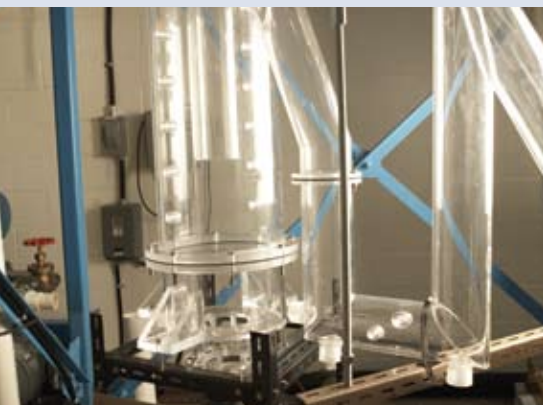


innovative  
clean  
energy  
fund  
report



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## MESSAGE FROM THE PROVINCE

MESSAGE FROM PREMIER GORDON CAMPBELL  
and IAIN BLACK, MINISTER OF SMALL BUSINESS, TECHNOLOGY AND ECONOMIC DEVELOPMENT

The Province's Innovative Clean Energy Fund is helping to position British Columbia at the leading edge of the global low-carbon economy. ICE Fund projects are creating opportunities for our government to forge partnerships with B.C.'s industries, municipalities and world-class universities to pioneer new technologies, approaches and ideas around clean energy. As a result, a strong private-public sector network is emerging in British Columbia that combines technological expertise, marketing know-how and investment essential to green economy success.

The ICE Fund brings made-in-B.C. clean energy solutions to communities large and small across the province, supporting local jobs and economic development. At the same time, the ICE Fund shows international customers and investors that B.C. has effective, cutting-edge technologies ready for commercialization in a world searching for clean, green energy solutions.

We've set ambitious clean energy goals in British Columbia, including making the province electricity self-sufficient by 2016, taking action on climate change by cutting greenhouse gas emissions by 33 per cent by 2020, and introducing some of the most comprehensive emission-reduction policies in North America. The ICE Fund is helping B.C. to meet these goals – and will continue helping to provide reliable and affordable clean energy for all British Columbians for years to come.



Gordon Campbell  
Premier of British Columbia



Iain Black  
Minister of Small Business,  
Technology and Economic  
Development

A handwritten signature in blue ink that reads "Gordon Campbell".

A handwritten signature in blue ink that reads "Iain Black".

## ABOUT THE ICE FUND

The Province of British Columbia established the Innovative Clean Energy Fund in 2007 to support the development of new clean energy technologies with the potential to solve everyday energy and environmental issues, and create socio-economic benefits for British Columbians.

This ICE Fund report describes projects funded as part of the ICE Fund's first and second calls for applications, as well as five liquid biofuels projects supported with ICE funding. A third call – the 2010 Showcase Call – is accepting applications until July 5, 2010.

To date, the ICE Fund has invested over \$54 million in 39 projects in communities across B.C., representing a total investment value of nearly \$200 million. The array of technological applications supported include ocean tidal and wave, solar, geothermal, wind, bioenergy, and energy conservation and management.

The ICE Fund supports commercial clean energy technology not yet used in B.C., and technology at the pre-commercial stage – proven on a small-scale and ready to be showcased to potential buyers and investors.

Demonstrating the commercial viability of technology is critical to its development, and one of the key reasons the ICE Fund was created: to showcase to the world British Columbia's innovative solutions to the pressing environmental and energy issues of our times, while creating jobs, sustainable development, and a better future for all British Columbians.

For more information on the ICE Fund, visit [www.icefund.gov.bc.ca](http://www.icefund.gov.bc.ca).

# First Call 2008 Projects



T'Sou-ke First Nation Solar Photovoltaic Installation

## T'Sou-ke Nation

T'Sou-ke Nation, a small Aboriginal community on Vancouver Island's west coast, has created the largest grid-connected photovoltaic solar energy system operating in British Columbia today, thanks in part to its \$400,000 ICE Fund contribution.

It also became the first ICE Fund proponent to complete its project in the summer of 2009. To celebrate, the group hosted 50 First Nations from across B.C. for a two-day 'solar gathering' to share information on ways to make clean energy a reality at the community level.

"First Nations have lived on this continent for thousands of years without using fossil fuels," said T'Sou-ke Nation Chief Gordon Planes. "The Sum-SHA-Thut project, which means 'sunshine' in Sencoten, is an important step in achieving energy self-sufficiency once again."

Along with the photovoltaic installation, which creates electricity from the sun, T'Sou-ke Nation has fitted solar hot water panels for 37 homes and several administrative buildings on the reserve, and trained nine band members as solar panel installers.

"Our entire community is engaged in this project and we want the economic and social benefits to extend to all First Nations and municipalities in B.C.," said Andrew Moore, project manager. "By hosting 50 First Nations and other communities, we are

providing information and inspiration on ways to both pursue economic development and act as an alternative energy leader in British Columbia."

T'Sou-ke Centre for Sustainable Living is aiming to achieve a high level of self-sufficiency in energy, food production and economic development while bringing about a restoration of traditional values and culture. Many of the T'Sou-ke trainees previously displaced from traditional fishing and logging industries now find opportunities as leaders in the fast-growing renewable energy industry.

"We want the knowledge and benefits gained through this project to extend far and wide," said Moore. "That's why we're partnering with our neighbours in the municipalities of Sooke and Colwood, to help develop their conservation and renewable energy plans. Soon we'll explore the potential of wind and tidal power – this is only the beginning."



“First Nations have lived on this continent for thousands of years without using fossil fuels. This project is an important step in achieving energy self-sufficiency once again.”

T'Sou-ke Nation Chief Gordon Planes

“Our entire community is engaged in this project, and we want the economic and social benefits to extend to all First Nations and municipalities in B.C.”

Andrew Moore, T'Sou-ke Nation Project Manager

ICE FUND

\$400,000

TOTAL INVESTMENT VALUE:

\$900,000

COMMUNITY:

T'Sou-ke Nation,  
Vancouver Island

COMPLETION DATE:

Summer 2009

JOB CREATION:

20 construction jobs

10 ongoing jobs





## University of Northern British Columbia

### ICE FUND

\$3.5 million

### TOTAL INVESTMENT VALUE:

\$15.75 million

### COMMUNITY:

Prince George

### COMPLETION DATE:

Spring 2011

### JOB CREATION:

151 construction/ongoing jobs

The University of Northern British Columbia is implementing a Nexterra Systems Corp. system to gasify biomass – largely wood infected by the mountain pine beetle – and produce heat for the university's Prince George campus.

This showcase project, the first of its kind at a Canadian university, will be a catalyst for replication and economic development. Biomass gasification could displace up to 80 per cent of the fossil fuel currently used to heat buildings on the campus.

The project supports the university's efforts to work with others in the region to establish a Bioenergy Centre of Excellence. It will also serve as a platform for applied research and regional installations in partnership with communities.





## Alterna Energy Inc.

Alterna Energy is building a plant in the Prince George region to produce biocarbon (charcoal), and usable thermal energy from a variety of forest wastes and biomass infested by the mountain pine beetle. Biocarbon can be used to offset the use of fossil fuels; producing one ton of biocarbon is a renewable substitute for three tons of CO<sub>2</sub>.

Opportunities exist in the established carbon markets, commonly supplied from coal, since the physical and chemical characteristics of biocarbon are similar to high-grade coal. The product is essentially a "bio-coal" or "wood coal."

