Innovative Clean Energy Fund
developing clean energy solutions

2014 update
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Since 2008, the Province’s Innovative Clean Energy Fund has helped position British Columbia at the leading edge of the global low-carbon economy.

The Province has approved ICE Fund contributions of more than $48 million to 38 clean energy technology projects across British Columbia. These projects represent a total value of over $191 million in total project investments and showcase a variety of clean energy technologies including solar, wind, tidal, geothermal, ocean wave and bioenergy.

This summary report highlights the past seven years of efforts under the ICE Fund, as well as the benefits associated with the ICE Fund Special Accounts legislation which will help the Province meet its energy and environmental priorities, while creating significant socio-economic benefits for all British Columbians.
About the ICE Fund

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

The ICE Fund has been designed to advance the development and deployment of clean energy technologies in the electricity, alternative energy, transportation, and oil and gas sectors. The program is administered through the Ministry of Energy and Mines and, under its current mandate, aims to:

- Address specific energy and environmental priorities identified by government;
- Showcases BC technologies that have a strong potential for international market demand because they solve problems that exist both in BC and other jurisdictions;
- Support pre-commercial energy technology that is new, or commercial technologies not currently used in British Columbia; and,
- Demonstrate the commercial viability of new energy technologies

The program has provided an important source of bridging and “patient” capital to assist early stage companies to fully develop their projects and maximize their chances of success.

Since 2008, four rounds of funding have resulted in the approval of 62 projects and culminated in ICE Fund contributions of more than $48 million to 38 projects in communities across British Columbia. These projects have a total value of over $191 million and showcase a broad range of clean energy technologies including solar, wind, tidal, geothermal, ocean wave and bioenergy.

All ICE Fund projects are approved “in-principle” pending proponents meeting the criteria for entering into a contractual funding agreement with the Province. These criteria include:

- All project funding is secured;
- All required permitting and consultations are completed; and,
- All required supply and/or sales agreements necessary for project viability are secured.

Funds are generally disbursed to projects through the reimbursement of eligible incurred costs and reflect completion of agreed upon project milestones.

QUICK FACT:
The Ministry of Energy and Mines was identified by the Premier as being critical to the economic development of British Columbia.

Source: 2013 Mandate Letter from the Premier
Challenges - Why Some Projects Don’t Proceed

Of the 62 projects approved “in principle” by the Province over the past seven years, 43 have resulted in viable projects, with 38 receiving contribution agreements and 5 not started yet.

Emerging technologies and early stage start-up companies face many challenges and represent a high risk investment. All project endeavors will encounter challenges that may cause delays or termination of the project. The portfolio of projects carried by the ICE Fund is no different and approved projects have not proceeded for various reasons. These include:

- Economic or technical failure.
- The proponent was unable to secure required project funding.
- The proponent did not receive the required permitting.
- The required consultations were not completed or were unsuccessful.
- The proponent voluntarily terminated the project.
- The Province intervened due to lack of progress in initiating the project.

The attrition rate for approved projects is around 30 percent, which is consistent with other, much larger, government programs targeting emerging energy and environmental technologies.

Due diligence demonstrated by the program delivery team ensures that safeguards are put in place which minimize taxpayers’ risk. As a result, risk of failure once commencement of funding is approved is low. Since 2007, 31 projects have successfully completed, two projects failed after the commencement of ICE funding and only one has resulted in a lost provincial investment. When a project does not proceed, the funding that is rescinded (had been approved in principle) remains in the ICE Fund Special Account to be made available for other clean energy projects or programs.

QUICK FACT:
Pre-commercial projects approved by the ICE Fund often still face significant economic, technical and regulatory barriers that can result in significant project delays.
ICE Fund Special Account Legislation

The ICE Fund Special Account was established under section 9.5 of the Special Accounts Appropriation and Control Act. The legislation enables a broad range of activities designed to address Government’s energy, economic and environmental priorities and that can advance British Columbia’s clean energy sector.

An Effective and Powerful Tool

The Minister of Energy and Mines has legislated spending authority over the ICE Fund Special Account for projects, programs or initiatives that will assist the Province in meeting its energy, economic and environmental priorities.

