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BACKGROUNDER

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INNOVATIVE CLEAN ENERGY FUND RURAL PROJECTS

Quesnel Community and Economic Development Corporation
ICE Fund investment $4.133 million
Total project value – $14,797,600
Project phase jobs – 84
On-going jobs – nine
The project will use excess capacity from an existing industrial biomass energy system to produce electricity and heat for community use. The energy system consists of two parts: a turbine and electrical generator to produce electricity and heat; and a distribution system to serve local clients. Replacing natural gas, the energy from the new community energy system will heat city hall, a local hospital, a retirement lodge, provincial government offices, a recreation centre, other large buildings and industrial sites.

Small Energy Group Inc.
Hartley Bay, Haida Gwaii, Hesquaiht
ICE Fund investment $2.418 million
Total project value – $7,254,000
Project phase jobs – 25
On-going jobs – 25
Small Energy Group Inc. (Pulse Energy), a B.C. company, has created an energy software system to improve the management of energy use in buildings and communities, resulting in reduced diesel-electric power generation in remote, First Nation, and off-grid communities. The project's off-grid component involves 100-200 buildings in three remote communities with three partners: Village of Hartley Bay, Hesquiaht First Nation with Ecotrust Canada, and Haida Gwaii with BC Hydro. An on-grid component involves 12 commercial buildings in Prince George and 12 in Nanaimo.

E3P Technologies, Inc.
Northern Development Initiative Trust Region
ICE fund investment $2.32 million
Total project value – $6,600,000
Project phase jobs – four
On-going jobs – 10
E3P Technologies, Inc. has researched and developed a patented device to capture wasted pressure energy from natural gas pipelines. Wasted energy from pressure reduction can be recovered and converted to useable electrical power. The device is scalable, reversible and ideal for converting pressure energy to mechanical work.

Pacific Coastal Wave Energy Corporation
Ucluelet
ICE fund investment $2 million
Total project value – $20,000,000
Project phase jobs – 12
On-going jobs – two
Pacific Coastal Wave Energy Corp. is partnering with the District of Ucluelet to build a four-megawatt (MW) demonstration facility to generate electricity from ocean wave power. Located off-shore from the community, the technology will be attached to the seabed where submerged buoys harness the ocean's kinetic energy. Since it is deployed underwater, there are no aesthetic concerns and less vulnerability to weather.

SyncWave Systems Inc.
Tofino
ICE Fund investment $2 million
Total project value - $10,475,000
Project phase jobs – 30
On-going jobs – 30
A SyncWave Power Resonator will convert the energy of ocean swells into clean, renewable electricity. The technology is designed to be suitable for both off-grid and grid-integrated applications.

Canoe Pass Tidal Energy Consortium
Regional District of Strathcona
ICE Fund investment $2 million
Total project value – $6,375,000
Project phase jobs – 33
Canoe Pass Tidal Energy Consortium (New Energy Corporation Inc., Canoe Pass Tidal Energy Corporation and the City of Campbell River) will develop a commercial tidal energy site at Canoe Pass in a narrow channel between Quadra and Maude Islands north of Campbell River. The commercialization project will involve removal of a causeway, restoration of the tidal current flow and installation of a mechanical span across the pass for two 250 kilowatt (KW) turbines to harness the tidal power.

Aboriginal Cogeneration Corporation (ACC)
Kamloops
ICE Fund investment $1.5 million
Total project value – $10,050,000
Project phase jobs – seven
On-going jobs – 21
ACC will build a biomass-to-energy demonstration facility at their existing railroad tie handling facility in Kamloops, using waste railway ties from Canadian Pacific Railway as feedstock. The facility will use a micro-gasifier to convert biomass, such as wood or dry processing residues, into electricity. Each micro-gasifier can process up to 41 tonnes of waste wood per day, effectively generating one MW for every two tonnes of wood biomass. Future opportunities exist with small northern communities where ACC can convert existing diesel fuel-powered generators to biomass generators using mountain pine beetle infested timber.

Pacific Green Energy Initiative "Smart" Street Light Coalition
Prince George, Quesnel, Vanderhoof, Fort St. James, Fraser Lake, Wells
ICE Fund investment $1.3 million
Total project value – $3,848,250
Project phase jobs – 23
On-going jobs – 300
This project is a commercial scale demonstration of "smart" street light technology to replace 8,000 to 10,000 lights in six participating communities. Electricity consumption for street lighting in British Columbia could be reduced by up to 100,000 MW hours per year by retrofitting approximately 300,000 street lights with adaptive lighting technology developed in the province.