### ICE FUND

\$2.69 million

### TOTAL INVESTMENT VALUE:

\$8.16 million

### COMMUNITY:

Prince George

### COMPLETION DATE:

Summer 2011

### JOB CREATION:

12 construction jobs

13 ongoing jobs



## Metro Vancouver

### ICE FUND

\$3 million

### TOTAL INVESTMENT VALUE:

\$9 million

### COMMUNITY:

Richmond

### COMPLETION DATE:

Fall 2011

### JOB CREATION:

24 construction jobs

Metro Vancouver's Lulu Island wastewater treatment plant project will result in electricity production from biogas. Paradigm Environmental Technologies Inc. developed the made-in-B.C. MicroSludge process, which increases the production of biogas from wastewater sludge that can be converted into electricity with co-generation equipment. This will allow Richmond-based Lulu Island to turn wastewater sludge into a clean, renewable source of electricity. Metro Vancouver will be the economic beneficiary of the project.

Most municipal wastewater plants with secondary wastewater treatment serving cities larger than 75,000 people can use MicroSludge technology with advanced co-generation to reduce operating costs and realize environmental benefits. The technology can also be applied in industrial facilities that generate wastewater, including pulp and paper, petrochemical, and food processing plants. Increasing emphasis on greenhouse gas reduction will also enhance the value of a technology that can make clean energy from wastewater sludge.

## SunSelect Produce (Delta) Inc.

SunSelect Produce (Delta) Inc. is constructing and operating a wood waste energy plant to power a 14 megawatt wood-fired boiler and capture carbon dioxide. The project will provide heat and carbon dioxide for the company's 160,000-square-metre modern glass greenhouse. The wood waste energy plant will produce clean energy from a renewable fuel source and operate with 20 per cent more efficiency than existing wood waste plants.

By capturing over 7,000 tonnes per year of carbon dioxide, the wood waste energy plant is supplying a key component needed to produce vegetable crops in the greenhouse. The energy generated is used to heat the greenhouse, and will reduce natural gas consumption by over 400,000 gigajoules per year.



### ICE FUND

\$2.23 million

### TOTAL INVESTMENT VALUE:

\$6.69 million

### COMMUNITY:

Aldergrove

### COMPLETION DATE:

Winter 2009

### JOB CREATION:

15 construction jobs  
5 ongoing jobs





## Lignol Innovations Ltd.

### ICE FUND

\$1.96 million

### TOTAL INVESTMENT VALUE:

\$5.88 million

### COMMUNITY:

Burnaby

### COMPLETION DATE:

Spring 2010

### JOB CREATION:

20 engineering  
and technical jobs

Lignol's project includes operation of its pre-commercial biorefinery to process fibre infested with mountain pine beetle and other B.C. feedstocks for the production of cellulosic ethanol and other valuable co-products.

The project includes extensive reviews of Lignol's biorefinery to gather required technical and engineering design data to scale up the process. The project will result in a preliminary engineering and design package for a commercial biorefinery in B.C. using local feedstocks. To date, Lignol has successfully demonstrated end-to-end operation of the pre-commercial biorefinery and is proceeding with benchmarking and optimization trials. In particular, Lignol has successfully processed B.C. aspen into cellulosic ethanol and HP-L™ high purity lignin using the pre-commercial biorefinery.

Lignol has also designed and is in the midst of constructing additional modules to demonstrate efficient on-site production of saccharifying enzymes and yeasts, resulting in improvements to the overall efficiency and economics of ethanol production.



## Nexterra Systems Corp.

Nexterra Systems Corp. is working with FP Innovations and Kruger Products Ltd. to develop and install a biomass gasification system at Kruger's tissue mill in New Westminster, B.C. The new system will be the first of its kind in the pulp and paper industry.

Nexterra's turnkey gasification system will convert locally sourced wood into clean burning "syngas" that will be fired directly into a boiler in place of natural gas.

Displacing natural gas with syngas made from wood fuel will lower the mill's energy costs by millions of dollars a year, making the mill less reliant on fossil fuels.

It will also reduce greenhouse gas emissions from the plant by more than 22,000 tonnes per year, the equivalent of removing nearly 5,500 cars from British Columbia roads.

In 2008, Nexterra announced the successful completion of a two-year testing program to confirm that direct firing of syngas can displace up to 100 per cent of the fossil fuels in industrial boilers.

### ICE FUND

\$1.5 million

### TOTAL INVESTMENT VALUE:

\$9 million

### COMMUNITY:

New Westminster

### COMPLETION DATE:

Spring 2010

### JOB CREATION:

30 construction jobs  
4 ongoing jobs



## Catalyst Power Inc.

### ICE FUND

\$1.5 million

### TOTAL INVESTMENT VALUE:

\$4.5 million

### COMMUNITY:

Abbotsford

### COMPLETION DATE:

Spring 2010

### JOB CREATION:

25 construction jobs  
7-10 ongoing jobs

Catalyst Power Inc.'s project will result in a high-yield biogas system, providing the first Anaerobic Digester built in British Columbia to serve the Fraser Valley agricultural community.

The project represents an economic and environmentally sustainable way to use agricultural waste. As research partner in the project, the University of British Columbia has developed a process for extracting nutrients and producing energy from agricultural waste. Fertilizer mixes, a useful agricultural byproduct of the process, will help expand economic benefits from the investment and reduce B.C.'s chemical fertilizer imports.

The project will create capacity to process up to 350 tonnes of manure from dairy and poultry farms in the Fraser Valley per day. From this quantity of waste, the project can create 95,000 gigajoules of renewable natural gas per year.

Catalyst Power plans to develop the project site to include a Centre of Discovery, a 465-square-metre centre and lab, plus a 0.4-hectare demonstration greenhouse.



CATALYST POWER INC.



## SBC Firemaster Ltd.

SBC Firemaster Ltd. has designed and will operate the first modular pellet plant in North America. The plant will produce wood pellets, a carbon neutral, renewable energy source for local communities. The plant can handle many different sorts of fibre, including lower-quality material like slash piles, standing deadwood, tree bark and other fibre streams currently considered to be waste. Simplified assembly and transportability allows for multiple applications throughout B.C. and internationally.



### ICE FUND

\$750,000

### TOTAL INVESTMENT VALUE:

\$2.27 million

### COMMUNITY:

Kamloops

### COMPLETION DATE:

Winter 2009

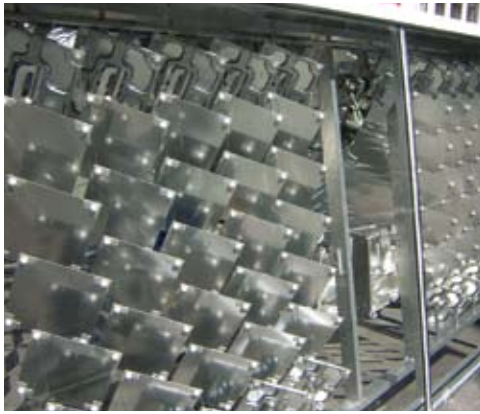
### JOB CREATION:

16 construction jobs

20 ongoing jobs







## SunCentral Inc.

### ICE FUND

\$2 million

### TOTAL INVESTMENT VALUE:

\$6.36 million

### COMMUNITY:

Vancouver

### COMPLETION DATE:

Winter 2012

### JOB CREATION:

12 construction jobs

18 ongoing jobs

SunCentral's Core Sunlight Illumination System provides daylight to the interior of multi-floor office buildings, either by design in new buildings or by retrofitting existing structures. The system reduces the need for electric lighting, thereby reducing greenhouse gas emissions. The system can reduce energy requirements for a standard commercial building by at least 25 per cent.