The legislation underpinning the ICE Fund Special Account and availability of a predictable level of annual funding affords the Ministry the opportunity to undertake longer-term planning for key undertakings that:

- Provide Government with innovative options for energy and environmental challenges associated with its resource and economic development policies;
- Allow the formation of funding partnerships that leverage and extend the Province’s financial participation;
- Require dedicated resourcing to achieve Service Plan goals; and
- May extend beyond one fiscal period.

To date, the ICE Fund has been used primarily to bridge capital funding gaps in the deployment of pre-commercial clean energy technology projects in communities throughout British Columbia.

Key provincial programs and initiatives were also included within the ICE Fund Special Account expenditure framework from 2011 to 2013. These included: the LiveSmart Residential program delivery; reporting, compliance and enforcement framework for the Renewable and Low Carbon Fuel Requirements Regulation; Uniform Building Code Initiative; Remote Community Electrification Program; and the proposed Hartley Bay Micro-Hydro Project.

QUICK FACT:
If used to its maximum potential, the ICE Fund Special Account legislation can be an effective and versatile tool that can assist the Province in achieving its energy, economic and environmental priorities.
**Funding**

From September 1, 2007 to June 30, 2010, the ICE Fund received approximately $25 million per year through a 0.4 percent levy on all final sales of electricity, natural gas, fuel oil and grid-delivered propane, excluding fuels taxed or exempted from tax under the Motor Fuel Tax Act. The levy was discontinued following the implementation of the Harmonized Sales Tax and no further funding sources were made available to the ICE Fund. The ICE Fund levy was re-instated April 1, 2013, with the return of the Provincial Sales Tax. The levy remains in its original form, but with the exemption of electricity sales, and is still assessed on residential, commercial and industrial customers. At current energy prices, the levy is estimated to generate between $6.5 - $7 million per year.

The levy is assessed under the Provincial Sales Tax Act to take advantage of well-established registration, collection and remittance provisions, and to qualify the levy for exemption from the federal Goods and Services Tax. Contributions are capped at $100,000 per year per customer. The levy is remitted monthly with the Provincial Sales Tax and funds are credited quarterly to the ICE Fund Special Account based upon an annual estimate provided to the Minister of Finance.

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**T’SOU-KE NATION**

**A Photovoltaic Innovation and Demonstration Project**

**CASE STUDY**

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.

With help from a $400,000 grant from the ICE Fund in 2008, T’Sou-ke Nation has successfully brought on-line a 75 kilowatt photovoltaic power generation capacity. T’Sou-ke Nation uses solar energy to provide electricity for the band office, a fisheries building and sale of clean energy to BC Hydro grid. Ten band members trained to become solar panel installers.

Along with the photovoltaic installation, which creates electricity from the sun, T’Sou-ke Nation has fitted solar hot water panels for 40 homes and several administrative buildings on the reserve.

This project became the first ICE Fund proponent to complete its project in the summer of 2009. T’Sou-ke Nation invited all levels of government and First Nations to a weekend gathering with dancing and drumming, solar tours and workshops. To date, T’Sou-ke has had 32 schools, 54 municipalities and tourists from all over the world come for tours and workshops.

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**First Call 2008 Project**

**Total Projects Value:**

$900,000

**ICE Fund Contributions:**

$400,000

**Highlights**

- Job Creation
  - 20 construction
  - 10 ongoing

**Accomplishments**

- Canada’s First Aboriginal solar community

[www.tsoukenation.com](http://www.tsoukenation.com)
ICE Fund Timeline

Since establishing the Innovative Clean Energy Fund in 2007, B.C. has met its mandate to support and accelerate the commercialization of new clean energy technologies.

