

BC'S INDUSTRY STRUCTURE

This appendix provides some explanation of the different kinds of alternative energy technologies, categories of energy efficiency, sector participants and the types of activities in which they are involved. Then, industry participants are profiled in terms of their alternative energy technology coverage (Table B.1), energy efficiency sector coverage (Table B.2), and activities (Tables B.3 and B.4 for alternative energy and energy efficiency, respectively).

B.1 Definitions and Coverage

Alternative Energy Technologies

Small/Micro Hydro	<ul style="list-style-type: none"> • water is channelled through a penstock to capture the energy of the moving water by powering turbines to generate electricity. • in run-of-river applications, turbines are placed in mid-stream with no/minimal water impoundment. • micro hydro = up to 2MW. • small hydro = 2 MW to 50 MW (typical Non Utility Generator development, or low end of range to supply power grid).
Solar Photovoltaic (PV)	<ul style="list-style-type: none"> • sunlight is converted to electricity using photovoltaic or solar cells, bundled into modules or panels. • PV cells are semi-conductor devices usually made of silicon. • an inverter is used to convert direct current from solar and/or batteries to alternating current.
Solar Thermal	<ul style="list-style-type: none"> • in active solar applications, solar collectors are used to capture energy from the sun to provide heat, which is distributed by pumps or fans. • used to heat homes and buildings, swimming pools, domestic hot water, water for the aquaculture industry. • passive solar involves building design, orientation and placement of appropriate building components (e.g., windows) to make use of sunlight for daylighting and space heating and cooling.
Wind	<ul style="list-style-type: none"> • converts kinetic energy present in the wind into mechanical energy and/or electricity (the latter via wind turbine generators). • mechanical energy powers windmills and pumps water (also begins the process of powering turbines). • two designs of wind turbines are vertical axis and horizontal axis.
Biomass	<ul style="list-style-type: none"> • heat and power derived from biomass. • includes agricultural waste, forest waste and municipal waste. • applications include pellets for woodstoves, pulping liquors/hog fuels to generate heat and power in pulp mills, and woodchip boilers in institutional facilities.

	<ul style="list-style-type: none"> • includes high-efficiency biomass gasification.
Biogas	<ul style="list-style-type: none"> • biogas may be produced via anaerobic digestion by bacteria, e.g., methane from landfills or livestock manure. • biogas can be used to generate heat and/or power.
Biofuels	<ul style="list-style-type: none"> • biofuels such as ethanol made from corn or lignocellulose (wood fibres), biodiesels, bio-oils. • used primarily in mobile applications such as fuelling vehicles.
Geothermal	<ul style="list-style-type: none"> • geothermal energy uses steam or hot water in the earth's crust to power turbines or heat buildings or water. • steam or hot water is passed through pipes to supply heat, or steam is used to power turbines. • earth energy uses temperatures found in the earth or water to heat or cool air and water for buildings. • heat pumps extract heat from underground in winter and are reversed in summer to provide air conditioning by moving hot air out of the building and into the ground.
Fuel Cells	<ul style="list-style-type: none"> • a fuel cell chemically combines hydrogen and oxygen to produce water, heat and electricity. • can be powered by hydrogen, either in pure form or extracted from methanol or other fuels (including biogas). • can be used for mobile applications, to power vehicles (personal, transit, industrial), or to provide stationary power via an electricity generation plant.
Wave	<ul style="list-style-type: none"> • utilizes ocean wave activity to power turbines and create electricity via a generator.
Tidal	<ul style="list-style-type: none"> • harnesses the natural rise and fall of coastal waters to generate electricity via tidal turbines (similar to wind turbines).
Cogeneration	<ul style="list-style-type: none"> • generation of heat and electricity, typically using natural gas, oil or wood wastes to produce electricity and heat for nearby thermal energy loads.
District Energy (DE)	<ul style="list-style-type: none"> • uses one central heating or cooling system and distributes the energy via pipes connecting a number of nearby buildings. • often used in conjunction with electricity generation, i.e., cogeneration of heat and power.
Municipal Solid Waste (MSW)	<ul style="list-style-type: none"> • MSW, as differentiated from the landfill methane application of biogas, refers to the incineration of municipal solid waste to generate electricity.

Energy Efficiency Categories

Energy Conservation	<ul style="list-style-type: none"> • a reduction in the demand for energy services, such as lighting, heating, industrial motive force, water pumping or other end uses. • Examples include the installation of daylighting features in buildings to reduce the need for electric lights, designing water distribution systems to minimize friction losses, or locating homes, schools and workplaces close together to reduce the demand for transportation.
Energy Efficiency	<ul style="list-style-type: none"> • a reduction in the consumption of energy for a given output or energy service using energy efficient technologies for end uses. • examples include converting incandescent light bulbs to more energy efficient fluorescent bulbs and ballasts, using high-efficiency pumps for water, or driving a more fuel-efficient vehicle.
Load Management	<ul style="list-style-type: none"> • spreading energy demand over a broader timeframe, particularly to reduce the amount of power drawn during periods of peak demand in an energy system. • an example at the household level would be running the dishwasher or clothes washer late at night or mid-morning, not the early evening when peak electricity demand occurs in many systems due to lighting, cooking and television use.

Energy Efficiency Sectors

Residential	<ul style="list-style-type: none"> • existing residential and new construction of buildings. • single-family dwelling houses and duplexes. • multi-unit residential buildings including apartments and condominiums. • equipment and appliances used around the home, such as a washer and dryer. • distributed alternative energy supplies such as solar or earth energy systems for household use.
Commercial and Institutional	<ul style="list-style-type: none"> • existing buildings and new construction of buildings. • commercial buildings, such as offices and shopping malls. • apartment buildings, hotels, condominiums (i.e., overlap with "residential" service providers). • institutions such as hospitals, schools, municipal facilities, colleges, universities, government buildings, non-profit organizations, others. • equipment used in commercial/institutional applications, such as heating, ventilation and air conditioning systems. • Distributed energy supplies such as cogeneration, district energy, solar, earth and other energy systems.

Industrial	<ul style="list-style-type: none"> • New and existing buildings used in an industrial setting. • equipment or energy used in industrial processes, such as electric-powered machinery or chemical reactions. • power and heat supplies from a variety of resources • transportation on the industrial site. • district energy utilities which provide heat or steam to multiple buildings, often from a single source of energy.
Transportation	<ul style="list-style-type: none"> • public transportation, such as transit systems • private transportation, including personal vehicles, commercial transport of goods and people, and mobile applications in an industrial setting. • use of alternative energy transportation fuels such as bio-oil, biodiesel and bioethanol.
Stationary Power	<ul style="list-style-type: none"> • generation, transmission and distribution of electricity or natural gas via utilities. • use of renewable fuels along with efficient fossil fuel resources. • public utilities. • independent power producers (private sector operators producing power for off-grid applications or for sale to the grid) • on-site "self-generation" technologies with potential grid backup and/or net metering tariffs to permit power banking.

Participants

Federal Departments	<ul style="list-style-type: none"> • federal government departments (e.g., Natural Resources Canada) that provide policy, technical support and enabling programs.
Federal Agencies	<ul style="list-style-type: none"> • Crown Corporations and other agencies whose work contributes to alternative energy and energy efficiency (e.g., Canada Mortgage and Housing Corporation, Sustainable Development Technology Canada).
National Associations	<ul style="list-style-type: none"> • associations of industry members and other participants in the alternative energy and energy efficiency industry, such as the Canadian Renewable Fuels Association.
National NGOs	<ul style="list-style-type: none"> • non-government organizations, including environmental groups and non-profit organizations (e.g., the Pembina Institute for Appropriate Development).
BC Ministries	<ul style="list-style-type: none"> • ministries within the BC government, such as the Ministry of Energy and Mines, which houses the Alternative Energy Policy Branch.

BC Associations/ NGOs	<ul style="list-style-type: none"> • associations and NGOs in BC with activities related to the alternative energy and energy efficiency sectors (e.g., the Independent Power Association of BC).
BC Academia Institutions	<ul style="list-style-type: none"> • academic institutions in BC that include a focus on alternative energy and energy efficiency (e.g., the Institute for Integrated Energy Systems at the University of Victoria, the British Columbia Institute of Technology).
BC Crown Corporations	<ul style="list-style-type: none"> • Crown corporations in BC whose mandate and/or activities include alternative energy and energy efficiency (e.g., BC Hydro).
BC Municipalities and Communities	<ul style="list-style-type: none"> • municipalities and communities in BC that have undertaken activities such as community energy planning.
BC Private Sector	<ul style="list-style-type: none"> • companies operating in alternative energy and energy efficiency in BC, such as private utilities and energy service companies.

Activities

Providing Information	<ul style="list-style-type: none"> • preparation and dissemination of information concerning alternative energy and energy efficiency. • examples include information on new technologies, service providers, environmental impacts and benefits, where to obtain the technologies and attributes to consider.
Standard Setting	<ul style="list-style-type: none"> • reviewing and assessing technologies, labelling and/or setting performance standards, such as CSA energy efficiency standards, Energuide ratings, building energy codes and fuel economy standards. • providing performance guidelines and criteria for advanced performance, such as R-2000 homes.
Lobbying for Change	<ul style="list-style-type: none"> • lobbying governments, utilities, private enterprises and individuals for changes in policies and practices with respect to alternative energy and energy efficiency. • includes making a case for tax exemptions for renewables.
Coordination	<ul style="list-style-type: none"> • coordinating activities among participants, including both producers and users of energy. • includes the activities of associations coordinating members (e.g., municipalities, companies), in an effort to reduce energy use or adopt targets for energy supplies.
Professional Services	<ul style="list-style-type: none"> • planning and design (e.g., power generation projects, energy efficiency retrofits), development of tools (e.g., software design for resource assessments, energy audits), legal and business services (e.g., arranging financing). • technical advisory services and troubleshooting.