By producing a variety of demonstration installations, the project will showcase how the technology applies in different types of buildings and geographical locations, for the benefit of architects, engineers and lighting specialists. About half of the 10 million square metres of office space in British Columbia is appropriate for a Core Sunlight Illumination system installation.

## MSR Innovations

MSR Innovations developed a modular solar roofing system called SolTrak that uses a unique tile and track system for installation. ICE Fund support allows the first construction of public demonstration sites for the solar photovoltaic system incorporated into the roof tiles. The demonstration sites will allow data collection and analysis to support large-scale manufacturing and assembly of the system.

By combining the costs of a roofing product and a photovoltaic system, MSR Innovations is effectively reducing the payback time required for homeowners to recover their investment cost in a solar system. In addition, SolTrak's design flexibility also enables MSR Innovations to adapt the product for future design options.



### ICE FUND

\$336,000

### TOTAL INVESTMENT VALUE:

\$1 million

### COMMUNITY:

Langley

### COMPLETION DATE:

Summer 2010

### JOB CREATION:

3 construction jobs

3 ongoing jobs





## British Columbia Institute of Technology

### ICE FUND

\$2.69 million

### TOTAL INVESTMENT VALUE:

\$6.54 million

### COMMUNITY:

Burnaby

### COMPLETION DATE:

Winter 2010

### JOB CREATION:

21 construction jobs

21 ongoing jobs

The British Columbia Institute of Technology will design and develop an intelligent electricity grid system. BCIT's grid will allow for testing of communication technologies, smart metering, smart appliances, and co-generation (thermal, turbine, wind and solar). As a testing bed, the grid will support commercialization and use of technologies to help meet British Columbia's electricity needs and priorities. BCIT's new Centre for Applied Research and Innovation is implementing the project.

As the backbone of the power network, the electricity grid is the focus of various technological innovations. Intelligent or smart grid systems make electricity utilities more reliable, efficient and capable of exploiting and integrating all their sources of energy, including alternative energy. BCIT's Intelligent Micro-Grid will enable high-tech companies, engineers and power consumers to work together to verify that specific technologies meet specifications required in B.C.



## Fairfield Propagators Ltd.

Fairfield Propagators Ltd.'s 4.8-hectare greenhouse facility in Chilliwack will be the site of a unique demonstration project promoting the use of geothermal energy systems. It currently uses natural gas and electricity for winter heating and summer cooling, which generates about 2,900 tonnes of greenhouse gas emissions. The project will replace the heating/cooling system with an open-loop geothermal energy heat pump system, using ground water at different temperatures to either heat or cool the buildings, minimizing greenhouse gas emissions and providing lower-cost energy. The project includes a demonstration component – the Geothermal Technology-Transfer Centre – in order to showcase the process for greenhouse growers, businesses and institutions.



### ICE FUND

\$1.26 million

### TOTAL INVESTMENT VALUE:

\$3.38 million

### COMMUNITY:

Chilliwack

### COMPLETION DATE:

Summer 2012

### JOB CREATION:

8 construction jobs

2 ongoing jobs



## Terasen BioGas Upgrading Project

### ICE FUND

\$366,000

### TOTAL INVESTMENT VALUE:

\$1.12 million

### COMMUNITY:

Salmon Arm

### COMPLETION DATE:

Spring 2010

### JOB CREATION:

6 construction jobs

Terasen Gas Inc. is partnering with a local government on a project to recover raw biogas from a waste water treatment plant or landfill site and upgrade the gas to pipeline quality methane (bio-methane) using Xebec's advanced gas purification system. The technology will allow Terasen to capture waste gas from flaring, and use Xebec's purification technology to deliver high-quality green energy into the Terasen Gas pipeline system for customer use. It is estimated that the process could recover enough natural gas to heat between 100 and 500 homes annually and reduce greenhouse gas emissions by more than 500 tonnes per year.

This project will be the first in B.C. to recover and upgrade raw biogas from any facility. It is part of Terasen's program to develop biogas from the conversion of organic waste from wastewater treatment plants, landfills and farms. The biogas will then be delivered to natural gas customers. As an innovative approach to producing clean energy from readily available organic waste, the project showcases a B.C. technology to produce bio-methane from waste gas. This process can also be applied to other biogas upgrade projects in the municipal waste and agricultural sectors.



## Halfway Ranch Micro-Hydro Generating Plant

The project at Halfway Ranch, west of Kamloops between Lytton and Lillooet, converts the energy of water moving through an irrigation system into hydro electricity that can be connected to the BC Hydro grid. The ICE Fund supports construction of a powerhouse using two pumps as turbines to generate a maximum of 25 kilowatts of electricity. After generating electricity, the water will be used to irrigate over 80 hectares of farmland.



### ICE FUND

\$44,000

### TOTAL INVESTMENT VALUE:

\$197,000

### COMMUNITY:

Lytton/Lillooet

### COMPLETION DATE:

Fall 2010

### JOB CREATION:

2 construction jobs

# Summary: First Call 2008 Projects

## Distribution by Technology

Technology	# of Projects	ICE Fund Investment	Project Value
Ethanol/ Liquid Biofuels Production	1	\$1,960,000	\$5,883,849
Solar PV/ Solar Thermal	2	\$735,979	\$1,907,937
Biomass Conversion	5	\$12,178,647	\$46,379,243
Geothermal/ Geo-Exchange	1	\$1,260,270	\$3,378,009
Waste Energy/ Heat Capture	3	\$3,366,000	\$10,120,000
Efficiency and Conservation Platforms/Systems	2	\$4,691,905	\$12,904,115
Other	1	\$44,000	\$196,788
<b>TOTAL</b>	<b>15</b>	<b>\$24,236,801</b>	<b>\$80,769,941</b>

## Distribution by Region

Region	# of Projects	ICE Fund Investment	Project Value
Lower Mainland	10	\$16,848,934	\$53,488,690
Northern British Columbia (NDIT)	4	\$6,193,867	\$23,917,233
Southern Interior (SIDIT)	2	\$794,000	\$2,464,018
Vancouver Island	1	\$400,000	\$900,000
<b>TOTAL</b>	<b>15</b>	<b>\$24,236,801</b>	<b>\$80,769,941</b>



# **Second 'Rural' Call 2009 Projects**



## Pulse Energy Inc.

Pulse Energy is gaining recognition as a leader in the fast-growing market of building-performance improvement and optimization.

The company has created an energy software system to detect and correct a building's energy-wasting irregularities. Among the communities benefiting from the technology, the City of Vancouver used Pulse Technology as part of the 2010 Olympic Winter Games to track, in real time, the energy use of all Vancouver and Whistler sports venues and facilities.

"Expectations were high as to how well the Olympic venues would perform," said Pulse Energy co-founder David Helliwell. "VANOC was the first Olympic Committee to report publicly on the performance of venues, and we're proud to have played a part in setting a new sustainability standard for all Olympics to follow."

With a \$2.4-million investment from the ICE Fund, Pulse Energy is reducing costs and emissions for five British Columbia communities, including three off-grid First Nations communities: the Village of Hartley Bay; Hesquiaht First Nation, with Ecotrust Canada; and Haida Gwaii, with BC Hydro.

Pulse has hired two community-based energy managers in Hartley Bay, with plans for others in

Hesquiaht and Massett. The trained managers will use Pulse software not only to manage their community's energy use, but also to work for Pulse Energy as remote energy managers for customers around North America; customers improving their energy efficiency by up to 20 per cent with little to no capital expenditures. Hartley Bay has plans to deploy the first Smart Grid of its kind in North America, putting this remote community of 140 people at the forefront of a technical innovation with applicability around the world.