Northwind Ethanol
Prince George
ICE Fund investment $1.246 million
Total project value – $4,985,500
Project phase jobs – 20
On-going jobs – 28
Northwind Ethanol proposes to build a 500,000 gallon (US) cellulosic feedstock, fuel ethanol demonstration facility to make ethanol and lignin from woody biomass. The project supports new employment opportunities in the forest industry and provides fuel ethanol.

Tla-o-qui-aht First Nation
Clayoquot Sound
ICE Fund investment $750,000
Total project value – $3,000,000
Project phase jobs – five
On-going jobs – two
Tla-o-qui-aht First Nation is currently implementing the Ty-Hystanis New Community project, with plans for a health centre, community building, school, and a 160-lot subdivision for up to 215 new housing units. The project will pump geo-thermal energy from the ground to provide heat for buildings and domestic hot water for residents.

City of Grand Forks
ICE Fund investment $666,667
Total project value – $2,000,000
Project phase jobs – 30
On-going jobs – two
The project will incorporate a heat recovery system in the municipality's reconstruction of its park lift station, extracting energy from raw wastewater to heat a new building housing the lift station, public restrooms, and a community stage.

Saltwork Technologies
Regional District of Okanagan-Similkameen
ICE Fund investment $503,910
Total project value – $1,586,000
Project phase jobs – three
On-going jobs – 20
Saltworks Technologies Inc. has developed a desalination technology that substantially reduces the amount of electricity needed to make brackish water potable. The technology uses solar-chemical energy for the conversion process – saving enough electricity to power 21,000 homes for a year. Within British Columbia, Saltworks expects commercial applications in water-stressed rural and remote communities located in coastal regions or areas with salty groundwater.

New Hope Society
Baldy Hughes Rehabilitation Centre (southwest of Prince George)
ICE Fund investment $460,635
Total project value – $1,316,100
Project phase jobs – seven
On-going jobs – seven
Baldy Hughes is former military base used as an addictions treatment centre. The project will heat eight of the 22 buildings on site from a centralized boiler plant fuelled by wood pellets. The heating system will allow for removal of existing propane boilers.

Pacific Regeneration Technologies Inc. (PRT)
Prince George
ICE Fund investment $435,600
Total project value – $1,306,800
Project phase jobs – two
On-going jobs – two
PRT's project will install a high-efficiency low-emission gasifier/combustor and boiler using poplar and willow feedstock, in addition to waste biomass, to produce heat for commercial, industrial and institutional buildings. The locally-grown woody feedstock is a valuable alternative source of biomass for the region.

Town of Gibsons
ICE Fund investment $325,115
Total project value – $976,320
Project phase jobs – three
The Town of Gibsons will design and build a municipally-operated geo-exchange district energy utility, the first of its kind in North America, to capture renewable energy from heat exchangers in the ground on municipally-owned green space. The system will pump heat from the ground to residential and commercial buildings, initially servicing 110 dwellings. In addition to the jobs and investment, the project will provide the municipality with stable, long-term revenue.

Powertech Labs Inc. (BC Hydro)
Bella Coola
ICE Fund investment $203,775
Total project value - $617,500
Project phase jobs – five
On-going jobs – one
This initiative deploys energy storage systems in remote British Columbia communities through a zinc bromine battery system. Zinc bromine batteries improve reliability of intermittent power sources, such as wind and solar generation. The Bella Coola project is demonstrating technologies that can reduce reliance on non-renewable power generation, particularly diesel.

Siwash Lake Ranch
100 Mile House
ICE Fund investment $197,000
Total project value – $590,200
Project phase jobs – 10
On-going jobs – two
The project at Siwash Lake Ranch will overhaul an existing off-grid energy system, currently burning over 14,000 litres of diesel fuel and 7,000 litres of propane per year. The ranch will be switching to a primary solar energy system to generate clean, renewable electricity. Solar thermal technologies will replace propane currently used for heating water.

Nyfound Energy Inc. Wind Farm Project
Merritt
ICE Fund investment $142,592
Total project value – $484,224
Project phase jobs – two
The project will use wind turbines to pump water from an existing reservoir into a new water storage area on higher ground. Then, when the wind dies down, the water will flow from the higher to the lower reservoir through a hydro generator to create electricity.

Thompson-Nicola Regional District (TNRD)
Clinton, Logan Lake, Lytton
ICE Fund investment $79,063
Total project value – $237,189
Project phase jobs – six
On-going jobs – three
TNRD is upgrading refuse transfer stations to eco-depots in the municipalities of Clinton, Logan Lake and Lytton. The project will install solar panels at three eco-depots, reducing reliance on conventional hydro and fossil fuel generators, while providing power for compacting refuse and recyclable material.

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