Policy Development	<ul style="list-style-type: none"> • analysis and development of policy relating to alternative energy and energy efficiency. • utilization of legal instruments and/or investment of public funds in a strategic manner. • includes designing policies (e.g., utility renewable portfolio standards, government green procurement) and designing measures (e.g., tax exemptions, financing mechanisms).
Program Delivery	<ul style="list-style-type: none"> • offering and managing programs, (e.g., to encourage and enable alternative energy installations and energy efficiency retrofits). • providing training to energy practitioners and tools for decision makers (e.g., energy audit software). • raising funds for sustainable program delivery.
Resource Assessment	<ul style="list-style-type: none"> • monitoring and assessing resource potential, such as wind speed and other variables at specific locations. • conducting energy audits of buildings and facilities, and energy management reviews of utility systems, to assess potential energy savings from making changes.
Technology Development	<ul style="list-style-type: none"> • research and development of alternative energy and energy efficiency technologies. • testing and demonstration of technologies, at a pre-commercialization stage.
Manufacturing	<ul style="list-style-type: none"> • manufacturing of equipment and appliances, such as electricity generators, boilers, pellet stoves and energy efficient dishwashers. • manufacture of energy generators, parts and supplies, such as wind towers and turbines, energy efficient light bulbs, etc.
Producing Feedstocks	<ul style="list-style-type: none"> • producing feedstocks or currencies for energy using and converting systems, such as: woodwaste biomass, hydrogen, ethanol fuel and landfill methane. • does not apply in the case of wind, solar, wave/ tidal, geothermal/earth energy systems where the feedstocks are naturally occurring, or in the case of energy efficiency.
Energy Supply	<ul style="list-style-type: none"> • wholesale and retail supply of energy resources including electricity and heat. • production of energy generation technologies such as solar panels. • production of energy efficient equipment, parts and fuels, including high efficiency industrial equipment, energy efficient windows and transportation biofuels.
Construction and Renovation	<ul style="list-style-type: none"> • installation of technologies, including power generating stations such as micro-hydro and wind turbines. • construction and renovation of buildings to include features such as solar wall technology and energy efficient windows and lighting. • leading by example, such as installing solar PV in a public building and/or construction to advanced specifications beyond minimum energy efficiency codes.

Operations	<ul style="list-style-type: none"> • operating systems, including power generation facilities and energy efficient buildings and factories. • maintenance and repair of energy-producing and energy-using systems and facilities. • leading by example, such as green power procurement.
Financial Services	<ul style="list-style-type: none"> • planning and developing proposals for debt and/or equity investments in alternative energy and energy efficiency projects, such as wind farms or district energy applications. • providing loans for energy efficiency retrofits, private alternative energy applications and technology commercialization.
Marketing	<ul style="list-style-type: none"> • marketing related to alternative energy and energy efficiency, such as marketing green power at a premium rate, or marketing emission offsets. • advertising, such as for energy efficient and hybrid vehicles
Investment	<ul style="list-style-type: none"> • investment in applied technology, such as equity in a wind power plant, installing solar panels on a head office building, purchasing green power, or constructing a new office building that exceeds minimum standards or energy efficiency codes.

Table B.1: Alternative Energy Industry Participants by Technology

Organization Name	Hydro	Solar	Wind	Biomass	Biogas	Bio-fuels	Geo-thermal	Fuel Cells	Wave/Tidal	Cogen/DE
<i>Federal Departments and Branches</i>										
Natural Resources Canada										
NRCan – CANMET		X	X	X						X
NRCan – CEDRL		X	X	X						X
NRCan – REED	X	X	X	X	X	X	X	X	X	X
Industry Canada - Technology Partnerships Canada				X		X		X		
<i>Federal Crown Corporations and Agencies</i>										
National Research Council (NRC) Innovation Centre (Vancouver)								X		
<i>National Associations</i>										
Centre for Energy	X	X	X	X	X	X	X	X	X	X
Energy Council of Canada	X	X	X	X	X	X	X	X	X	X
Canadian Association for Renewable Energy (CARE)	X	X	X	X	X	X	X	X	X	X
Canadian Bioenergy Association (CANBIO)				X	X	X				
Canadian Renewable Energy Network (CANREN)	X	X	X	X	X	X	X	X	X	X
Canadian Renewable Fuels Association (CRFA)						X				
Canadian Solar Industries Association (CANSIA)		X								
Canadian Wind Energy Association (CANWEA)			X							

Table B.1: Alternative Energy Industry Participants by Technology (cont'd)

Organization Name	Hydro	Solar	Wind	Biomass	Biogas	Bio-fuels	Geo-thermal	Fuel Cells	Wave/Tidal	Cogen/DE
National Associations (cont'd)										
Canadian District Energy Association (CDEA)										X
Earth Energy Society of Canada (EESC)							X			
Fuel Cells Canada (FCC)								X		
Solar Energy Society of Canada Inc. (SESCI)		X	X							
National NGOs										
Pembina Institute for Appropriate Development (PIAD)		X	X	X	X	X				X
BC Ministries										
Ministry of Energy and Mines - Alternative Energy Policy Branch	X	X	X	X	X	X	X	X	X	X
Ministry of Small Business and Economic Development				X				X		
Ministry of Health		X								
BC Associations/NGOs										
BC Wind Energy Association			X							
Canadian Institute of Energy (BC)	X	X	X	X	X	X	X	X	X	X
Independent Power Association of BC (IPABC)	X	X		X						
Friends of Renewable Energy (FORE) BC	X	X	X	X	X	X	X	X	X	X
David Suzuki Foundation	X	X	X	X	X	X	X	X	X	X
BC Academic Institutions										
Okanagan University College				X	X	X				
BC Institute of Technology (BCIT)		X								

Table B.1: Alternative Energy Industry Participants by Technology (cont'd)

Organization Name	Hydro	Solar	Wind	Biomass	Biogas	Bio-fuels	Geo-thermal	Fuel Cells	Wave/Tidal	Cogen/DE
BC Academic Institutions (con't.)										
Simon Fraser University (SFU)	X	X	X	X	X	X	X	X	X	X
Institute for Integrated Energy Systems Uvic (IESVic)								X		
BC Crown Corporations										
BC Hydro	X	X	X	X	X		X	X	X	X
BC Buildings Corporation		X								
Land and Water BC	X		X							
BC Municipalities and Communities										
Greater Vancouver Regional District (GVRD)										
City of Vancouver			X	X	X		X			X
District of North Vancouver										X
BC Private Sector										
Abitibi Consolidated				X						X
Advanced Technology Centre				X						
Algonquin Power	X									
Altek Power Corp.				X						X
Analytic Systems Ware		X								
Angstrom Power								X		
Aquila Networks Canada (Fortis)	X									
Asian Phoenix Resources	X									
ASL AQFlow	X									
Astravan Distributors Ltd.		X								

Table B.1: Alternative Energy Industry Participants by Technology (cont'd)

Organization Name	Hydro	Solar	Wind	Biomass	Biogas	Bio-fuels	Geo-thermal	Fuel Cells	Wave/Tidal	Cogen/DE
BC Private Sector (cont'd)										
Aztec Solar Solutions		X	X							
Azure Dynamics								X		
Ballard Power Systems Inc								X		
Blue Energy Canada									X	
Boliden Westmin	X									
Canadian Forest Products				X						
Canadian Geothermal Systems										
Canadian Hydro Developers	X						X			
Cariboo Pulp & Paper				X						X
Carmanah Technologies		X								
Cascade International				X						X
Celgar Pulp				X						X
Cellex Power Products								X		
Central Coast Power Corp.	X									
Chrysalix Energy Ltd.								X		
Crossman Machinery			X							
Duke Energy										X
Dundee Securities Corp.								X		
Dynamotive Technologies						X				
Earth First Energy			X							
Ecco Heating							X			
Enerdata Systems	X									
EnerGreen Power Inc.						X				

Table B.1: Alternative Energy Industry Participants by Technology (cont'd)

Organization Name	Hydro	Solar	Wind	Biomass	Biogas	Bio-fuels	Geo-thermal	Fuel Cells	Wave/Tidal	Cogen/DE
BC Private Sector (cont'd)										
Energy Alternatives	X	X	X							
EnergyWise Technologies		X								
English Bay Energy			X							
Enviro				X						
Essential Innovations Technology							X			
Evans Forest Products				X						X
Firebird Semiconductors		X								
Formula Controls		X					X			
General Hydrogen Corp								X		
Geologic Thermal Solutions							X			
Geothermal Heating Specialties							X			
Gold River Power Corp.	X									
GPH Ltd.	X	X								
Greenlight Power Technologies								X		
Greenwind Power			X							
Groundsolar Geotechnics							X			
Heliocentris								X		
Howe Sound Pulp & Paper				X						X
Industrial Electric Control		X	X							
Innovative HVAC							X			
International Cool Energies							X			
Kawneer		X								
Kootenay Geothermal Systems							X			
Landmark Glass Systems		X								
Lignol Innovations						X				

Table B.1: Alternative Energy Industry Participants by Technology (cont'd)