"Our early partnerships in B.C. were an extraordinary springboard for the growth of the company," said Helliwell. "Pulse Energy is fortunate to be working with leading organizations such as the Lawrence Berkeley National Lab, Cisco, UBC, and Cadillac Fairview to take the state of the art for energy management software to a whole new level."

Pulse Energy was recently recognized for having the top new technology of 2009 in the B.C./Yukon region by the Canadian Manufacturers & Exporters and the Industrial Research Assistance Program – another accolade for a B.C. company providing real-world energy solutions for British Columbia and beyond.



“Pulse Energy is fortunate to be working with leading organizations such as the Lawrence Berkeley National Lab, Cisco, UBC, and Cadillac Fairview to take the state of the art for energy management software to a whole new level.”

Pulse Energy co-founder David Helliwell

#### ICE FUND

\$2.42 million

#### TOTAL INVESTMENT VALUE:

\$7.25 million

#### COMMUNITY:

Hartley Bay, Haida Gwaii,  
Hesquaiht, Nanaimo,  
Prince George

#### COMPLETION DATE:

Summer 2012

#### JOB CREATION:

25 construction jobs

25 ongoing jobs





## Tla-o-qui-aht First Nations

### ICE FUND

\$750,000

### TOTAL INVESTMENT VALUE:

\$3 million

### COMMUNITY:

Clayoquot Sound

### COMPLETION DATE:

Fall 2010

### JOB CREATION:

5 construction jobs

2 ongoing jobs

Tla-o-qui-aht First Nations is implementing the Ty-Histaniis Reclamation Project, with plans for a health centre, community building, school, and a 160-lot subdivision for up to 215 new housing units. The District Geoexchange Energy System project will extract geothermal energy from the ground to provide heat for buildings and domestic hot water for residents. It will also provide an opportunity to showcase the Ty-Histaniis Reclamation Project as a model sustainable community development respecting the unique ecosystem of the Pacific Rim National Park Reserve and the Tofino area. The project is unique in British Columbia, as the first large scale community application of this technology in a First Nation community.

Displacing electric or propane power, the geothermal energy will support the environment by reducing greenhouse gas emissions. Homeowners will benefit economically as the geothermal heat costs address affordability concerns associated with home ownership. The reliability of the system should reduce dependence on back-up diesel generators used to deal with power outages.



*Tla-o-qui-aht First Nations*

PO BOX 18 TOFINO BC V8R 2Z9  
TELEPHONE: (250) 726-3235 FAX: (250) 726-4033

## SyncWave Systems Inc.

A SyncWave Power Resonator will convert the energy of ocean swells into clean, renewable electricity.

SyncWave's project provides a demonstration of a pre-commercial 100-kilowatt-capacity wave energy conversion device in ocean conditions typical of waters off the British Columbia coast. Compared to other wave energy converters, the SyncWave Power Resonator is simpler to build and maintain. Project objectives include completion of an environmental impact assessment, design optimization, construction, installation, monitoring and life-cycle analysis of a fully sea-worthy SyncWave device. Results will be essential to designing and constructing commercial SyncWave Resonator wave energy farms.

The technology is designed to be suitable for both off-grid and grid-integrated applications.



### ICE FUND

\$2 million

### TOTAL INVESTMENT VALUE:

\$10.48 million

### COMMUNITY:

Tofino

### COMPLETION DATE:

Summer 2012

### JOB CREATION:

20 construction jobs and  
10 engineering jobs





## Siwash Lake Ranch

### ICE FUND

\$197,000

### TOTAL INVESTMENT VALUE:

\$590,000

### COMMUNITY:

East of 70 Mile House

### COMPLETION DATE:

Fall 2012

### JOB CREATION:

10 construction jobs

2 ongoing jobs

Siwash Lake Ranch will overhaul its 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.

Siwash Lake Ranch combines the roles of family farm and luxury tourist destination. Surrounded by 32,000 hectares of pristine B.C. wilderness, Siwash is the only Canadian ranch to win a place on the Forbes Traveler top 10 list of luxury dude ranches in 2007. The ICE Fund project will help Siwash retain its leadership role in sustainable tourism.

The project will promote local production of clean, renewable energy to reduce diesel electric generation in B.C.'s remote off-grid rural communities.

## Saltworks Technologies Inc.

Saltworks Technologies Inc. has developed a desalination technology that reduces the amount of electricity needed to make seawater and brackish water potable.

The technology uses low temperature thermal energy for the conversion process, thereby reducing the electricity required. In a moderate-sized desalination plant, such technology would save enough electricity to power 21,000 homes for a year. Within British Columbia, Saltworks expects commercial applications for this technology are possible for water-stressed rural and remote communities located in coastal regions or areas with salty groundwater. British Columbia's Okanagan region is already experiencing water stress from population growth and land use.

Economic and environmental benefits to British Columbia include energy conservation, carbon reduction, public education about energy and water conservation, creation of skilled job opportunities and showcasing a made-in-B.C. technology to potential customers around the world.



### ICE FUND

\$504,000

### TOTAL INVESTMENT VALUE:

\$1.59 million

### COMMUNITY:

Penticton

### COMPLETION DATE:

Spring 2011

### JOB CREATION:

84 construction jobs  
20 ongoing jobs





## Quesnel Community and Economic Development Corp.

### ICE FUND

\$4.13 million

### TOTAL INVESTMENT VALUE:

\$14.79 million

### COMMUNITY:

Quesnel

### COMPLETION DATE:

Fall 2011

### JOB CREATION:

84 construction jobs

9 ongoing jobs

Using excess capacity from an existing industrial biomass energy system, the Quesnel project will 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.

The Quesnel Community and Economic Development Corp., a wholly owned subsidiary of the City of Quesnel is taking advantage of the region's natural resources and making use of the mountain pine beetle infestation by producing electricity and heat from biomass. Benefits include: greenhouse gas emission reduction, job creation, revenue for the municipality, and support for the viability of a key local industry. In addition, the project can serve as a demonstration model to other B.C. communities that could implement a similar project to use heat generated by a local industry in combination with other locally available materials.

## BC Hydro and Powertech Labs Inc.



The Hydrogen Assisted Renewable Power project involves installing new energy technologies near the community of Bella Coola on the central coast of British Columbia.

The project will demonstrate the ability of the technologies to enhance renewable power generation and reduce reliance on non-renewable power sources like diesel generation. The project will support further commercialization of the technologies and broader deployment in remote off-grid B.C. communities.

Technologies to be demonstrated are a hydrogen energy system, including an electrolyser; fuel cell and hydrogen storage; a zinc bromine flow battery for high-efficiency energy storage; and a “micro-grid” energy management system to optimize the operation of renewable and non-renewable power sources.

Energy storage systems play a critical role in harnessing the potential of intermittent renewable power sources in remote communities. This demonstration project will enable BC Hydro to develop a scalable energy storage solution for several remote communities in B.C. as part of its Remote Community Electrification program.

