynamic clean energy entrepreneurs, we are helping to bring new technologies to the point where they are commercially viable,” said Small Business, Technology and Economic Development Minister Ida Chong. “Clean energy technologies help protect the environment while stimulating economic activity at the community level.”

The announcement was made today at Lignol Innovations in Burnaby, which is receiving \$3.4 million in provincial funding to produce cellulosic ethanol and other products from under-utilized forest resources, especially beetle-killed lodgepole pine.

“This facility is one of just a handful in the world that can demonstrate the production of cellulosic ethanol and biochemicals on an industrial scale. With this support from the provincial government, we will begin operating our new pilot plant on a range of B.C. feedstocks, so that we can optimize our process and finalize the engineering for large scale plants,” said Ross MacLachlan, president and CEO of Lignol. “This facility will become a showcase for our company and British Columbia as we strive to commercialize a technology that holds so much promise for the forest products industry and communities hardest hit by the mountain pine beetle devastation.”

The ICE Fund is supporting 19 projects situated in rural and off-grid communities across British Columbia, covering a range of technological applications, including: ocean tidal and wave, solar, geothermal, wind, biomass, wastewater, energy conservation and management, and variable street light technology. The approved projects represent over \$96 million in total value and will create about 750 temporary and full time jobs in over 25 B.C. communities.

Funding for liquid biofuels will support eight projects to develop cellulosic ethanol, biodiesel, and biofuels technologies. The approved projects represent over \$100.6 million in total value and will create about 450 temporary and full time jobs in seven B.C. communities. Increased biofuels production will help meet the provincial standard of five per cent minimum annual average renewable content for gasoline and diesel used in B.C. by 2010.

By taking decisive action to reduce greenhouse gas emissions by 33 per cent by 2020, government is positioning British Columbia to be a green economic powerhouse in high tech and clean energy sectors – benefiting communities, businesses and citizens throughout the province now and in future. For more information, please visit <http://www.tted.gov.bc.ca/ICEFund/Pages/default.aspx> online.

2 backgrounder(s) attached.

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BACKGROUND

2009OTP0061-000611
April 3, 2009

Office of the Premier
Ministry of Small Business, Technology and Economic Development

INNOVATIVE CLEAN ENERGY FUND RURAL PROJECTS

Quesnel Community and Economic Development Corporation

ICE Fund investment \$4.133 million

Total project value – \$14,797,600

Project phase jobs – 84

On-going jobs – nine

The project will use excess capacity from an existing industrial biomass energy system to produce electricity and heat for community use. The energy system consists of two parts: a turbine and electrical generator to produce electricity and heat; and a distribution system to serve local clients. Replacing natural gas, the energy from the new community energy system will heat city hall, a local hospital, a retirement lodge, provincial government offices, a recreation centre, other large buildings and industrial sites.

Small Energy Group Inc.

Hartley Bay, Haida Gwaii, Hesquaiht

ICE Fund investment \$2.418 million

Total project value – \$7,254,000

Project phase jobs – 25

On-going jobs – 25

Small Energy Group Inc. (Pulse Energy), a B.C. company, has created an energy software system to improve the management of energy use in buildings and communities, resulting in reduced diesel-electric power generation in remote, First Nation, and off-grid communities. The project's off-grid component involves 100-200 buildings in three remote communities with three partners: Village of Hartley Bay, Hesquaiht First Nation with Ecotrust Canada, and Haida Gwaii with BC Hydro. An on-grid component involves 12 commercial buildings in Prince George and 12 in Nanaimo.

E3P Technologies, Inc.

Northern Development Initiative Trust Region

ICE fund investment \$2.32 million

Total project value – \$6,600,000

Project phase jobs – four

On-going jobs – 10

E3P Technologies, Inc. has researched and developed a patented device to capture wasted pressure energy from natural gas pipelines. Wasted energy from pressure reduction can be recovered and converted to useable electrical power. The device is scalable, reversible and ideal for converting pressure energy to mechanical work.

Pacific Coastal Wave Energy Corporation

Ucluelet

ICE fund investment \$2 million

Total project value – \$20,000,000

Project phase jobs – 12

On-going jobs – two

Pacific Coastal Wave Energy Corp. is partnering with the District of Ucluelet to build a four-megawatt (MW) demonstration facility to generate electricity from ocean wave power. Located off-shore from the community, the technology will be attached to the seabed where submerged buoys harness the ocean's kinetic energy. Since it is deployed underwater, there are no aesthetic concerns and less vulnerability to weather.

SyncWave Systems Inc.

Tofino

ICE Fund investment \$2 million

Total project value - \$10,475,000

Project phase jobs – 30

On-going jobs – 30

A SyncWave Power Resonator will convert the energy of ocean swells into clean, renewable electricity. The technology is designed to be suitable for both off-grid and grid-integrated applications.

Canoe Pass Tidal Energy Consortium

Regional District of Strathcona

ICE Fund investment \$2 million

Total project value – \$6,375,000

Project phase jobs – 33

Canoe Pass Tidal Energy Consortium (New Energy Corporation Inc., Canoe Pass Tidal Energy Corporation and the City of Campbell River) will develop a commercial tidal energy site at Canoe Pass in a narrow channel between Quadra and Maude Islands north of Campbell River. The commercialization project will involve removal of a causeway, restoration of the tidal current flow and installation of a mechanical span across the pass for two 250 kilowatt (KW) turbines to harness the tidal power.