Organization Name	Hydro	Solar	Wind	Biomass	Biogas	Bio-fuels	Geo-thermal	Fuel Cells	Wave/Tidal	Cogen/DE
BC Private Sector (cont'd)										
Lockhart Industries							X			
Louisiana Pacific				X						X
Magpower Systems Inc.								X		
Membrane Reactor Technologies Inc.								X		
Methanex								X		
Mitsubishi Canada			X							
Mogas Sales						X				
Mohawk Canada						X				
Mother Nature's Heating & Cooling							X			
Mountain Air Industries							X			
Nai Kun Wind Develop.			X							
Nexterra				X						
NORAM Engineering & Constructors Ltd.								X		
Norske Canada				X						X
Norske Skogindustrier				X						X
North Central Heating				X			X			
Northdoorway Homestead Outfitters	X	X	X	X						
Northern Utilities Inc.	X									
Northwest BC Timber and Pulp				X						X
Palcan Fuel Cell								X		
Patton & Cooke			X							
Pellet Flame				X						
Pinnacle Pellet				X						

Table B.1: Alternative Energy Industry Participants by Technology (cont'd)

Organization Name	Hydro	Solar	Wind	Biomass	Biogas	Bio-fuels	Geo-thermal	Fuel Cells	Wave/Tidal	Cogen/DE
BC Private Sector (cont'd)										
Polar Refrigeration Sales							X			
Pope and Talbot				X						X
PowerNova Technologies Corp.								X		
Power-Pacific Poles			X							
Powersource Energy Systems		X	X							
Powertech Labs Inc.								X		
Premium Pellet				X						
Princeton CoGeneration Corp.				X						
Prospect Developments Ltd.							X			
Queen Charlotte Power Corp.	X									
QuestAir Technology								X		
Regional Power	X									
Riverside Forest Products				X						X
Scott Paper (Kruger)				X						X
Sea Breeze Power	X		X							
Sed Technologies	X	X	X				X			
Sequoia Energy Inc.			X							
Skeena Cellulose				X						X
Solar Electric Engineering Distributors		X								
Solar Plus		X								
Soltek Powersource		X								
Sovran Energy		X								
Statpower Technologies		X								
Stikine Nation Power Corp.	X									
Stohtert Power				X						

Table B.1: Alternative Energy Industry Participants by Technology (cont'd)

Organization Name	Hydro	Solar	Wind	Biomass	Biogas	Bio-fuels	Geo-thermal	Fuel Cells	Wave/Tidal	Cogen/DE
BC Private Sector (cont'd)										
Sunology International Inc.		X								
SunWind Solar Industries		X								
Swingsys Technologies		X								
Swiss Solar Technologies		X								
Syntec Biofuels						X				
Taylor Munro Energy Systems		X								
Telus		X								
Tembec Industries				X						
Thermomax Industries		X								
Thomson & Howe Energy Systems	X									
Tideland Signal Canada		X								
The Trane Company							X			
TransCanada Power				X						X
Uniterre Resources			X							
Vancouver Expert Financial Models			X							
Vizon SciTech				X		X		X	X	
Ward & Associates	X									
Western Geopower							X			
Western Pulp	X			X						
WestTech Energy Systems		X	X							
Weyerhaeuser Canada				X						X
Windstorm Energy			X							
Xantrex Technology		X								
Zerowatt Energy	X	X								

Table B.2: Energy Efficiency Industry Participants by Sector

Organization Name	Residential		Commercial		Industrial	Transportation
	Existing	New	Existing	New		
Federal Departments and Branches						
NRCan - CANMET Energy Technology Centre (CETC)			X	X	X	
NRCan - Office of Energy Efficiency	X	X	X	X	X	X
Federal Crown Corporations and Agencies						
Canada Mortgage and Housing Corporation (CMHC)	X	X				
Canadian Standards Association (CSA)	X	X	X	X	X	X
National Research Council (NRC)	X	X	X	X	X	X
National Associations						
Building Owners and Managers Association (BOMA)			X	X		
Canadian Energy Efficiency Alliance (CEEA)	X	X	X	X	X	
Canadian Green Building Council (CaGBC)			X	X		
Canadian Institute of Energy Training (CIET)			X	X	X	
Cdn Association of Energy Service Companies (CAESCO)			X	X		
National Energy Conservation Association (NECA)			X	X		
Heating Ventilation Cooling Industry Association (HVCIA)	X	X	X	X		
National NGOs						
Pembina Institute for Appropriate Development (PIAD)	X	X	X	X	X	
BC Ministries						
Ministry of Energy and Mines (MEM)	X	X	X	X	X	
Ministry of Transportation (MOT)						X

Table B.2: Energy Efficiency Industry Participants by Sector (cont'd)

Organization Name	Residential		Commercial		Industrial	Transportation
	Existing	New	Existing	New		
BC Associations/NGOs						
Community Energy Association	X	X	X	X		
Architectural Institute of BC	X	X	X	X		
BC Building Envelope Council	X	X	X	X		
BC Construction Association	X	X	X	X		
BC Electrical Association	X	X	X	X	X	
Better Environmentally Sound Transportation (BEST)						X
Building Designers Institute of BC		X		X		
Canadian Institute of Energy - BC (CIE)	X	X	X	X	X	X
Clean Air Coalition of BC	X	X	X	X		X
Smart Growth BC	X	X	X	X		X
BC Academic Institutions						
SFU - Energy and Materials Research Group (EMRG)	X	X	X	X	X	X
UBC - School of Architecture	X	X	X	X		
BC Crown Corporations						
BC Buildings Corporation (BCBC)			X	X		
BC Housing	X	X				
BC Hydro	X	X	X	X	X	
BC Municipalities and Communities						
Atlin (plan)	X	X	X	X		
Bowen Island (plan)	X	X	X	X		X
Capital Regional District (CRD)			X			X
Comox Valley	X	X	X	X		
Greater Vancouver Regional District (GVRD)	X	X	X	X	X	X

Table B.2: Energy Efficiency Industry Participants by Sector (cont'd)

Organization Name	Residential		Commercial		Industrial	Transportation
	Existing	New	Existing	New		
Hartley Bay (plan)	X	X	X	X		
Hupacasath First Nation (plan)	X	X	X	X		X
Kamloops	X	X	X	X		
Kelowna	X	X	X	X		
Kwadacha (plan)	X	X	X	X		
Nemiah Valley (plan)		X		X		
Oweekeno (plan)	X	X	X	X		
Quesnel (plan)	X	X	X	X	X	X
Tsay Keh Dene (plan)	X	X	X	X		
Vancouver	X	X	X	X	X	X
Whistler	X	X	X	X	X	X

Table B.2: Energy Efficiency Industry Participants by Sector (cont'd)

Organization Name	Residential		Commercial		Industrial	Transportation
	Existing	New	Existing	New		
BC Private Sector						
Aquila Networks	X	X	X	X	X	
Ameresco Canada	X	X	X	X	X	
Amerispec	X	X				
Building Insight Technologies	X					
Busby & Associates Architects Ltd			X	X		
Canadian Institute of Energy Training (CIET)			X	X	X	
David Nairne and Associates				X	X	
Delta Controls			X	X		
Dynamics Energy Corporation						X
Eco-Design Architecture & Building Ecology Ltd.				X		
Ekistics Town Planning Inc.		X				
Elec-Tech Sales Ltd.			X	X	X	
Eneready Products Ltd.	X	X	X	X		
EnerSys Analytical Inc.			X	X		
Four Seasons Insulation Ltd.	X	X	X	X		
Green Technologies Inc.				X		
Greenbuild Systems Inc.	X	X	X	X		
Hendersons	X	X	X	X		
Honeywell Limited	X	X	X	X	X	
Innovative HVAC Ltd.	X	X	X	X		
Inproheat Industries					X	
Inwest Building Systems		X				

Table B.2: Energy Efficiency Industry Participants by Sector (cont'd)

Organization Name	Residential		Commercial		Industrial	Transportation
	Existing	New	Existing	New		
BC Private Sector (cont'd)						
Johnson Controls Ltd.			X	X	X	X
Kaladar Enersave Management Inc.			X	X		
Kawneer			X	X		
Keen Engineering Co Ltd.			X	X	X	
Ledalite Architectural Products			X	X		X
Levelton Engineering Ltd.			X	X	X	
MCW Custom Energy Solutions			X	X		
Merrick Architecture			X	X		
Mnemosyne Architecture		X		X		
Monoglass Inc.			X	X		
Omega Agencies	X	X	X	X		
Philips Lighting	X	X	X	X		
Prism Engineering			X	X		
Richard Kadulski Architect	X	X				
Save-On Energy	X	X	X	X	X	X
Specified Lighting Systems			X	X		
Stantec Consulting Ltd - Buildings Group			X	X	X	X
SunDog Energy Management			X	X		
Tekmar Control Systems Ltd.			X	X	X	
The Sheltair Group - Resource Consultants			X	X		
The Trane Company	X	X	X	X	X	
VEL Engineering			X	X	X	