### ICE FUND

**\$204,000**

### TOTAL INVESTMENT VALUE:

**\$618,000**

### COMMUNITY:

**Bella Coola**

### COMPLETION DATE:

**Summer 2010**

### JOB CREATION:

**5 construction jobs  
1 ongoing job**



## Pacific Regeneration Technologies Inc.

### ICE FUND

\$436,000

### TOTAL INVESTMENT VALUE:

\$1.31 million

### COMMUNITY:

Prince George

### COMPLETION DATE:

Spring 2012

### JOB CREATION:

2 construction jobs

2 ongoing jobs

Pacific Regeneration Technologies will provide heating for greenhouses by installing a high-efficiency, low-emission gasifier/combustor and boiler using poplar and willow feedstock waste biomass. The locally grown woody feedstock is a valuable alternative source of biomass for the region.

The project will replace a significant portion of existing natural gas heating with biomass heat. Short rotation, intensive culture woody biomass – such as high-yield poplar and willow — will provide a source of biomass. Timber infested by mountain pine beetle and waste biomass will also be used.

Helping to develop sustainable low carbon energy generation will be one of the project's main benefits. The project represents an opportunity to demonstrate a commercial scale, carbon neutral design producing energy at competitive prices, ready to be implemented at other locations. Expected commercial applications include heat for commercial and institutional buildings, and for industrial processes. The project will help reduce greenhouse gas emissions and support the development of sustainable energy.

## Pacific Green Energy Initiative Smart Street Light Coalition

Led by the Pacific Green Energy Initiative Smart Street Light Coalition, this project will demonstrate the commercial viability of a made-in-B.C. smart streetlight technology. Benefits include job creation in local communities and energy savings of up to 40 per cent for municipalities – which also results in lower greenhouse gas emissions as electricity is used to power the streetlight grid.

The project will support the marketability of the technology, developed by Streetlight Intelligence Inc., a Victoria-based company that produces a wireless Internet device and central monitoring system to dim street lights when they are not needed.

The coalition is implementing the smart street light technology in six northern B.C. communities, replacing between 8,000 and 10,000 street lights.

The City of Prince George has ordered 500 pre-production units.

### ICE FUND

\$1.3 million

### TOTAL INVESTMENT VALUE:

\$3.85 million

### COMMUNITY:

Prince George, Quesnel,  
Vanderhoof, Fort St.  
James, Fraser Lake, Wells

### COMPLETION DATE:

Spring 2011

### JOB CREATION:

21 construction jobs  
100 ongoing jobs





## Pacific Coastal Wave Energy Corp.

### ICE FUND

\$2 million

### TOTAL INVESTMENT VALUE:

\$20 million

### COMMUNITY:

Ucluelet

### COMPLETION DATE:

Fall 2011

### JOB CREATION:

12 construction jobs

2 ongoing jobs

Pacific Coastal Wave Energy Corp. is working with the District of Ucluelet to build a four-megawatt demonstration facility to generate electricity from ocean wave power. Located offshore from the community, the technology will be attached to the seabed where submerged buoys harness the ocean's kinetic energy. Being deployed underwater eliminates aesthetic concerns and makes the technology less vulnerable to weather.

Energy obtained by converting wave energy to electricity is free of fossil fuels and greenhouse gas emissions. The technology demonstrated by the project has the potential to produce significant quantities of clean, renewable energy. Modular and scalable, the technology can be deployed in large or smaller projects suitable for off-grid communities.

Communities near a suitable wave resource could access clean energy from the nearby ocean by harnessing wave energy.



## Nyfound Energy Inc.

Nyfound Energy Inc.'s 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.

Because they depend on the weather, wind farms do not always generate energy at a consistent rate. Integrating a new pump technology makes it possible to generate hydro electricity during periods of light winds. As a result, the wind farm can provide more consistent and reliable energy in a clean and renewable manner. Demonstrating how technology can be adapted to take advantage of local weather patterns and the natural landscape, the project will deliver a wind turbine and a water pump system to provide a reliable, stable supply of energy from an intermittently renewable energy source. The system can be connected to the grid or used to benefit off-grid communities.



### ICE FUND

\$143,000

### TOTAL INVESTMENT VALUE:

\$484,000

### COMMUNITY:

Southern Interior

### COMPLETION DATE:

Summer 2011

### JOB CREATION:

1 construction jobs

1 ongoing job



## Northwind Ethanol Inc.

### ICE FUND

\$1.25 million

### TOTAL INVESTMENT VALUE:

\$4.99 million

### COMMUNITY:

Prince George

### COMPLETION DATE:

Spring 2011

### JOB CREATION:

10 construction jobs

28 ongoing jobs

Northwind Ethanol Inc. proposes to build a 1.9-million-litre cellulosic feedstock, fuel ethanol demonstration facility to make ethanol and lignin from woody biomass. The project supports new jobs in the forest industry and provides fuel ethanol.

Northwind's fuel ethanol technology is unique through its capacity to use cellulosic feedstocks. Suitable feedstocks include all forms of wood residue and any plant matter containing cellulose in a reasonable proportion. Cellulose is widely recognized as the next generation feedstock for the production of fuel ethanol, as it is carbon neutral and does not affect food use.

The production facility will be located next to NorthWest Wood Preserver's operation in Prince George. Canfor Corp. will supply the wood residual feedstock, and the fuel ethanol produced by the plant will be sold to Husky Oil, which operates a refinery next to the pulp mill. The University of Northern British Columbia will provide technical and research support.



Northwind Ethanol Inc.



## City of Grand Forks

This 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.

Grand Forks will be one of the first rural communities in British Columbia to deploy the technology. A wastewater heat recovery system will save municipal taxpayers energy costs and reduce greenhouse gas emissions. This project gives Grand Forks a leadership role in promoting sustainable initiatives.

Wastewater heat recovery technology can be implemented at similar treatment plants in communities across the province.



### ICE FUND

\$667,000

### TOTAL INVESTMENT VALUE:

\$2 million

### COMMUNITY:

Grand Forks

### COMPLETION DATE:

Summer 2010

### JOB CREATION:

30 construction jobs

2 ongoing jobs





## Town of Gibsons

### ICE FUND

\$325,000

### TOTAL INVESTMENT VALUE:

\$976,000

### COMMUNITY:

Gibsons

### COMPLETION DATE:

Fall 2012

### JOB CREATION:

3 construction jobs

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.

Pumping heat from the ground to residential and commercial buildings, the system will initially service 110 dwellings. In addition to creating jobs and potential investments, the project will provide the municipality with stable, long-term revenue and save \$60,000 in annual energy costs.

Producing clean, renewable energy, the project can produce enough heat to service one-quarter of the homes in Gibsons. Featuring strong replication potential, the technology is well-suited for application in small and medium-sized communities interested in bringing sustainable energy to residential neighbourhoods.

Gibsons expects to realize significant environmental benefits from the project, including a 63 per cent reduction in energy consumption and a 93 per cent reduction in greenhouse gas emissions compared with natural gas heating.



## E3P Technologies, Inc.

E3P Technologies, Inc. has researched and developed a patented device to capture wasted energy from pressure let-down stations on 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.

The project uses an E3P patented rotary positive displacement turbine. Recovered energy can be converted to electrical power and sold to the power grid. E3P will design and build a power recovery unit consisting of a 400-kilowatt gas expander and a 1,500-horsepower natural gas burning engine (to pre-heat the gas and increase total site efficiency and useful power recovery).

Improving the cost effectiveness of natural gas pipeline systems by using waste energy from pressure let-down stations will help improve the overall operating efficiency of British Columbia's energy transmission infrastructure.