2007
- B.C. established the ICE Fund to support the development of new clean energy technologies in the electricity, alternative energy, transportation and oil and gas sectors

2008
- The Province announced 15 First Call projects on July 8, 2008.
  - $24.2M – ICE Fund Investment
  - $78.7M – Total Project Value

2009
  - $22.6M – ICE Fund Investment
  - $96.4M – Total Project Value
- A one-time Liquid Fuels from Biomass Call for Applications secured 8 projects to develop cellulose ethanol, biodiesel and biofuels technology.
  - $10M – ICE Fund Investment
  - $100.6M – Total Project Value

2010 - 2012
- Third Call: 2010 Showcase
  - 1\textsuperscript{st} Intake – 2 projects
  - 2\textsuperscript{nd} Intake – 12 projects
  - 3\textsuperscript{rd} Intake – 6 projects
  - $20.7M-ICE Fund Investment
  - $167.2M-Total Project Value

2013
- Ministry Initiatives funded by the ICE Fund:
  - $6.0M – Hartley Bay Micro-Hydro Project
  - $1.0M – LiveSmart BC Residential Program
  - $0.2M – Renewable and Low Carbon Fuel Requirements Regulation
  - $0.53M – Uniform BC Building Code

Initially, $77.2M in contributions was approved in principle between 2008 and 2010 for 62 projects with a project value of $442.9M; however, 19 projects did not proceed and were not funded.

2010 ICE Fund Report
Government and Ministry Priorities

The Ministry of Energy and Mines plays an integral and ongoing role in achieving Government’s energy, economic and environmental priorities such as:

- The BC Energy Plan
- Natural Gas Strategy
- Liquefied Natural Gas Strategy
- Climate Action Plan
- The BC Jobs Plan
- BC Bioenergy Strategy
- BC Technology Strategy
- Green Economy Strategy
- Research & Innovation Strategy
Government and Ministry Priorities

The ICE Fund legislation enables direct support for the energy and environmental priorities identified in government’s Canada Starts Here: the BC Jobs Plan which drives province-wide job creation and opportunities in the natural gas, transportation, clean tech and green economy sectors. This includes ICE Fund pre-commercial energy technology demonstrations, in addition to priority areas identified in the Ministry’s Service Plan. These priority areas address several BC Jobs Plan objectives through the Clean Energy Act, BC Energy Plan and the Natural Gas and LNG Strategies, respectively.

2014 Mandate Letter from the Premier

Premier Christy Clark’s mandate letter to the Minister of Energy and Mines and Minister Responsible for Core Review directs the Minister, “...to ensure development opportunities are seized in the province where they make economic and environmental sense” and “…to ensure private sector investments are welcomed and encouraged…” Specific directions relevant to the ICE Fund are:

6. Implement the 10-year electricity plan that will continue to find efficiencies at BC Hydro, build required infrastructure and keep rates affordable for British Columbians reporting these outcomes to Cabinet.

7. Work with the Clean Energy Sector to ensure that there remains cost-effective opportunities for renewable energy companies to provide power in British Columbia. “


Ministry strategies support the BC Jobs Plan and the Ministry continues to implement the Clean Energy Act, and the BC Energy Plan. The Ministry’s performance measures and targets are designed to support its goals and to facilitate job creation, economic development and the well-being of communities throughout B.C.

The Government’s strategic priority of a strong economy and the BC Jobs Plan are directly supported by the Ministry’s goal one and its associated objectives, strategies and measures.

**Goal 1:** Globally competitive energy and mining sectors that create jobs and grow the economy.

The Government’s strategic priority of a secure tomorrow, and in particular, environmentally and socially responsible energy development and use, is supported by the Ministry’s goal two, objective 2.2 and performance measure six, as follows:

**Goal 2:** Safe, environmentally and socially responsible energy and mineral resource development and use.

**Objective 2.2:** Clean energy resources, fuels and related technologies complemented by energy efficiency and conservation efforts across all sectors of the economy.
**Strategy***: Through the Innovative Clean Energy Fund, support projects that solve real, everyday energy and environmental issues and create economic benefits for all British Columbians.

**Performance Measure 6**: Total energy savings achieved each year through utility and provincial conservation policies, programs, and regulations.