Table B.3: Alternative Energy Industry Participants by Activity

Organization Name	Provide Info.	Standards	Lobbying	Coordn	Prof. Servs	Policy Devel.	Prog Deliv.	R&D	Manf.	Energy			
										Supply	Constrn	Ops	Fin. Servs
<i>Federal Departments and Branches</i>													
NRCan - CANMET							X	X					
NRCan – CEDRL							X	X					
NRCan – REED	X	X				X	X						
NRCan – OEE	X					X	X	X					
Industry Canada	X					X	X						
<i>Federal Crown Corporations and Agencies</i>													
NRC Innovation Centre (Vancouver)	X		X	X				X					
Western Economic Diversification				X			X						
<i>National Associations</i>													
Canadian Association for Renewable Energy (CARE)			X	X									
Canadian Bioenergy Association (CANBIO)			X	X									
Canadian District Energy Association (CDEA)			X	X									
Canadian Renewable Energy Network (CANREN)	X												
Canadian Renewable Fuels Association (CRFA)	X		X	X									
Canadian Solar Industries Association (CANSIA)			X	X									
Canadian Wind Energy Association (CANWEA)	X		X	X									
Earth Energy Society of Canada (EESC)			X	X									
Centre for Energy	X												
Energy Council of Canada	X		X		X								

Table B.3: Alternative Energy Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof. Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Energy Supply	Constrn	Ops	Fin. Serv
National Associations (cont'd)													
Fuel Cells Canada (FCC)	X		X	X									
Solar Energy Society of Canada Inc. (SESCI)	X		X	X									
National NGOs													
Pembina Institute for Appropriate Development (PIAD)	X		X	X	X								
David Suzuki Foundation	X		X	X	X								
BC Ministries													
MEM - Alternative Energy Policy Branch	X	X				X	X						
Ministry of Health												X	
Ministry of Small Business and Economic Development	X					X	X						
BC Associations/NGOs													
BC Wind Energy Association	X		X	X									
CIE (BC)	X		X	X									
Independent Power Producers of BC (IPPBC)				X									
Friends of Renewable Energy BC	X		X										
WISE Energy Co-op	X		X							X			
BC Academic Institutions													
BC Institute of Technology (BCIT)							X	X					
Simon Fraser University (SFU)					X			X					
UVic - Institute for Integrated Energy Systems (IESVic)					X	X		X					
UBC								X					
Okanagan University College								X					

BC Crown Corporations													
BC Hydro	X	X				X	X	X			X	X	X
BCBC												X	
Land and Water BC (LWBC)	X	X										X	

Table B.3: Alternative Energy Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof. Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Energy			
										Supply	Constrn	Ops	Fin.Servs.
BC Municipalities and Communities													
GVRD	X	X			X	X	X					X	X
City of Vancouver	X	X			X	X	X						
District of North Vancouver	X	X			X	X	X						
BC Private Sector													
Abitibi Consolidated											X	X	
Advanced Technology Centre										X	X		
Algonquin Power											X	X	
Altek Power Corp.											X	X	
Analytic Systems Ware								X	X	X			
Angstrom Power								X	X	X			
Aquila Networks Canada (Fortis)	X						X				X	X	
Asian Phoenix Resources										X			
ASL AQFlow					X				X	X			
Astravan Distributors Ltd.										X			
Aztec Solar Solutions										X			
Azure Dynamics								X	X	X			
Ballard Power Systems Inc.								X	X	X			
Blue Energy Canada					X			X	X				
Boliden Westmin											X	X	
Canadian Forest Products											X	X	
Canadian Geothermal Systems											X	X	
Canadian Hydro Developers											X	X	
Cariboo Pulp & Paper											X	X	
Carmanah Technologies									X	X			
Cascade International										X			
Celgar Pulp											X	X	

Table B.3: Alternative Energy Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof.Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Energy Supply	Constrn	Ops	Fin.Servs.
BC Private Sector (cont'd)													
Cellex Power Products								X	X	X			
Central Coast Power Corp											X	X	
Chrysalix Energy Ltd.					X								X
Crossman Machinery									X				
Duke Energy											X	X	
Dundee Securities Corp.													X
Dynamotive Technologies								X	X	X			
Earth First Energy											X	X	
Ecco Heating										X			
Enerdata Systems										X			
EnerGreen Power Inc.									X				
Energy Alternatives					X						X	X	
EnergyWise Technologies					X						X	X	
Enviro									X	X			
English Bay Energy								X			X	X	
Essential Innovations Technology								X					
Evans Forest Products											X	X	
Firebird Semiconductors									X				
Formula Controls					X		X	X		X	X	X	
General Hydrogen Corp.								X					X
Geologic Thermal Solutions									X				
Geothermal Heating Specialties										X			
Gold River Power Corp.											X	X	
GPH					X						X	X	
Greenlight Power Technologies									X	X			
Greenwind Power											X	X	

Table B.3: Alternative Energy Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof. Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Energy Supply	Constrn	Ops.	Fin.Servs.
BC Private Sector (cont'd)													
Groundsolar Geotechnics										X			
Heliocentris								X	X				
Howe Sound Pulp & Paper											X	X	
Industrial Electric Control										X			
Innovative HVAC										X			
International Cool Energies					X						X	X	
Kawneer										X			
Kootenay Geothermal Systems										X			
Landmark Glass Systems										X			
Lignol Innovations								X	X				
Lockhart Industries									X	X			
Louisiana Pacific											X	X	
Magpower Systems Inc.								X	X	X			
Membrane Reactor Technologies Inc.									X				
Methanex									X				
Mitsubishi Canada									X	X			
Mogas Sales								X	X	X			
Mohawk Canada										X			
Mother Nature's Heating & Cooling										X			
Mountain Air Industries										X			
Nai Kun Wind Develop.											X	X	
NORAM Engineering & Constructors Ltd.								X	X	X			
Norske Canada											X	X	

Table B.3: Alternative Energy Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof.Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Energy Supply	Constrn	Ops.	Fin.Servs.
BC Private Sector (cont'd)													
Norske Skogindustrier											X	X	
North Central Heating					X					X			
Northdoorway Homestead													
Outfitters					X						X	X	
Northern Utilities Inc.											X	X	
Northwest BC Timber and Pulp											X	X	
Palcan Fuel Cell									X	X			
Patton & Cooke									X				
Pellet Flame									X	X			
Pinnacle Pellet									X				
Polar Refrigeration Sales										X			
Pope and Talbot											X	X	
PowerNova Technologies Corp.									X				
Power-Pacific Poles									X				
Powersource Energy Systems										X			
Powertech Labs Inc.								X					
Premium Pellet									X				
Princeton CoGeneration Corp.									X				
Prospect Developments Ltd.											X	X	X
Quail Engineering					X								
Queen Charlotte Power Corp.											X	X	
QuestAir Technology								X	X	X			
Regional Power											X	X	
Riverside Forest Products											X	X	
SAR Engineering					X								
Scott Paper (Kruger)											X	X	
Sea Breeze Power											X	X	

Table B.3: Alternative Energy Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof. Servs.	Policy Devel	Prog. Deliv.	R&D	Manf.	Energy Supply	Constrn	Ops.	Fin.Servs.
BC Private Sector (cont'd)													
Sed Technologies											X	X	
Sequoia Energy										X	X	X	
Skeena Cellulose											X	X	
Solar Electric Engineering Distributors										X			
Solar Plus										X			
Soltek Powersource					X				X	X			
Sovran Energy										X			
Statpower Technologies										X			
Stikine Nation Power Corp											X	X	
Stohtert Engineering										X			
Sunology International Inc.									X		X	X	
SunWind Solar Industries										X			
Swingsys Technologies										X			
Swiss Solar Technologies					X					X	X		
Syntec Biofuels								X	X	X	X		
Taylor Munro Energy Systems					X					X			
TEC Trak Energy Corp.					X					X	X		
Telus											X	X	
Tembec Industries											X	X	
Thermomax Industries										X			
Thomson & Howe Energy Systems									X				
Tideland Signal Canada									X	X			
The Trane Company										X			
TransCanada Power											X	X	
Uniterre Resources											X	X	
Vancouver Expert Financial Models													X
Vizon SciTech	X			X	X			X					

Ward & Associates			X							X	X	X	X
Western Biofuels													
Western Geopower											X	X	

Table B.3: Alternative Energy Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof. Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Enregy Supply	Constrn	Ops	Fin.Serv.
<i>BC Private Sector (cont'd)</i>													
Western Pulp											X	X	
WestTech Energy Systems										X			
Weyerhaeuser Canada											X	X	
Windstorm Energy													X
Xantrex Technology								X	X				
Zerowatt Energy					X					X			

Table B.4: Energy Efficiency Industry Participants by Activity

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof.Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Energy Supply	Constrn	Ops.	Fin.Servs.
<i>Federal Departments and Branches</i>													
NRCan - CANMET	X	X				X	X	X					
NRCan - Office of Energy Efficiency	X	X				X	X						X
<i>Federal Crown Corporations and Agencies</i>													
Canada Mortgage and Housing Corporation (CMHC)	X					X	X						
Canadian Standards Association (CSA)	X	X				X							
National Research Council (NRC)	X	X						X					
<i>National Associations</i>													
Building Owners and Managers Association (BOMA)	X		X	X									
Canadian Energy Efficiency Alliance (CEEA)	X		X	X									
Canadian Green Building Council (CaGBC)	X	X		X			X						
Canadian Institute of Energy Training (CIET)	X		X	X			X						
Cdn Association of Energy Service Companies (CAESCO)	X		X	X			X						
Centre for Energy	X												
Energy Council of Canada	X			X		X							
National Energy Conservation Association (NECA)	X		X	X			X						
Heating Venting and Cooling Industry Association (HVCI)	X		X	X									
<i>National NGOs</i>													
Pembina Institute for Appropriate Development (PIAD)	X		X	X	X								