### ICE FUND

\$2.32 million

### TOTAL INVESTMENT VALUE:

\$6.6 million

### COMMUNITY:

Northern Development  
Initiative Trust Region

### COMPLETION DATE:

Summer 2012

### JOB CREATION:

4 construction jobs  
10 ongoing jobs





## Canoe Pass Tidal Energy Consortium

### ICE FUND

\$2 million

### TOTAL INVESTMENT VALUE:

\$6.38 million

### COMMUNITY:

Regional District of Strathcona

### COMPLETION DATE:

Fall 2012

### JOB CREATION:

33 construction jobs

The consortium, a joint venture partnership between New Energy Corporation Inc., Canoe Pass Tidal Energy Corporation, and the City of Campbell River, will develop a commercial-scale 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 turbines to harness the tidal power. The project will be connected to the BC Hydro distribution line from Vancouver Island to Quadra Island.

Envisioned as a three-year program, the Canoe Pass project will showcase the power generation capability of tidal turbines while demonstrating reliable operation in an ocean environment. The project will also model ocean energy project review processes and demonstrate energy viability for grid connection.

Campbell River and northern Vancouver Island feature the greatest abundance of tidal energy generating capacity on Canada's Pacific coast, offering an opportunity to create exportable economic and technological expertise that can benefit the region into the future.

## New Hope Society

Baldy Hughes, a former military base about 50 kilometres southwest of Prince George, has been used as an addictions treatment centre since the beginning of 2008. 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.

Few B.C. communities are familiar with using advanced biomass heating from a centralized point to heat a cluster of buildings. The project will demonstrate the reliability of heating systems based on biomass boilers. The system can function on a variety of biomass and wood waste sources readily available in the region, including mountain pine beetle infested wood.

Heat supply to the eight buildings will be done by an underground pipeline network. DelTech Manufacturing Inc. will supervise the project and involve residents in its implementation and operation.



### ICE FUND

\$461,000

### TOTAL INVESTMENT VALUE:

\$1.32 million

### COMMUNITY:

Prince George

### COMPLETION DATE:

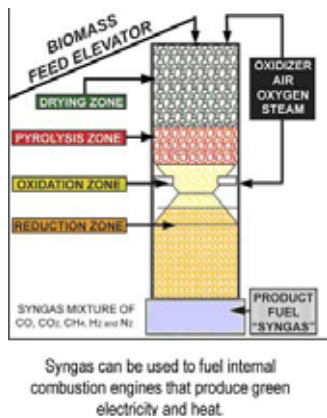
Spring 2010

### JOB CREATION:

8 construction jobs

7 ongoing jobs





## Aboriginal Cogeneration Corporation

### ICE FUND

\$1.5 million

### TOTAL INVESTMENT VALUE:

\$10.05 million

### COMMUNITY:

Southern  
Development  
Initiative Trust Region

### COMPLETION DATE:

Winter 2010

### JOB CREATION:

7 construction jobs  
21 ongoing jobs

The Aboriginal Cogeneration Corporation will build a biomass-to-energy facility 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 megawatt for every two tonnes of wood biomass. Future opportunities exist with small northern communities where ACC can convert diesel fuel-powered generators to biomass generators using timber infested by the mountain pine beetle.

ACC plans to install a minimum of 10 more units in Canada, using over two million railway ties per year and creating employment opportunities for Aboriginal people. The ICE Fund will play a critical role by helping the proponent to demonstrate that the process is cost-effective and commercially viable.

## Thompson-Nicola Regional District



The Thompson-Nicola Regional District is upgrading refuse transfer stations to eco-depots in the municipalities of Clinton, Logan Lake and Lytton. This project will install solar panels at three eco-depots, reducing reliance on conventional hydro and fossil fuel generators. All three sites are in locations with extensive southern exposure, facilitating the use of solar power production systems.

The Logan Lake eco-depot site is off-grid and is currently powered by gasoline generators. Switching to solar power will reduce the use of fossil fuels. The Clinton and Lytton sites will use solar power to achieve net-zero metering, thus reducing the year round reliance on conventional hydro.

All three sites will be designed to support energy efficiency and conservation.

The solar powered eco-depot concept supported by this project is new and the concept can be adapted to remote and rural locations, as well as urban centres.