*One of eight strategies noted under Objective 2.2. To read the Ministry’s Service Plan in full, please visit: [http://www.bcbudget.gov.bc.ca/2014/sp/pdf/ministry/mem.pdf?pl=mo-mpr-min_service_plan](http://www.bcbudget.gov.bc.ca/2014/sp/pdf/ministry/mem.pdf?pl=mo-mpr-min_service_plan)*

**Approved Government Priorities for the ICE Fund**

- **Energy Production**: The ICE Fund helps increase British Columbia’s production of clean or renewable energy
- **Energy Transmission**: The ICE Fund helps improve the way energy moves from producers to British Columbia users
- **Energy Use**: The ICE Fund helps improve the ways energy is used in British Columbia’s communities and across all sectors of the provincial economy

**Projects supported by the ICE Fund**

Projects supported by the ICE Fund provide province-wide benefits by creating jobs and helping local communities save energy, build economic diversity, and reduce their environmental footprint. Environmental benefits may include greenhouse gas (GHG) emissions reduced, GHGs offset, amount of renewable energy produced, waste reduced, and gallons of water saved.

**Environmental Benefits**

Benefits from the ICE Fund include a reduction in GHG emissions of over 135,000 tonnes - equivalent to removing 28,105 passenger vehicles from the road.

**Economic Benefits**

The jobs associated with these projects served communities such as: Abbotsford; Burnaby; Delta; Nanaimo; Prince George; Revelstoke; and Richmond. Out of the 43 approved projects, 31 projects are complete and have created 587 construction jobs and 240 ongoing jobs.

**QUICK FACT**: Reduction in greenhouse gas emissions is calculated at over 135,000 tonnes. That’s equivalent to removing 28,105 passenger vehicles off the road!

Source: BC Ministry of Energy and Mines & U.S. Environmental Protection Agency
The Technology Portfolio

Many ICE Fund projects have achieved notable success; advancing their technologies to commercial readiness and creating global market opportunities. Through the ICE Fund, the Province supports a broad range of technological applications, including: ocean tidal and wave; solar PV; geoxchange; micro-hydro; wind; bioenergy; waste utilization; and energy efficiency and conservation. Since 2008, a total of 19 bioenergy projects have received 63 percent of the ICE Fund’s approved contributions.
**Distribution by Technology (2008 – 2014)**

<table>
<thead>
<tr>
<th>Technology</th>
<th># of Projects</th>
<th>ICE Fund Investment</th>
<th>Project Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioenergy</td>
<td>17</td>
<td>$28,957,000</td>
<td>$125,932,834</td>
</tr>
<tr>
<td>Energy Conservation</td>
<td>4</td>
<td>$5,589,163</td>
<td>$20,628,957</td>
</tr>
<tr>
<td>Energy Management</td>
<td>4</td>
<td>$7,300,858</td>
<td>$22,460,929</td>
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<tr>
<td>Energy Storage</td>
<td>1</td>
<td>$203,775</td>
<td>$617,500</td>
</tr>
<tr>
<td>Geoexchange</td>
<td>2</td>
<td>$1,075,115</td>
<td>$3,993,969</td>
</tr>
<tr>
<td>Hydro</td>
<td>1</td>
<td>$44,000</td>
<td>$200,000</td>
</tr>
<tr>
<td>Ocean - Wave/Tidal</td>
<td>2</td>
<td>$2,469,622</td>
<td>$7,804,900</td>
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<tr>
<td>Solar</td>
<td>6</td>
<td>$2,052,321</td>
<td>$8,142,273</td>
</tr>
<tr>
<td>Waste to Energy</td>
<td>1</td>
<td>$666,666</td>
<td>$2,000,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>38</strong></td>
<td><strong>$48,358,519</strong></td>
<td><strong>$191,781,362</strong></td>
</tr>
</tbody>
</table>

**QUICK FACT:**

The Innovative Clean Energy Fund supports the development of clean power and energy efficiency technologies in the electricity, alternative energy, transportation and oil and gas sectors.

*Source: The BC Energy Plan: A Vision for Clean Energy Leadership*
**Delta-Q Technologies Corp.**

**Showcasing Load Demand Management and Next Generation Electric Vehicle Charging**

**CASE STUDY**

Delta-Q Technologies provides power management and power conversion solutions that improve the performance and durability of electric drive vehicles and industrial equipment.