Table B.4: Energy Efficiency Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof. Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Energy Supply	Constrn	Ops.	Fin.Servs.
BC Ministries													
Ministry of Energy and Mines (MEM)	X	X				X	X						
Ministry of Transportation (MOT)	X	X				X	X						
BC Associations/NGOs													
Community Energy Association	X		X	X								X	
Architectural Institute of BC				X			X						
BC Building Envelope Council				X			X						
BC Construction Association				X			X						
BC Electrical Association				X			X						
Better Environmentally Sound Transportation (BEST)	X		X	X									
Building Designers Institute of BC	X		X	X			X						
Canadian Institute of Energy - BC (CIE)	X			X									
Clean Air Foundation	X		X	X									
Smart Growth BC	X		X	X		X	X						
BC Academic Institutions													
SFU - CIEEDAC, MRM	X				X		X	X					
UBC - School of Architecture	X				X		X	X					
BC Crown Corporations													
BC Buildings Corporation (BCBC)						X							
BC Housing						X	X						
BC Hydro	X	X				X	X	X			X	X	

Table B.4: Energy Efficiency Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof.Servs.	Policy Deliv.	Prog. Deliv.	R&D	Manf.	Energy Supply	Constrn	Ops.	Fin.Servs.
BC Municipalities and Communities													
Atlin (plan)	X			X								X	
Bowen Island (plan)	X											X	
Capital Regional District (CRD)				X								X	X
Comox Valley	X			X								X	
Greater Vancouver Regional District (GVRD)												X	X
Hartley Bay (plan)	X			X								X	
Hupacasath First Nation (plan)	X			X								X	
Kamloops	X			X								X	X
Kwadacha (plan)	X			X								X	
Nemiah Valley (plan)	X			X		X						X	
Oweekeno (plan)	X			X								X	X
Quesnel (plan)	X			X								X	X
Tsay Keh Dene (plan)	X			X								X	X
Vancouver	X			X	X	X	X					X	X
Whistler	X			X		X						X	X
BC Private Sector													
Aquila Networks Canada							X					X	
Ameresco Canada					X						X	X	X
Amerispec					X		X						
BC Hydro Powersmart	X			X		X	X			X		X	X
Building Insight Technologies				X	X		X						
Busby & Associates Architects Ltd.					X								
Canadian Institute of Energy Training (CIET)							X						
David Nairne and Associates					X		X						

Table B.4: Energy Efficiency Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof.Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Energy Supply	Constrn	Ops.	Fin.Servs.
Delta Controls								X	X	X			
Dynamics Energy Corporation								X	X				
Eco-Design Architecture & Building Ecology Ltd.					X								
Ekistics Town Planning Inc.					X								
Elec-Tech Sales Ltd.										X			
Eneready Products Ltd.									X	X			
EnerSys Analytical Inc.					X								
EnergyWise Technologies					X				X	X			
Four Seasons Insulation Ltd.										X			
Green Technologies Inc.					X								
Greenbuild Systems Inc.					X						X		
Hemmera Consulting	X				X								
Hendersons										X			

Table B.4: Energy Efficiency Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof.Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Energy Supply	Constrn	Ops.	Fin.Serv.
BC Private Sector (cont'd)													
Homeworks Inc.	X					X							X
Honeywell Limited								X	X	X			
Innovative HVAC Ltd.					X					X			
Inproheat Industries										X			
Inwest Building Systems					X					X			
Johnson Controls Ltd.								X	X	X			
Kaladar Enersave Management Inc.					X								
Kawneer										X			

Table B.4: Energy Efficiency Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof.Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Energy Supply	Constn	Ops.	Fin.Serv.
Keen Engineering Co Ltd.					X								
Ledalite Architectural Products									X	X			
Levelton Engineering Ltd.					X								
M.A. Turbo/Engine Design								X	X				
MCW Custom Energy Solutions					X						X	X	X
Merrick Architecture					X								
Mnemosyne Architecture					X								
Monoglass Inc.									X	X			
NASCOR									X	X			
Omega Agencies										X			
Omicron Consulting	X				X								
Philips Lighting								X	X	X			
Prism Engineering					X							X	
Quail Engineering					X								
RCI Systems	X				X					X	X		
Richard Kadulski Architect					X								
SAR Engineering					X								
Save-On Energy					X		X	X	X	X	X	X	
Specified Lighting Systems										X			
Stantec Consulting Ltd - Buildings Group					X								
SunDog Energy Management										X			
Tekmar Control Systems Ltd.								X	X	X			

Table B.4: Energy Efficiency Industry Participants by Activity (cont'd)

Organization Name	Provide Info	Standards	Lobbying	Coordn	Prof. Servs.	Policy Devel.	Prog. Deliv.	R&D	Manf.	Energy Supply	Constrn	Ops.	Fin.Servs.
<i>BC Private Sector (cont'd)</i>													
Terasen Gas	X			X	X		X						X
The Sheltair Group - Resource Consultants					X								
The Trane Company									X	X			
Urban Ecology Design Collaborative	X				X								
VEL Engineering					X								

PROGRAMS AND SERVICES

This appendix documents a number of federal, provincial and local programs in support of alternative energy and energy efficiency that apply within British Columbia. Programs are then profiled in terms of alternative energy technology coverage (Table C.1), energy efficiency sector coverage (Table C.2), and type of program or services offered (Tables C.3 and C.4 for alternative energy and energy efficiency, respectively).

Programs involve one or more of the following aspects:

- *Information* – information, education, technical assistance, tools and coordination;
- *Investment* – investment in applied technology, demonstration and leading by example;
- *Standards* – policies, standards, guidelines, regulations, codes and labelling;
- *R&D* – research and development, training, analysis and study;
- *Financing* – financial mechanisms such as repayable loans and revolving funds;
- *Rebates* – financial mechanisms such as rebates, grants and matching funds;
- *Fiscal* – fiscal measures such as tax exemptions and special tax measures,

C.1 National Programs

Advanced Combustion Technologies

The Advanced Combustion Technologies (ACT) Program is Canada's centre of excellence for the development of efficient stationary combustion processes and pollution abatement technologies to support industrial development both nationally and internationally.

See www.nrcan.gc.ca/es/etb/cetc for more information.

Alternative Transportation Fuels

The purpose of this program is to encourage the production and use of alternative transportation (ATF) fuels and alternative fuel vehicles. The initiative comprises economic and market studies, emissions and safety assessments, information and technology transfer, and assistance to industry to promote and demonstrate cost-effective applications. A parallel program supports research and the development and improvement of ATF technologies.

See Natural Resources Canada's (NRCan's) Office of Energy Efficiency (OEE) website at www.oee.nrcan.gc.ca.

C-2000

The C-2000 Program for Advanced Commercial Buildings is a small demonstration program for high-performance buildings, developed and sponsored by the NRCan's CANMET Energy Technology Centre (CETC). The emphasis of the program is on energy performance and water conservation, but criteria have also been developed for maintenance of site ecology and improved levels of indoor environmental quality.

See the NRCan Buildings Group website at www.buildingsgroup.nrcan.gc.ca.

Canadian Environmental Technology Advancement Centres (CETACs)

While not a funding program, CETACs help small- and medium-sized enterprises commercialize environmental technologies by providing a wide range of services, such as assistance in accessing investment capital, general business development counselling, technical and legal services, market analysis, and strategic advisory and mentoring services. They may also help with the development of business plans and locating of non-government funding sources. CETACs are private sector, not-for-profit corporations that operate at arm's length from the government.

More information on CETAC-West is available at <http://www.cetac-west.ca>.

Canadian Transportation Fuel Cell Alliance Program

This is a \$23-million federal initiative that will demonstrate fuelling options for fuel cell vehicles in Canada. The goal is to demonstrate five different combinations of fuels and fuelling systems for light, medium and heavy-duty vehicles by 2005. The initiative will also develop standards and training and testing procedures for fuel cell and hydrogen technologies.

Refer to www.nrcan.gc.ca/es/etb/ctfca

Municipal Climate Protection Campaigns

Cities for Climate Protection (CCP)

CCP is a campaign of the International Council for Local Environmental Initiatives (ICLEI). It is a performance-oriented campaign that offers a framework for local governments to develop a strategic agenda to reduce global warming and air pollution emissions, with the benefit of improving community livability. ICLEI strives to provide cities participating in the CCP with substantial assistance in achieving their emissions reduction goals. Technical tools and information, training workshops, and overall assistance have been designed to link the global issue of climate change with air quality and other local issues such as energy costs, traffic congestion, waste management and community livability.

For more information see www.iclei.org.

Partners for Climate Protection (PCP)

PCP helps municipal governments reach goals of reduced greenhouse gas (GHG) emissions and concurrent financial savings, with step-by-step guidance from a full range

of complementary programs and services available through the Federation of Canadian Municipalities' (FCM's) Centre for Sustainable Community Development.

See www.fcm.ca.

Climate Change Action Fund – Technology Early Action Measures (TEAM)

This program leverages other federal funding programs to promote the demonstration and deployment of technology projects that reduce GHG emissions. Many of the funded projects involve the use of renewable and alternative energy sources. For more information, contact Ms. Wendy Avis of Environment Canada's office in North Vancouver at 604-666-3244. Additional information is available at:

http://climatechange.gc.ca/english/actions/action_fund/techno.shtml

Commercial Building Incentive Program (CBIP)

Federal funding has been allocated to provide financial incentives through CBIP. This program encourages building owners to incorporate energy-efficient technologies and practices in designs for new commercial and institutional buildings.

See <http://www.oeenrcan.gc.ca/newbuildings/cbip>.