Aboriginal Cogeneration Corporation (ACC)

Kamloops

ICE Fund investment \$1.5 million

Total project value – \$10,050,000

Project phase jobs – seven

On-going jobs – 21

ACC will build a biomass-to-energy demonstration facility at their existing railroad tie handling facility in Kamloops, using waste railway ties from Canadian Pacific Railway as feedstock. The facility will use a micro-gasifier to convert biomass, such as wood or dry processing residues, into electricity. Each micro-gasifier can process up to 41 tonnes of waste wood per day, effectively generating one MW for every two tonnes of wood biomass. Future opportunities exist with small northern communities where ACC can convert existing diesel fuel-powered generators to biomass generators using mountain pine beetle infested timber.

Pacific Green Energy Initiative “Smart” Street Light Coalition
Prince George, Quesnel, Vanderhoof, Fort St. James, Fraser Lake, Wells
ICE Fund investment \$1.3 million
Total project value – \$3,848,250
Project phase jobs – 23
On-going jobs – 300

This project is a commercial scale demonstration of “smart” street light technology to replace 8,000 to 10,000 lights in six participating communities. Electricity consumption for street lighting in British Columbia could be reduced by up to 100,000 MW hours per year by retrofitting approximately 300,000 street lights with adaptive lighting technology developed in the province.

Northwind Ethanol
Prince George
ICE Fund investment \$1.246 million
Total project value – \$4,985,500
Project phase jobs – 20
On-going jobs – 28

Northwind Ethanol proposes to build a 500,000 gallon (US) cellulosic feedstock, fuel ethanol demonstration facility to make ethanol and lignin from woody biomass. The project supports new employment opportunities in the forest industry and provides fuel ethanol.

Tla-o-qui-aht First Nation
Clayoquot Sound
ICE Fund investment \$750,000
Total project value – \$3,000,000
Project phase jobs – five
On-going jobs – two

Tla-o-qui-aht First Nation is currently implementing the Ty-Hystanis New Community project, with plans for a health centre, community building, school, and a 160-lot subdivision for up to 215 new housing units. The project will pump geo-thermal energy from the ground to provide heat for buildings and domestic hot water for residents.

City of Grand Forks
ICE Fund investment \$666,667
Total project value – \$2,000,000
Project phase jobs – 30
On-going jobs – two

The project will incorporate a heat recovery system in the municipality’s reconstruction of its park lift station, extracting energy from raw wastewater to heat a new building housing the lift station, public restrooms, and a community stage.

Saltwork Technologies

Regional District of Okanagan-Similkameen

ICE Fund investment \$503,910

Total project value – \$1,586,000

Project phase jobs – three

On-going jobs – 20

Saltworks Technologies Inc. has developed a desalination technology that substantially reduces the amount of electricity needed to make brackish water potable. The technology uses solar-chemical energy for the conversion process – saving enough electricity to power 21,000 homes for a year. Within British Columbia, Saltworks expects commercial applications in water-stressed rural and remote communities located in coastal regions or areas with salty groundwater.

New Hope Society

Baldy Hughes Rehabilitation Centre (southwest of Prince George)

ICE Fund investment \$460,635

Total project value – \$1,316,100

Project phase jobs – seven

On-going jobs – seven

Baldy Hughes is former military base used as an addictions treatment centre. The project will heat eight of the 22 buildings on site from a centralized boiler plant fuelled by wood pellets. The heating system will allow for removal of existing propane boilers.

Pacific Regeneration Technologies Inc. (PRT)

Prince George

ICE Fund investment \$435,600

Total project value – \$1,306,800

Project phase jobs – two

On-going jobs – two

PRT's project will install a high-efficiency low-emission gasifier/combustor and boiler using poplar and willow feedstock, in addition to waste biomass, to produce heat for commercial, industrial and institutional buildings. The locally-grown woody feedstock is a valuable alternative source of biomass for the region.

Town of Gibsons

ICE Fund investment \$325,115

Total project value – \$976,320

Project phase jobs – three

The Town of Gibsons will design and build a municipally-operated geo-exchange district energy utility, the first of its kind in North America, to capture renewable energy from heat exchangers in the ground on municipally-owned green space. The system will pump heat from the ground to residential and commercial buildings, initially servicing 110 dwellings. In addition to the jobs and investment, the project will provide the municipality with stable, long-term revenue.

Powertech Labs Inc. (BC Hydro)

Bella Coola

ICE Fund investment \$203,775

Total project value - \$617,500

Project phase jobs – five

On-going jobs – one

This initiative deploys energy storage systems in remote British Columbia communities through a zinc bromine battery system. Zinc bromine batteries improve reliability of intermittent power sources, such as wind and solar generation. The Bella Coola project is demonstrating technologies that can reduce reliance on non-renewable power generation, particularly diesel.