### ICE FUND

\$79,000

### TOTAL INVESTMENT VALUE:

\$237,000

### COMMUNITY:

Clinton, Logan Lake,  
Lytton

### COMPLETION DATE:

Summer 2010

### JOB CREATION:

6 construction jobs  
3 ongoing jobs



# Summary: Second ‘Rural’ Call 2009 Projects

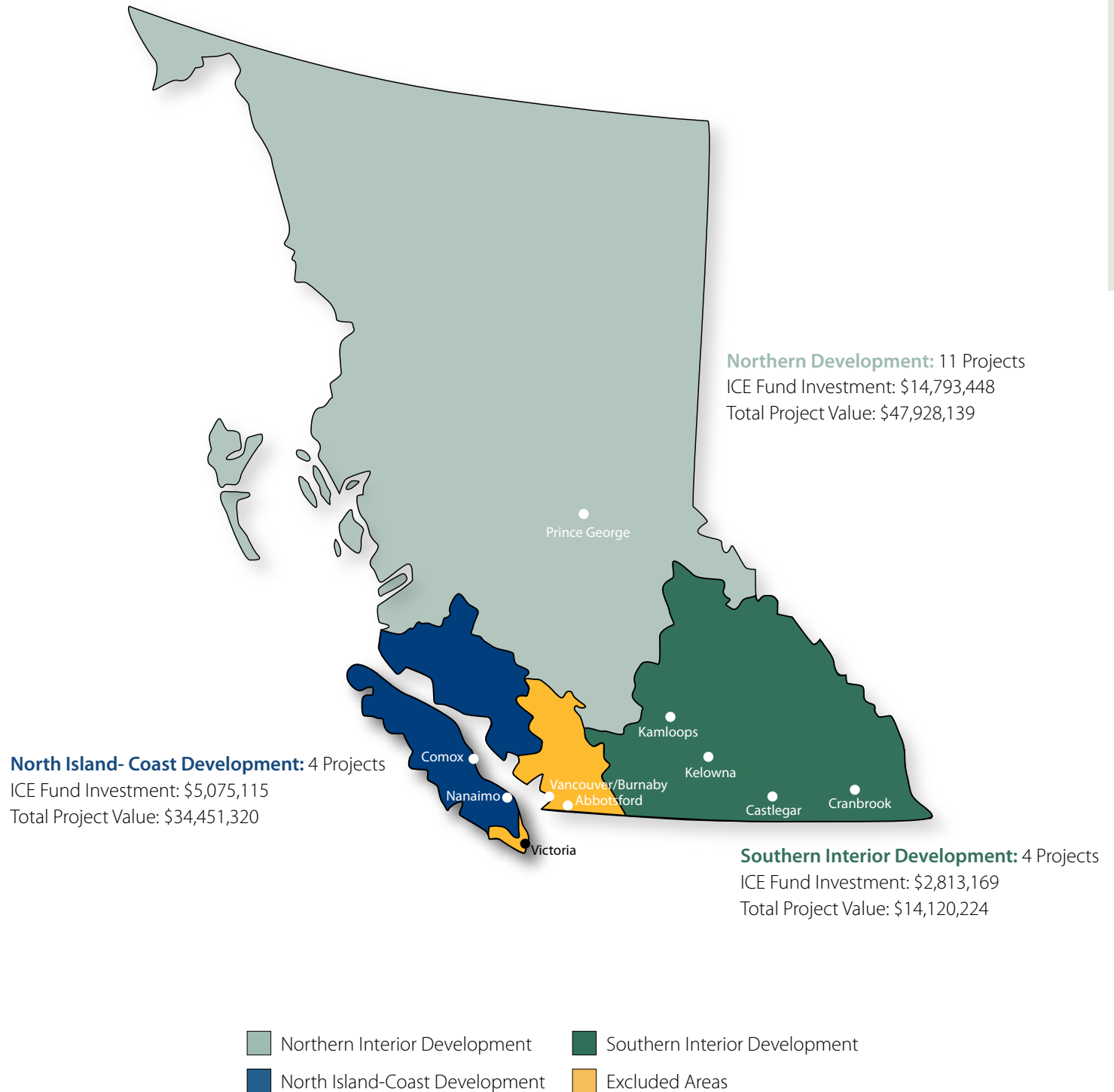
## Distribution by Technology

Technology	# of Projects	ICE Fund Investment	Project Value
Energy Storage	1	\$203,775	\$617,500
Solar PV/ Solar Thermal	2	\$276,063	\$827,389
Biomass/Bioenergy	5	\$7,775,610	\$32,456,000
Ocean - Wave/ Tidal	3	\$6,000,000	\$36,850,000
Geothermal/ Geo-Exchange	2	\$1,075,115	\$3,976,320
Waste Energy/ Heat Capture	2	\$2,986,667	\$8,600,000
Energy Management	2	\$3,718,000	\$11,102,250
Wind	1	\$142,592	\$484,224
Other	1	\$503,910	\$1,586,000
<b>TOTAL</b>	<b>19</b>	<b>\$22,681,732</b>	<b>\$96,499,683</b>

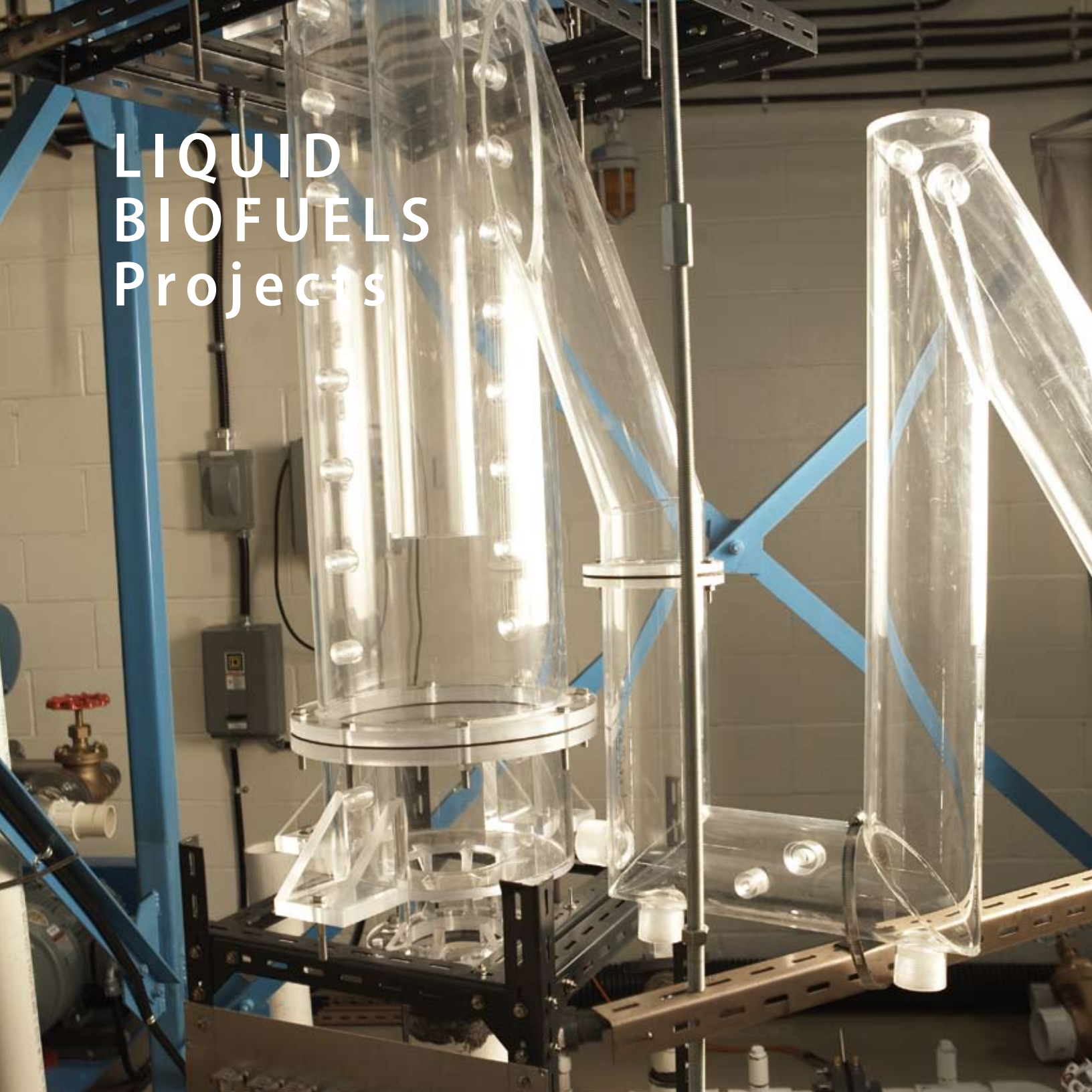
## Distribution by Region

Region	# of Projects	ICE Fund Investment	Project Value
North Island- Coastal Development Initiative Trust (NCDIT)	4	\$5,075,115	\$34,451,320
Southern Interior Development Initiative Trust	4	\$2,813,169	\$14,120,224
Northern Development Initiative Trust	11	\$14,793,448	\$47,928,139
<b>TOTAL</b>	<b>19</b>	<b>\$22,681,732</b>	<b>\$96,499,683</b>





# LIQUID BIOFUELS Projects



## City-Farm Biofuels Ltd.

City-Farm Biofuels Ltd.'s project will expand the company's annual biodiesel production from five 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.

Successful demonstration of the process will help encourage similar operations in the province's rural regions, as well as confirming biodiesel production as an economic opportunity for oil crops and used cooking oil. The project will continue to adopt the most efficient equipment and state-of-the-art technology, while using non-food feedstock.



### ICE FUND

\$740,000

### TOTAL INVESTMENT VALUE:

\$2.5 million

### COMMUNITY:

Delta

### COMPLETION DATE:

Winter 2011

### JOB CREATION:

20 construction jobs

20 ongoing jobs



## Consolidated Biofuels Ltd.

### ICE FUND

\$150,000

### TOTAL INVESTMENT VALUE:

\$532,122

### COMMUNITY:

Delta

### COMPLETION DATE:

Fall 2010

### JOB CREATION:

5 construction jobs

8 ongoing jobs

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

The project deploys a unique energy conservation system that reduces energy consumption by almost half the level needed by conventional biodiesel plants. The plant has been designed to use multi-feed stocks - like beef tallow, waste cooking oil from restaurants, and non-food seed oils. Once in operation, the facility will help reduce greenhouse gas emissions by producing biodiesel for blended fuels. End users of the product could include multinational oil companies, fuel blending companies, and fuel distributors.



## GoGreen Biofuels Inc.

The GoGreen Biofuels project proposes to build Vancouver Island's first waste vegetable oil low-carbon fuel plant in the Capital Regional District.

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.

Environmental benefits include diversion of waste vegetable oil to support clean energy. The project demonstrates an opportunity in British Columbia's low-carbon economy to turn local waste into a valuable commodity.