Community Energy Systems

This program identifies and develops opportunities for the use of district heating and cooling, the combined production of heat and power, industrial waste-heat recovery and thermal storage. It works with Canadian industry, energy utilities, researchers, engineers and other levels of government to develop and transfer technology, and to stimulate interest in community-based energy systems and community energy planning as a whole. It also evaluates opportunities to develop and install community energy systems and provides financial and technical support for implementation.

See the CANMET Energy Technology Centre website at www.nrcan.gc.ca/es/etb/cetc.

Energy Efficiency Regulations

This program, created by regulations under the *Energy Efficiency Act*, aims to eliminate inefficient energy-using equipment from the Canadian marketplace, by prescribing minimum energy efficiency performance levels.

See <http://www.oeenrcan.gc.ca/regulations> for more information.

EnerGuide for Equipment and HVAC

The EnerGuide for Equipment and HVAC Program is a combination rating, labelling and information program that promotes the production, purchase and use of more energy-efficient major electrical household appliances, as well as heating, ventilation and air-conditioning equipment.

See <http://www.oeenrcan.gc.ca/equipment> for more information.

EnerGuide for Houses

The EnerGuide for Houses Program offers Canadians individualized, professional advice on how to improve the energy performance of their houses. Expanding on the well-known EnerGuide Labelling Program for home appliances, EnerGuide for Houses provides homeowners with the facts they need to make informed decisions about energy efficiency, whether they are making improvements to their home or buying a new one.

See <http://www.oeenrcan.gc.ca/houses-maisons>.

EnerGuide for Industry

EnerGuide for Industry is an energy rating program that uses interactive tools to help energy-wise industries make the right choice when purchasing "off the shelf" equipment such as motors, dry-type transformers, HVAC and lighting products.

See <http://www.oeenrcan.gc.ca/egi> for more information.

Energy Innovators Initiative (EII)

EII helps commercial businesses and public institutions explore energy efficiency options and strategies. Member organizations can save money and help the environment through the reduction of GHG emissions related to energy consumption. The initiative offers access to tools, services and financial incentives delivered through Energy Innovators Officers, who work with members as they pursue energy management planning and retrofits. Municipal Energy Innovators can access programs, grants and loans through the Federation of Canadian Municipalities.

See <http://www.oeenrcan.gc.ca/eii>.

ENERGY STAR

The international **ENERGY STAR** symbol is a simple way for consumers to identify products that are among the most energy-efficient on the market. Only manufacturers and retailers whose products meet the criteria can label their products with this symbol. NRCan's Office of Energy Efficiency promotes the international symbol across Canada. Manufacturers and retailers of energy-efficient products; utilities, energy retailers, all levels of government and industry groups recognize the benefits of **ENERGY STAR** to consumers and have joined in promoting the symbol.

See <http://www.oeenrcan.gc.ca/energystar> for more information.

Environmental Choice (ECP)

This Environment Canada ecolabelling program provides a market incentive to manufacturers and suppliers of environmentally preferable products and services, and thereby helps consumers identify products and services that are less harmful to the environment.

See www.environmentalchoice.com.

Environmental Technology Verification (ETV) Program

ETV, although not a funding program, provides validation and independent verification of environmental technology performance claims. If a claim is verified successfully, the proponent of the technology is issued three documents: a Verification Certificate, a Technology Fact Sheet and a Final Verification Report. The proponent is then also entitled to use the ETV logo on specified documentation to market his or her technology in Canada and abroad. Accordingly, this initiative promotes the credibility of Canada's environment industry internationally, while building sustainable industry capacity at home. The voluntary program provides potential consumers with an assurance that a proponent's performance claims are valid, credible and supported by suitable demonstration test information. It is delivered by ETV Canada Incorporated, a private company that operates under a license agreement with Environment Canada.

See <http://www.etvcanada.com>.

Excise Tax Exemption for Ethanol and Methanol

The purpose of this program is to encourage the development and marketing of ethanol and methanol made from biomass. It provides a 100 percent exemption from the 10-cent-per-litre excise tax on gasoline for ethanol and methanol made from biomass that is blended with gasoline.

See the Canada Customs and Revenue Agency website at <http://www.cra.gc.ca>.

Green Buildings Challenge (GBC)

GBC is an on-going international process of more than twenty countries focused on the development and testing of a new system for assessing the environmental performance of buildings. NRCan launched GBC in 1996. It is now managed by the International Initiative for a Sustainable Built Environment (IISBE), for which the Building Group's Nils Larsson is Executive Director. Establishing a global standard for building performance assessment and labelling will provide a uniform definition of performance parameters that will facilitate the exchange of meaningful information about building performance between countries.

See the Buildings group website at www.buildingsgroup.nrcan.gc.ca.

Green Municipal Funds (GMF)

GMF focus on municipal infrastructure projects with a goal of improved environmental practices within Canadian municipalities. The Green Municipal Enabling Fund (GMEF) provides grants towards feasibility studies on projects designed to improve the quality of air, water and soil, as well as reducing GHG emissions and using renewable energy sources. The Green Municipal Investment Fund (GMIF) provides financing for environmental infrastructure projects that improve air, water or soil quality, protect the climate or promote the use of renewable resources in municipalities across Canada.

These funds are administered by the Federation of Canadian Municipalities at arms length from the federal government. They are available to Canadian municipalities or partnering companies with a commitment from the municipality.

See <http://www.fcm.ca>.

Green Power Initiative

This program expands the use of renewable energy at Government of Canada facilities and properties by increasing electricity purchases from emerging low- and non-emitting energy sources to 20 percent of annual consumption. More information is available from the Renewable and Electrical Energy Division of the Energy Resource Branch of Natural Resources Canada at:

<http://www2.nrcan.gc.ca/es/erb>.

Healthy Housing™

This program aims to foster change in how new homes are built, how existing homes are renovated and operated, and how communities are planned. It is based on five principles: occupant health, energy efficiency, resource efficiency, environmental responsibility and affordability.

For more information, see the Canada Mortgage and Housing Corporation website at <http://www.cmhc-schl.gc.ca>.

Industrial Energy Innovators (IEI)

IEI is a voluntary, company-based initiative that turns Canadian Industry Program for Energy Conservation (CIPEC) sector commitments into actions at the company level. Industrial Energy Innovators gain access to a variety of products and services from NRCAN that are designed to help them become more energy-efficient. Participants file annual action plans and progress reports that outline their energy efficiency initiatives and achievements.

See <http://www.oee.nrcan.gc.ca/cipec/ieep/iei>.

Industrial R&D Programs

Industry Energy Research and Development (IERD)

This program supports the development and use of new, energy-efficient processes, products, systems and equipment proposed by industry. The cost of technology development is shared with industry and other project participants. Clients of this program range from innovative small and medium-sized R&D companies striving to carve out a market niche to Canadian divisions of multinational corporations.

Industrial Process Engineering Program

The delivery mechanism for this program is collaborative in-house R& D involving manufacturers, service providers and end-users. Work is directed at developing and disseminating knowledge in industrial drying – an energy-intensive process necessary for

many industries – and the catalytic flow reversal reactor technology (CH4MIN) for coal mines. The CH4MIN technology reduces GHG emissions from underground coal mines and produces useful energy by converting dilute methane present in coal mine ventilation air. The technology can have other applications in sectors such as aluminum and natural gas production and transmission.

Industry Process Integration R& D Program

The delivery mechanism for this program is collaborative in-house R& D involving universities, service providers and end-users. Work is directed at developing and disseminating knowledge and technologies that allow the optimization of energy use in industrial processes, as well as the minimization of environmental impacts of industrial processes through the use of pinch and energy methodologies and other sophisticated energy and process modelling tools.

See the CANMET/CEDRL website at <http://www.cedrl/mets.nrcan.gc.ca>.

Industrial Programs Division

NRCan's Office of Energy Efficiency works with Canadian industry to identify energy efficiency potential, establish energy efficiency targets, implement and manage programs, report on progress and celebrate accomplishments. OEE engages all levels of industry and government in working toward Canada's economic and environmental goals.

See <http://www.oee.nrcan.gc.ca/cipec/ieep>.

Industrial Research Assistance Program (IRAP)

The National Research Council's (NRC's) IRAP is designed to provide knowledge-based assistance services to small- and medium-sized enterprises, and to provide access to relevant resources to support client innovation activities.

See <http://www.nrc.ca/irap>.

Intelligent Building Research and Development Program – CANMET

The objective of the program is to develop and disseminate knowledge and tools that result in improved energy efficiency and air quality in buildings. Projects are aimed at developing tools to improve the operation of HVAC. Program delivery mechanisms consist of R&D projects in cooperation with participants in the industry (manufacturers, building managers and operators, consultants), government agencies and organizations (Public Works and Government Services Canada, CMHC).

See the CANMET/CEDRL website at <http://www.cedrl/mets.nrcan.gc.ca>.

LEED

LEED is a building assessment tools used to evaluate the environmental performance of buildings. LEEDTM, which stands for Leadership in Energy and Environmental Design, is one example of an increasingly popular building assessment tool developed by the US

Green Building Council (USGBC). LEED Canada is being led by the Canadian Green Building Council.

For more information, see www.cagbc.ca and www.usgbc.org.