A test/demonstration platform consisting of the key charging, energy storage, control and communications elements incorporated in next generation electric vehicles will be developed and integrated by Delta-Q. This will enable key elements of next generation battery charging systems to be validated and showcased.

This project leveraged Delta-Q Technologies' twelve years of experience with on-board vehicle charging technologies as well as the BC Government's and BC Hydro's plug-in electric vehicle working group plans to deploy an extensive charging infrastructure and power management demonstration project.

**Testimonial**

'A lot of [our] growth is coming from the exports that are going to Asia and Southeast Asia, as opposed to the exports going back to the U.S. or Europe,' said Evan Sanders, vice-president of sales for the Burnaby, B.C., company.

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**EcoSmart Foundation Inc.**

**SunMine Project**

**CASE STUDY**

EcoSmart Foundations Inc. (EcoSmart) is a not-for-profit Canadian corporation based in Vancouver, British Columbia. It was one of the successful applicants in the Innovative Clean Energy (ICE) Funds Third Call, and was approved to receive funding of $1 million for the SunMine Project.

Partnering with the City of Kimberley and Teck Resources Ltd., EcoSmart’s SunMine Project will be the first BC installation of grid-connected solar power on a brownfield mine site (i.e., former Cominco Sullivan Mine). It will also be used to demonstrate how solar tracking technology can be adapted for northern climates.

SunMine will have over 4,000 solar-cell modules, mounted on 96 solar trackers which follow the sun’s movement, maximizing solar exposure. It will be the first solar project in B.C. to sell power to the BC Hydro grid.

**Testimonial**

"Kimberley citizens directly endorsed this project and we're proud to deliver on a bold and innovative initiative," says Kimberley’s Mayor, Ron McRae. "SunMine aligns with the community’s values associated with environment, community and a history of innovation and resilience. We're creating the future, not awaiting it, and this project shows we mean business."

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**Total Projects Value:**

$4.6 million

**ICE Fund Contributions:**

$1 million

**Highlights**

- Job Creation
  - 20 construction
  - 11 ongoing

**Accomplishments**

- 2010 Supplier of the Year by Tomberlin Automotive Group (TAG)
- 2013 Finalist for the B.C. Export Award in the Advancing Technology and Innovation category

[www.delta-q.com](http://www.delta-q.com)

[www.ecosmart.ca](http://www.ecosmart.ca)

[www.sunmine.ca](http://www.sunmine.ca)
Project Distribution by
Natural Resource Operations Regions in BC

- **Skeena:** 2 Projects
  - ICE fund Investment: $2,887,622
  - Total Project Value: $8,715,200

- **Cariboo:** 1 Project
  - ICE fund Investment: $182,075
  - Total Project Value: $590,200

- **Thompson–Okanagan:** 5 Projects
  - ICE fund Investment: $1,633,604
  - Total Project Value: $6,323,189

- **Vancouver Island – West Coast:** 7 Projects
  - ICE fund Investment: $7,178,890
  - Total Project Value: $24,949,918

- **Kootenay:** 2 Projects
  - ICE fund Investment: $1,750,000
  - Total Project Value: $7,170,000

- **Lower Mainland – South Coast:** 15 Projects
  - ICE fund Investment: $26,374,544
  - Total Project Value: $112,937,526

- **Omineca:** 6 Projects
  - ICE fund Investment: $8,351,783
  - Total Project Value: $31,055,329
70 Mile House

Siwash Lake Ranch

The Project: Demonstration & Deployment of Innovative Clean energy technology in Remote B.C.