Siwash Lake Ranch

100 Mile House

ICE Fund investment \$197,000

Total project value – \$590,200

Project phase jobs – 10

On-going jobs – two

The project at Siwash Lake Ranch will overhaul an existing off-grid energy system, currently burning over 14,000 litres of diesel fuel and 7,000 litres of propane per year. The ranch will be switching to a primary solar energy system to generate clean, renewable electricity. Solar thermal technologies will replace propane currently used for heating water.

Nyfound Energy Inc. Wind Farm Project

Merritt

ICE Fund investment \$142,592

Total project value – \$484,224

Project phase jobs – two

The project will use wind turbines to pump water from an existing reservoir into a new water storage area on higher ground. Then, when the wind dies down, the water will flow from the higher to the lower reservoir through a hydro generator to create electricity.

Thompson-Nicola Regional District (TNRD)

Clinton, Logan Lake, Lytton

ICE Fund investment \$79,063

Total project value – \$237,189

Project phase jobs – six

On-going jobs – three

TNRD is upgrading refuse transfer stations to eco-depots in the municipalities of Clinton, Logan Lake and Lytton. The project will install solar panels at three eco-depots, reducing reliance on conventional hydro and fossil fuel generators, while providing power for compacting refuse and recyclable material.

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BACKGROUND

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LIQUID BIOFUELS PROJECTS

Lignol Innovations Ltd.

Burnaby

Province of B.C. funding – \$3,405,000

Total project value – \$11,572,000

On-going jobs – 20

Lignol will produce cellulosic ethanol and other products from under-utilized forest resources, especially beetle-killed lodgepole pine. The project will establish process and product characteristics to produce test-market quantities of cellulosic ethanol and lignin-based products. The project includes a basic engineering design package and cost estimate for an initial major commercial bio-refinery to be built in British Columbia. By providing a demand for large quantities of beetle-killed wood and other feedstocks, the project will help support economic activity in rural B.C.'s forest communities.

International Composting Corporation (ICC)

Nanaimo

Province of B.C. funding – \$2,500,000

Total project value – \$7,500,000

Project phase jobs – five

On-going jobs – 25

ICC plans to process 15,600 tonnes per year of organic waste (now going to a landfill site) from the Nanaimo Regional District and produce approximately 2,000,000 litres of biodiesel per year at the Duke Point Industrial Park.

Peace Biofuels Ltd. (PBL)

Dawson Creek

Province of B.C. funding – \$2,000,000

Total project value – \$60,000,000

Project phase jobs – 200

On-going jobs – 106

PBL proposes to construct a 40-million-litre canola biodiesel plant in Dawson Creek, producing canola oil from an extraction plant integrated with the biodiesel plant. Most of the canola will be grown in B.C.'s Peace region and the biodiesel plant will contribute to the area's important agriculture sector.

Pure Power Global Ltd.

Quesnel

Province of B.C. funding – \$880,000

Total project value – \$17,600,000

On-going jobs – four

Pure Power Global (PPG) Ltd. will design and build a bio-refinery in Quesnel to convert 10 MT per day of woody biomass into cellulosic ethanol, lignins and xylose. The project will demonstrate the ability of an integrated bio-refinery to carry out air, soil and water remediation in a rural community and develop engineering specifications for a 250 MT per day commercial bio-refinery.

City-Farm Biofuels Ltd.

Delta

Province of B.C. funding – \$740,000

Total project value – \$2,500,000

Project phase jobs – 20

On-going jobs – 50

City-Farm Biofuel Ltd.'s project will expand the company's annual biodiesel production from five million to 10 million litres. The project will use local crop oil and cooking oil to produce biodiesel through state-of-the-art technology with a high conversion rate, no wastewater, and no environmental waste.

GoGreen Biofuels Inc.

Saanich

Province of B.C. funding – \$200,000

Total project value - \$600,000

Project phase jobs – four

On-going jobs – nine

The GoGreen Biofuels project proposes to build Vancouver Island's first waste vegetable oil low-carbon fuel plant at the Vancouver Island Technology Park in Saanich. The plant will produce one million litres per year of locally-sourced biodiesel and byproducts. It will also manufacture glycerin-cellulose briquettes and/or pellets for boilers and biomass energy generation systems on Vancouver Island. The project will demonstrate a new biofuel refining technology that creates no wastewater.

Consolidated Biofuels Ltd.

Delta

Province of B.C. funding – \$150,000

Total project value – \$532,122

Project phase jobs – five

On-going jobs – eight

Consolidated Biofuels is building a manufacturing facility to produce 15 million litres of biodiesel per year by the end of 2009. The company will use rendered animal fats produced in B.C. as a feedstock source.

Northern Extreme Bioenergy Corp

Mackenzie

Province of B.C. funding – \$125,000

Total project value – \$375,000

On-going jobs – four

Located in the Fraser-Fort George Regional District, Northern Extreme Bioenergy Corporation will build a commercial processing plant to produce biodiesel, using vegetable oil from restaurants in Mackenzie and the surrounding areas within an approximate radius of 500 km. Producing 50,000 litres in the first months, the plant will ramp up to full capacity of 300,000 litres as feedstock becomes available.

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