Market Incentive Program for Distributors of Emerging Renewable Energy Sources

The objective of this program is to encourage electricity distributors to experiment with measures to stimulate sales of electricity from emerging renewable energy sources having low environmental impact to residential and small business customers. The program provides a limited financial incentive to electricity distributors, electric utilities, electricity retailers and energy marketers interested in developing market-based programs, such as marketing and consumer awareness campaigns to encourage the purchase of electricity from emerging renewable energy sources, and to experiment with the sale of electricity from emerging renewable electricity sources in their residential and small business markets. For more information, see NRCan's Renewable and Electrical Energy Division website at:

<http://www.nrcan.gc.ca/es/erb/reed>.

Model National Energy Code for Buildings (MNECB)

MNECB is a model energy efficiency code published in September 1997 by the National Research Council Canada (NRCC). The code sets minimum energy efficiency standards for commercial building construction in Canada. CBIP requirements are based on the MNECB. A proposed design must meet the mandatory requirements in the MNECB and be at least 25% more energy-efficient when compared to a reference design that just meets the MNECB requirements. The MNECB is designed for adoption by provincial, territorial and municipal governments. Until that time, the code can be used as a guide for energy-efficient design.

For more information, see www.oe.nrcan.gc.ca/newbuildings/mnecb.

Photovoltaic and Hybrid Systems Program

The goal of this program is to contribute to the development and deployment of photovoltaics (PV) in Canada. Activities include performing R&D, supporting the development of standards and codes, addressing barriers to the marketplace acceptance of PV technology, and providing expert advice to industry, policy makers and community stakeholders.

See the CANMET/CEDRL website at: <http://www.cedrl/mets.nrcan.gc.ca>.

R-2000 Initiative

The R-2000 Initiative encourages the building of energy-efficient houses that are environmentally friendly and healthy to live in.

See <http://www.oe.nrcan.gc.ca/r-2000> for more information.

Renewable Energy Deployment Initiative (REDI)

This program stimulates market demand for renewable energy for space and water heating and cooling by providing a subsidy to eligible businesses for the purchase and installation of qualifying renewable energy systems.

See <http://www.canren.gc.ca/programs>.

Renewable Energy and Hybrid Systems for Remote Communities Program

This program supports the development and deployment of renewable energy technologies, such as photovoltaics, at remote communities that rely on fuel oil for electricity generation and space and water heating.

See <http://www.nrcan.gc.ca/es/etb/programs.html#REHS>.

Renewable Energy for Remote Communities Program (RERC)

This program accelerates the deployment of renewable energy technologies at remote communities that are not connected to electricity grids or natural gas pipelines. Community decision-makers are provided with the tools, information and knowledge needed to assess the feasibility of renewable energy systems, to select the most cost-effective technologies, and to implement these projects.

See <http://www.nrcan.gc.ca/es/etb/programs.html#RERC>.

Renewable Energy Technologies Program (RETP)

This program supports Canadian industry in developing and commercializing advanced renewable energy technologies that are cost-effective and environmentally responsible alternatives to conventional energy generation.

See <http://www.nrcan.gc.ca/es/etb/programs.html#RETP>.

Sustainable Development Technology Fund

Sustainable Development Technology Canada (SDTC) was established at an initial level of \$100 million to stimulate the development and demonstration of new sustainable development technologies, in particular those aimed at climate change and clean air. It is an arm's length, not-for-profit corporation, created as the third-party agency that will administer this new fund. Two stages are used for selecting successful proposals for funding. The funding cycle consists of a Call for Letters of Interest, followed by an invitation to selected proponents to submit a detailed proposal.

See <http://www.fsdtc.ca>.

Tax incentives for Investment in Energy Conservation and Renewable Energy

CCA Class 43.1

Class 43.1 in Schedule II of the *Income Tax Act* allows taxpayers an accelerated write-off of certain equipment that is designed to produce energy in a more efficient way or to produce energy from alternative renewable sources.

CRCE

The Canadian Renewable and Conservation Expense allows certain intangible (pre-development) expenses, related to equipment that is eligible for Class 43.1 treatment, to be fully deductible and carried forward indefinitely or renounced to shareholders who have entered into a flow-through share (FTS) agreement (enabling those shareholders to make the deductions against their income).

More information is available at www.nrcan.gc.ca/es/erb/reed.

Technology Partnership Canada (TPC)

TPC provides funding loans for technology demonstrations. Environmental technologies are a key area for the program, which has a technology investment fund that was established to contribute to the achievement of Canada's objectives of increasing economic growth, creating jobs and wealth, and supporting sustainable development.

See <http://www.strategis.ic.gc.ca/SSG/tp00245e.html>.

Transportation Energy Technologies

The purpose of this program is to increase the market penetration of ATFs by supporting the development of innovative technologies that can be marketed nationally and internationally. The program focuses on the development of competitive, energy-efficient and environmentally responsible technologies for gaseous fuels (natural gas and propane), alcohols (ethanol and methanol), biodiesel and advanced transportation systems (electric vehicles and batteries, fuel cells and hydrogen).

See the NRCan website at <http://www.nrcan.gc.ca>.

Vehicle Fuels Program

This initiative develops policy and programs to encourage the production and use of cleaner and lower carbon fuels and associated vehicle technology and infrastructure.

See <http://www.oee.nrcan.gc.ca/vehiclefuels> for more information.

Wind Power Production Incentive (WPPI)

In its December 2001 Budget, the federal government committed \$260 million over 15 years to the WPPI, which provides incentives for electricity produced by qualifying wind projects. The incentive will be available for the first ten years of production and will help to provide a long-term stable revenue source. This will result in more investment in wind

energy projects in all regions of Canada, which will help address climate change and improve air quality.

See <http://www.canren.gc.ca/programs>.

C.2 Provincial Programs

Aquila Networks Canada

PowerSense

Aquila Networks Canada (the electricity utility serving the West Kootenay and South Okanagan) offers energy efficiency services to residential, commercial and industrial customers. For residential customers, the Home Improvements program includes energy audits and low-interest financing. The New Home Construction program assists in the design and construction of an energy-efficient home. Financial incentives (grants and loans) connected to the purchase of a ground source heat pump are available. Rebates are offered to all customer classes in the purchase of approved energy efficient lighting products and systems.

For commercial and industrial customers, advice and rebates are provided related to building and process energy efficiency improvements, lighting, high efficiency motors and domestic hot water saving upgrades. Free energy audits are available, as well as funding towards comprehensive energy management studies.

Green Power

Aquila Networks Canada also has a green power incentive program, which is run through its individual distribution (retail) utilities.

For more information, see <http://www.aquilanetworks.ca/>

BC Building Code

The *BC Building Code* currently establishes energy efficiency standards for residential homes across the province, focusing on insulation levels in walls, floors and attics. The City of Vancouver has established energy performance standards for new commercial and institutional buildings using an industry-accepted standard: ASHRAE (American Society of Heating Refrigeration and Air Conditioning Engineers) standard 90.1.

BC Energy Efficiency Act

The *BC Energy Efficiency Act* establishes standards for “energy devices” that are manufactured in the province and use energy or control or affect the use of energy. The standards currently apply to household and office appliances (e.g., washers and fridges), heating systems (e.g., furnaces, boilers, heat pumps), cooling systems (e.g., air conditioners), lighting (e.g., ballasts, fluorescent bulbs) and some industrial equipment (e.g., motors, transformers). The federal *Energy Efficiency Act* affects devices that are imported into British Columbia.

BC Hydro

Power Smart

BC Hydro has a host of offerings within its Power Smart energy saving programs for residential and business customers. Currently, most of the offerings are focused on providing information and advice. For example, Power Smart Tips provides advice on how to save energy around the house, and Shop Power Smart identifies what models of products are Power Smart and where they may be purchased. The Fridge Buy-Back Program offers customers money for the retirement of a second fridge. Power Smart programs for business provide tools to assess and implement energy management practices and technologies.

See <http://www.bchydro.com/powersmart>.

BOMA BC “Go Green”

This program, announced by the Building Owners and Managers Association of BC (BOMA) in September 2003, will include some 170 commercial buildings. The GO GREEN designation will be awarded to buildings demonstrating compliance with five measures of good practice in the following areas: resource consumption, waste reduction and recycling, building materials, interior environment and tenant awareness.

See the BOMA website at www.boma.bc.ca.

Community Energy Planning (CEP)

CEP is a tool that examines community objectives and future development plans, with the goal of creating energy and infrastructure efficiencies and realizing sustainability goals. It looks at all the ways that energy is used by a community – transportation, buildings and infrastructure (both heating and electricity) – as well as energy supply and distribution. CEP also gives communities an opportunity to explore possible energy resources, products and services that could best meet their needs. In some cases, green energy might be one of the solutions.

For more information, see the Community Energy Association (formerly Energy Aware Committee) website at www.energyaware.bc.ca.

Green and Community Venture Capital Programs

The Province has various venture capital programs to encourage business development, including the Green Venture Capital Program administered by the Ministry of Small Business and Economic Development (MSBED). Further information on these programs is available at:

http://www.cse.gov.bc.ca/ProgramsAndServices/BusinessServices/Investment_Capital/Venture_Capital_Programs/default.htm .

Green Buildings Program

The British Columbia Buildings Corporation (BCBC)'s Green Buildings Program is designed to reduce the environmental impact of provincially funded buildings and, in the process, foster the growth of the province's environmental industry. It encourages the design of new buildings and/or the retrofitting of existing buildings to be more energy efficient.

See <http://www.greenbuildingsbc.com>.

Provincial Motor Fuels Tax Act Exemption for Alternative Fuels

Alternative vehicle fuels (e.g., natural gas or the ethanol portion of gasoline blends currently containing 85 percent or more ethanol) are exempt from taxation under British Columbia's *Motor Fuel Tax Act*. In 1999, the ethanol fuel tax exemption was extended to include lower ethanol blends once a commercial ethanol plant is operating in the province. Biodiesel is currently under consideration for a similar exemption.