Technology: Solar PV and Thermal

ICE Fund: $182,075  Project Value: $590,200

Status: Completed October 2012  Jobs: Construction 10 – Ongoing 2
Kootenay Region

Kimberley

EcoSmart Foundation Inc.
The Project: SunMine Project – B.C.’s first installation of grid-connected solar power on a brownfield mine site.
Technology: Solar PV
ICE Fund: $1,000,000 Project Value: $4,600,000
Status: In Progress Jobs: Construction 36 – Ongoing 2

Revelstoke

SBC Firemaster Ltd.
The Project: Modular Pellet Plant - Bioenergy Creation
Technology: Bioenergy
ICE Fund: $750,000 Project Value: $2,570,000
Status: Completed October 2009 Jobs: Construction 16 – Ongoing 18
Lower Mainland – South Coast

**Abbotsford**

**Catalyst Power Inc.**
**The Project:** Advanced (High Yield) Biogas System  
**The Technology:** Bioenergy  
ICE Fund: $1,500,000  
Project Value: $5,500,000  
Status: Completed July 2010  
Jobs: Construction 5 – Ongoing 10

**Burnaby**

**BC Institute of Technology**
**The Project:** Development of an intelligent Micro (Smart) Grid  
**Technology:** Energy Management  
ICE Fund: $2,702,772  
Project Value: $6,540,166  
Status: Completed March 2011  
Jobs: Construction 11 – Ongoing 9
Lower Mainland – South Coast

**Burnaby**

**Delta-Q Technologies Corp.**
The Project: Showcasing Load Demand Management and Next Generation Electric Vehicle Charging.

Technology: Energy Management

ICE Fund: $1,000,000  Project Value: $4,792,213

Status: Completed December 2013  Jobs: Construction 20 – Ongoing 11

**Lignol Innovations Ltd.**
The Project: Cellulosic Ethanol Produced using Lignol Biorefinery Technology and BC Feedstocks – Phase 1

Technology: Bioenergy

ICE Fund: $1,955,929  Project Value: $5,883,849

Status: Completed March 2010  Jobs: Construction 31 – Ongoing 31
Burnaby

Lignol Innovations Ltd.
The Project: Ethanol Production using BC Feedstocks – Phase 2
Technology: Bioenergy
ICE Fund: $3,405,000  Project Value: $12,106,963
Status: Completed December 2011  Jobs: Construction 25 – Ongoing 25

SunCentral Inc.
The Project: Solar Canopy illumination System Demonstration
Technology: Solar
ICE Fund: $2,000,000  Project Value: $8,129,451
Status: Completed June 2013  Jobs: Construction 12 – Ongoing 12
Delta

**Consolidated Biofuels Ltd.**

**The Project:** Biodiesel Build-out  
**Technology:** Bioenergy  
ICE Fund: $150,000  
Project Value: $690,000  
Status: Completed June 2010  
Jobs: Construction 4 – Ongoing 10

**Quadrogen Power Systems Inc.**

**The Project:** Quad-generation from landfill gas at Village Farms  
**Technology:** Waste to Energy  
ICE Fund: $1,000,000  
Project Value: $7,910,145  
Status: In Progress  
Jobs: Construction 2 – Ongoing 3

**S2G Biochemicals Inc.**

**The Project:** S2G Bio-Glycol Pre-Commercial Demonstration Plant  
**Technology:** Bioenergy  
ICE Fund: $1,000,000  
Project Value: $4,611,233  
Status: Completed December 2013  
Jobs: Construction 7 – Ongoing 13
Lower Mainland – South Coast

**Delta**

SunSelect Produce (Delta) Inc.
**The Project:** Wood Fired Heat & CO2 Recovery Plant for Use in Greenhouse Applications  
**Technology:** Bioenergy  
**ICE Fund:** $2,240,000  
**Project Value:** $6,690,000  
**Status:** Completed June 2010  
**Jobs:** Construction 2 – Ongoing 3

**Langley**

MSR Innovations Inc.
**The Project:** Sol-Trak Solar Roofing System  
**Technology:** Solar  
**ICE Fund:** $335,589  
**Project Value:** $1,570,000  
**Status:** Completed March 2013  
**Jobs:** Construction 5 – Ongoing 1

**New Westminster**

Nexterra Energy Corp.
**The Project:** Direct-Fired Boiler (Biomass) Gasification Demonstration Project  
**Technology:** Bioenergy  
**ICE Fund:** $1,500,000  
**Project Value:** $9,000,000  
**Status:** Completed February 2010  
**Jobs:** Construction 20 – ongoing 5
Vancouver