### ICE FUND

\$200,000

### TOTAL INVESTMENT VALUE:

\$600,000

### COMMUNITY:

Saanich

### COMPLETION DATE:

Summer 2011

### JOB CREATION:

4 construction jobs

9 ongoing jobs



## International Composting Corp.

### ICE FUND

\$2.5 million

### TOTAL INVESTMENT VALUE:

\$7.5 million

### COMMUNITY:

Nanaimo

### COMPLETION DATE:

Spring 2012

### JOB CREATION:

5 construction jobs

25 ongoing jobs

International Composting Corp. plans to process 15,600 tonnes per year of organic waste diverted from landfill from the Nanaimo Regional District and produce about two million litres of biodiesel per year at the Duke Point Industrial Park.

Benefits include reduced landfill gas methane emissions, increased diesel and aviation fuel supplies produced in British Columbia, and high-tech green economy jobs in Nanaimo. The production facility will be a global showcase for made-in-B.C. green technology, with potential for exports to Europe, Latin America and North America.

International Composting Corp. brings over five years' experience in managing organic waste to produce fertilizer and horticultural products. The project will provide new information and patentable technology for the process of producing biofuels from organic waste.







## Lignol Innovations Ltd.

Lignol will produce cellulosic ethanol and biochemical products from under-used forest resources, including beetle-killed lodgepole pine. The project will establish process and product characteristics to produce test market quantities of cellulosic (non-food based) ethanol and biochemical co-products. Using large quantities of beetle-killed pine and other indigenous feedstocks for the production of renewable fuels and biochemicals will diversify the economies of B.C.'s forest-based rural communities.

By encouraging deployment of commercial bio-refineries in British Columbia, this provincial government investment paves the way for commercial production of cellulosic ethanol and other green chemicals. New bio-refineries will attract investment dollars and create employment in rural B.C. Environmentally, the success of the technology will result in helping B.C. meet its low carbon fuel standard with significant reductions in green house gas emissions. This leading edge technology can also be exported to other regions in Canada and abroad generating high value green jobs in B.C.

### ICE FUND

\$3.4 million

### TOTAL INVESTMENT VALUE:

\$11.57 million

### COMMUNITY:

Burnaby

### COMPLETION DATE:

Summer 2011

### JOB CREATION:

34 ongoing jobs

# Summary: Liquid Biofuels Projects

## Distribution by Technology

Technology	# of Projects	ICE Fund Investment	Project Value
Cellulosic Ethanol and By-Products	1	\$4,145,000	\$11,572,678
Biodiesel	4	\$2,850,000	\$11,132,122
TOTAL	5	\$6,995,000	\$22,704,800

## Distribution by Region

Region	# of Projects	ICE Fund Investment	Project Value
Lower Mainland	3	\$4,295,000	\$14,604,800
Vancouver Island	2	\$2,700,000	\$8,100,000
TOTAL	5	\$6,995,000	\$22,704,800



## ICE FUND DETAILS

### PURPOSE

The ICE Fund is administered through British Columbia's Ministry of Small Business, Technology and Economic Development and aims to:

- Address energy and environmental priorities identified by government.
- Showcase technologies that solve energy problems in B.C. and other jurisdictions, and highlight their international market potential.
- Support pre-commercial clean energy technology or commercial technologies not yet used in B.C.
- Demonstrate the commercial viability of new clean energy technologies.

### ELIGIBILITY

The ICE Fund accepts applications for projects that meet one or more of the following government priorities:

- Increase British Columbia's production of clean or renewable energy.
- Improve the ways energy moves from producers to British Columbia users.
- Improve the ways energy is used in B.C. communities and across all sectors of the provincial economy.

### CALL FOR APPLICATIONS

ICE Fund applications are submitted in response to a call for applications. The third call for applications – the 2010 Showcase Call – is underway, with the last of three intake dates closing July 5, 2010. For information on the application process, visit [www.icefund.gov.bc.ca](http://www.icefund.gov.bc.ca).

### SELECTION CRITERIA

- |  |   |  |
|--|---|--|
| • Project technology                                     | • Project work plan                       | • Stakeholder and First Nations engagement completed or underway, as required by permitting agencies |
| • Government priorities                                  | • Project resources                       | • Commercialization and replication opportunities within and beyond the province                     |
| • Measurable impacts and benefits                        | • Secured financing                       |  |
| • Technical feasibility with high probability of success | • Intellectual property                   |  |
| • Project management                                     | • Required permits obtained or in process |  |

Project funding recommendations are based on the results of the review process and the merits of the project within the context of government's priorities.

## ICE FUND ANNOUNCEMENTS

### **First Call:**

The Province announced 15 First Call projects July 8, 2008, with a total ICE Fund contribution of \$24.4 million and a total project value of \$78.7 million. Technologies supported include: bioenergy, solar, geothermal, and smart grid.

### **Second Call:**

The Province announced 19 Second Rural Call projects April 3, 2009, with a total ICE Fund contribution of \$22.6 million and a total project value of \$96.4 million. Projects were limited to rural and off-grid communities across British Columbia. Government used a broad definition of rural – any region outside of the Lower Mainland and the Capital Regional District – to encourage technology developers to situate projects across B.C.

Second Call technologies include ocean tidal and wave, solar, geothermal, wind, biomass, wastewater, energy conservation and management and variable street lighting technology.

### **Liquid Biofuels:**

A one-time Liquid Fuels from Biomass Call for Applications secured five projects to develop cellulosic ethanol, biodiesel and biofuels technologies. The approved projects, announced April 3, 2009, represent \$22.7 million in total value and are creating 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. The ICE Fund is contributing \$7 million to these projects.

## FUNDING

Since 2007, the ICE Fund has received \$25 million a year through a 0.4 per cent levy on the final sales of electricity, natural gas, fuel oil, propane and any other product prescribed by regulation as an energy product. Transportation fuels like gasoline and diesel are exempt from the levy.

The ICE Fund levy is assessed on residential, commercial and industrial customers. For a family, the average annual cost of the levy is \$3 for electricity, \$5 for natural gas and \$8 for fuel oil.

Government is exploring new sources of ICE Funding as the ICE Fund levy will be discontinued with the introduction of the Harmonized Sales Tax in July 2010.

## ICE FUND GOVERNANCE COMMITTEE

The ICE Fund governance committee oversees the ICE Fund and ensures the fund's mandate is upheld. The committee also approves the portfolio of recommended projects to be taken to the minister and/or cabinet. The committee is made up of senior government and external representatives with backgrounds that contribute expertise to fulfil the committee's mandate. The governance committee members are:

**Don Fast, Chair**

Deputy Minister, Ministry of Small Business, Technology and Economic Development

**Eddy Isaacs**

Executive Director, Alberta Energy Research Institute

**Doug Konkin**

Deputy Minister, Ministry of Environment

**Greg Reimer**

Deputy Minister, Ministry of Energy, Mines and Petroleum Resources

**Jack Saddler**

Dean, Faculty of Forestry, University of British Columbia

**Brent Sauder**

Director, Strategic Initiatives, University of British Columbia

**Cheryl Slusarchuk**

Partner, McCarthy Tetrault, Co-Chair, CleanTech Group

**Sailesh Thaker**

Vice President, Industry and Stakeholder Relations: Sustainable Development Technology Canada

**Mossadiq Umedaly**

Executive Chairman, Enecsys Ltd.

**Peter Wild**

Professor, Department of Mechanical Engineering: University of Victoria





# innovative clean energy fund

[www.icefund.gov.bc.ca](http://www.icefund.gov.bc.ca)