Saltworks Technologies Inc.
The Project: Energy Efficient Desalination & Wastewater Treatment with Made-in-BC Advanced Materials
Technology: Energy Conservation
ICE Fund: $977,790 Project Value: $4,478,506
Status: Completed December 2013
Jobs: Construction 17 – Ongoing 17

Switch Materials Inc.
The Project: Hybrid Photochromic-Electrochromic Smart Windows
Technology: Energy Conservation
ICE Fund: $2,170,463 Project Value: $6,435,000
Status: Completed July 2012
Jobs: Construction 14 – Ongoing 14

UBC/GE/Nexterra
The Project: Small-Scale Biomass CHP: Demonstration of Syngas Technology with a High Efficiency Gas Engine
Technology: Bioenergy
ICE Fund: $4,500,000 Project Value: $28,600,000
Status: Completed June 2013
Jobs: Construction 107 – Ongoing 8
Prince George

**Alterna Energy**

**The Project:** Enviro-Carbonizers – Scale – up to Production Plant  
**Technology:** Bioenergy  
ICE Fund: $2,693,867  
Project Value: $8,301,741  
Status: In Progress  
Jobs: Construction 12 – Ongoing 13

**New Hope Society**

**The Project:** Biomass District Heating at Baldy Hughes Rehabilitation Centre  
**Technology:** Energy Management  
ICE Fund: $460,635  
Project Value: $1,316,100  
Status: Completed November 2009  
Jobs: Construction 10 – Ongoing 1

**University of Northern British Columbia**

**The Project:** Northern British Columbia Bioenergy Hub and Teaching / Learning Living Laboratory  
**Technology:** Bioenergy  
ICE Fund: $3,500,000  
Project Value: $15,750,000  
Status: Completed January 2011  
Jobs: Construction 139 – Ongoing 9
Omineca Regions

Prince George

Pacific Regeneration Technologies
The Project: SRIC Woody Biomass Greenhouse Heating System
Technology: Bioenergy
ICE Fund: $435,568  Project Value: $1,634,354
Status: Completed March 2012  Jobs: Construction 7.5 – Ongoing 1

Prince George, Prince Rupert, Kamloops and Castlegar

Pacific Green Energy Initiative
The Project: North/Central BC “Smart” Street Light
Technology: Energy Conservation
ICE Fund: $1,180,085  Project Value: $3,848,250
Status: Completed September 2013  Jobs: Construction 41 – Ongoing 3

Williston Lake

Tsay Keh Dene
The Project: TKD Solar Airfield
Technology: Solar
ICE Fund: $81,628  Project Value: $244,884
Status: Completed September 2013  Jobs: Construction 1 – Ongoing 0.5
Prince Rupert

Mavi Turbines Inc.
The Project: Demonstration of a Tidal Turbine Design for Remote Electrification in BC
Technology: Ocean – Wave/Tidal
ICE Fund: $469,622  Project Value: $1,434,900
Status: In Progress  Jobs: Construction 6 – Ongoing 6

Hartley Bay

Pulse Energy Inc.
The Project: Energy Management Software in Rural and Remote BC Communities – Village of Hartly Bay
Technology: Energy Management
ICE Fund: $2,418,000  Project Value: $7,280,300
Status: In Progress  Construction 25 – Ongoing 22
Thompson – Okanagan Region

Grand Forks

City of Grand Forks
The Project: Heat Recovery from Park Lift Station
Technology: Waste to Energy
ICE Fund: $666,666  Project Value: $2,000,000
Status: Completed July 2010  Jobs: Construction 15 – Ongoing 2

Lytton

Halfway Ranch
The Project: Halfway Ranch Micro-Hydro Generating Plant
Technology: Hydro
ICE Fund: $44,000  Project Value: $200,000
Status: Completed August 2013  Jobs: Construction 2 – Ongoing 0

Lytton, Clinton and Logan Lake

Thompson-Nicola Regional District
The Project: Eco-Depot Solar Power Supply
Technology: Solar
ICE Fund: $53,027  Project Value: $237,189
Status: Completed March 2010  Jobs: Construction 4 – Ongoing 3
**Thompson – Okanagan Region**

**Penticton**

*Saltworks Technologies Inc.*
**The Project:** Solar Desalination pre-commercial Plant  
**Technology:** Solar  
ICE Fund: $503,910  
Project Value: $1,586,000  
Status: Completed March 2011  
Jobs: Construction 13 – Ongoing 10

**Salmon Arm**

*Fortis BC Inc.*
**The Project:** Salmon Arm Biogas Production  
**Technology:** Bioenergy  
ICE Fund: $366,000  
Project Value: $2,300,000  
Status: Completed February 2013  
Jobs: Construction 9.5 – Ongoing 1.5
**Bella Coola**

**BC Hydro/PowerTech Labs Inc.**  
**The Project:** Energy Storage for Remote Communities  
**Technology:** Energy Storage  
ICE Fund: $203,775  
Project Value: $617,500  
Status: Completed June 2012  
Jobs: Construction 5 – Ongoing 1

**Esowista Indian Reserve #3**

**Tla-O-qui-Aht First Nation**  
**The Project:** Esowista New Community District Geoexchange Energy System  
**Technology:** Geoexchange  
ICE Fund: $750,000  
Project Value: $3,000,000  
Status: Completed January 2011  
Jobs: Construction 5 – Ongoing 1

**Gibsons**

**Town of Gibsons**  
**The Project:** Geoexchange District Energy Utility for Upper Gibsons  
**Technology:** Geoexchange  
ICE Fund: $325,115  
Project Value: $993,969  
Status: Completed December 2012  
Jobs: Construction 1.5 – Ongoing 0.1
Nanaimo

Cedar Road LFG Inc.
The Project: Collaborative Development and Demonstration Centre for Biogas Utilization (Landfill Gas)
Technology: Waste to Energy
ICE Fund: $1,000,000  Project Value: $4,068,449
Status: Completed September 2013  Jobs: Construction 8 – Ongoing 8

International Composting Corp.
The Project: Organic Waste to Fischer-Tropsch Bio-fuel Facility Proposal
Technology: Bioenergy
ICE Fund: $2,500,000  Project Value: $9,000,000
Status: In Progress  Jobs: Construction 5 – Ongoing 25
Regional District of Strathcona

Canoe Pass Tidal Energy Consortium
The Project: Canoe Pass Tidal Energy Commercialization
Technology: Ocean – Wave/Tidal
ICE Fund: $2,000,000  Project Value: $6,370,000
Status: In Progress  Jobs: Construction 33 – Ongoing 0

Sooke

T’Sou-Ke First Nation
The Project: A Photovoltaic Innovation and Demonstration Project
Technology: Solar PV and Thermal
ICE Fund: $400,000  Project Value: $900,000
Status: Completed July 2009  Jobs: Construction 20 – Ongoing 10
**Going Forward**

The Province’s Innovative Clean Energy Fund has positioned British Columbia at the leading edge of the global low-carbon economy, while providing direct support for the energy and environmental priorities identified in government’s Canada Starts Here: The BC Jobs Plan which drives province-wide job creation and opportunities in the natural gas, transportation, clean tech and green economy sectors.

The original mandate given the ICE Fund was to accelerate the commercialization of new, clean energy technologies in BC. The opportunity exists for the Ministry to expand the mandate within the legislative framework of the Special Account to meet other provincial energy and environmental priorities, while continuing to create long-term benefits for all British Columbians.

The legislation underpinning the ICE Fund Special Account is versatile and robust. It allows the Ministry to undertake a broad range of activities to address government’s energy, economic and environmental priorities. The Ministry has a unique opportunity to utilize this legislation to its maximum potential in order to assist the Province in meeting its priorities – now and in the future.

For more information on the Innovative Clean Energy Fund, please visit:  
[www.gov.bc.ca/innovativecleanenergyfund](http://www.gov.bc.ca/innovativecleanenergyfund)

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