Provincial Social Services Tax Exemption for Energy Conservation Equipment

Section 74(e) of the *Social Services Tax Act* provides a provincial sales tax exemption respecting the purchase of personal property used for the conservation of energy, which includes wind-powered generation equipment, solar thermal and solar photovoltaic collector panels.

See http://www.qp.gov.bc.ca/statreg/reg/S/SSTax84_58/84_58b.htm#section3.20.

The Leading Edge Endowment Fund

In April 2002, British Columbia launched a \$45 million Leading Edge Endowment Fund to establish 20 permanent BC Leadership Chairs, as part of its New Era Agenda. These chairs will be established, based on a cost-sharing partnership with the private sector, at public post-secondary institutions across the province in fields such as medical, social, environmental and technological research. Each Chair will receive an endowment of up to \$4.5 million, which will be cost-shared equally with the private sector. See the Ministry of Advanced Education (MAE) website at:

See http://www.aved.gov.bc.ca/leading_edge/welcome.htm.

Terasen Gas Homeworks

Terasen Gas (formerly BC Gas) has two offerings within its Homeworks Program. The first is a free energy inspection by a qualified contractor to identify priority areas for improvements in energy efficiency and help with project plans. The second aspect is access to low-interest financing to carry out the project.

See <http://terasen.com/gas/ForOurCustomers/Homeowner/SpecialOffers>.

C.3 Regional and Community Programs

CRD Energy Management Project

In November 2003, the Capital Regional District (CRD) announced a new energy management and water conservation project that was awarded a GMF grant to conduct retrofits of existing institutional (regional municipality) buildings.

For more information contact Andy Liu at 360-3268.

GVRD Better Buildings

The Better Buildings program was developed to encourage and facilitate an increase in eco-efficient building retrofit activity. The Better Buildings™ web site was inspired by the recognized need for a single comprehensive source of programs and information to assist building/facility owners and managers in completing energy and resource efficient retrofits. In addition, the concept of a regional web-based resource or portal is a powerful tool that is capable of serving the needs of a large and diverse audience.

See www.betterbuildings.ca and www.gvrd.bc.ca.

Table C.1: Alternative Energy Programs by Technology

Organization	Program	Hydro	Solar	Wind	Bio-energy	Geo-thermal	Fuel Cells	Cogen/DE
Federal Government								
NRCan - OEE	Alternative Transportation Fuels (ATF)				X		X	
Finance Canada	Capital Cost Allowance 43.1	X	X	X	X	X	X	X
Environment Canada	CCAF - TEAM	X	X	X	X	X	X	X
CTFCA	Canadian Transportation Fuel Cell Alliance Program.						X	
NRCan	CETACs	X	X	X	X	X	X	X
CANMET	Community Energy Systems							X
Finance Canada	CRCE tax measure	X	X	X	X	X	X	X
NRCan	Environmental Technology Verification (ETV)	X	X	X	X	X	X	X
CCRA	Excise Tax Exemption - Ethanol/Methanol				X			
NRCan - REED	Green Power Initiative	X		X				
NRC	Industrial Research Assistance (IRAP)	X	X	X	X	X	X	X
REED	Market Incentive for RE Distributors	X		X	X			
CANMET - CDRL	Photovoltaic and Hybrid Systems		X					
NRCan - ETB	RE and Hybrid Systems for Remote Communities		X	X				
NRCan	RE Deployment Initiative (REDI)		X		X	X		
NRCan - ETB	RE for Remote Communities (RERC)		X	X				

Table C.1: Alternative Energy Programs by Technology (cont'd)

Organization	Program	Hydro	Solar	Wind	Bio-energy	Geo-thermal	Fuel Cells	Cogen/ DE
Federal Government (cont'd)								
NRCan - ETB	RE Technologies Program (RETP)	X	X	X	X	X	X	X
SDTC	Sustainable Development Technology Fund	X	X	X	X	X	X	X
Industry Canada	Technology Partnership Canada	X	X	X	X	X	X	X
NRCan	Transportation Energy Technologies				X		X	
NRCan - OEE	Vehicle Fuels Program				X			
Finance Canada	Wind Power Production Incentive (WPPI)			X				
Federal Crown								
National Associations								
FCM	Green Municipal Funds	X	X	X	X	X	X	X
National NGOs								
BC Ministries								
MSBED	Green Venture Capital Fund	X	X	X	X	X	X	X
MAE	Leading Edge Endowment	X	X	X	X	X	X	X

Table C.1: Alternative Energy Programs by Technology (cont'd)

Organization	Program	Hydro	Solar	Wind	Bio-energy	Geo-thermal	Fuel Cells	Cogen/DE
BC Ministries (cont'd)								
MF	Motor Fuel Tax Exemption for ATF				X			
MF	Social Services Tax Exemption for RE		X	X				
BC NGOs								
BC Academic								
BC Crown Agencies								
BC Hydro	Green Power	X	X	X	X	X	X	X
BC Communities								
BC Private Sector								
Aquila Networks Canada	Green Power	X		X				

Table C.2: Energy Efficiency Programs by Sector

Organization	Program	Residential		Commercial		Industrial	Transpo
		Existing	New	Existing	New		
Federal Government							
CANMET	Advanced Combustion Technology				X	X	
NRCan OEE	C-2000				X		
NRCan OEE	Commercial Building Incentive (CBIP)				X		
Env Can	Environmental Choice - Ecologo		X		X		
NRCan OEE	Energuide for Equipment and HVAC		X		X		
NRCan OEE	Energuide for Houses	X	X				
NRCan OEE	Energuide for Industry					X	
NRCan OEE	Energy Efficiency Regulations		X		X	X	
NRCan OEE	Energy Innovators Initiative			X	X		
NRCan OEE	Energy Star		X				
NRCan OEE	Green Buildings Challenge				X		
NRCan OEE	Industrial Energy Innovators					X	
NRCan OEE	Industrial Programs					X	
NRCan CEDRL	Industrial R&D					X	
NRCan CEDRL	Intelligent Buildings			X	X		
NRCan OEE	Model National Energy Code				X		
NRCan OEE	R-2000		X				
Federal Crown Agencies							
CMHC	Healthy Housing	X	X				

Table C.2: Energy Efficiency Programs by Sector (cont'd)

Organization	Program	Residential		Commercial		Industrial	Transpo
		Existing	New	Existing	New		
National Associations							
FCM/ICLEI	Climate Protection Campaigns	X	X	X	X	X	
FCM	Green Municipal Funds			X	X		
Canadian Green Building Council	LEED				X		
National NGOs							
BC Ministries							
MEM	Building Code		X				
MEM	Energy Efficiency Act		X		X	X	
	Social Services Tax Exemption	X	X	X	X		
BC NGOs							
CEA	Community Energy Planning	X	X	X	X		
BOMA	Go Green			X			
BC Academic							
BC Crown Agencies							
BC Buildings Corporation	Green Buildings BC			X	X		
BC Hydro	Power Smart	X	X	X	X	X	

Table C.2: Energy Efficiency Programs by Sector (cont'd)

Organization	Program	Residential		Commercial		Industrial	Transpo
		Existing	New	Existing	New		
BC Communities							
GVRD	Better Buildings			X			
CRD	Energy Management Project			X			
BC Private Sector							
Terasen Gas	Homeworks	X	X				
Aquila Networks	PowerSense	X	X	X	X	X	

Table C.3: Alternative Energy Programs by Type

Organization	Program	Information	Investment	Standards	R&D	Financing	Rebate	Fiscal
Federal Government								
NRCan - OEE	Alternative Transportation Fuels (ATF)	X			X			
Finance Canada	Capital Cost Allowance 43.1							
Environment Canada	CCAF - TEAM				X		X	
CTFCA	Canadian Transportation Fuel Cell Alliance		X	X	X			
NRCan	CETACs	X						
CANMET	Community Energy Systems	X			X			
Finance Canada	CRCE tax measure							X
NRCan	Environmental Technology Verif. (ETV)			X				
CCRA	Excise Tax Exemption - Ethanol/Methanol							X
NRCan - REED	Green Power Initiative		X					
NRC	Industrial Research Assistance (IRAP)				X			
REED	Market Incentive for RE Distributors						X	
CANMET - CDRL	Photovoltaic and Hybrid Systems	X		X	X			
NRCan - ETB	RE and Hybrid Systems for Remote Communities	X						
NRCan	RE Deployment Initiative (REDI)						X	
NRCan - ETB	RE for Remote Communities (RERC)	X						

Table C.3: Alternative Energy Programs by Type (cont'd)

Organization	Program	Information	Investment	Standards	R&D	Financing	Rebate	Fiscal
Federal Government (cont'd)								
NRCan - ETB SDTC	RE Technologies Program (RETP)	X					X	
Industry Canada	SD Technology Fund Technology Partnership Canada					X		
NRCan	Transportation Energy Technologies				X			
NRCan - OEE	Vehicle Fuels Program	X						
Finance Canada	Wind Power Production Incentive (WPPI)						X	
Federal Crown Agencies								
National Associations								
FCM	Green Municipal Funds					X	X	
National NGOs								
BC Ministries								
MCSE	Green Venture Capital					X		
MAE	Leading Edge Endowment						X	

Table C.3: Alternative Energy Programs by Type (cont'd)

Organization	Program	Information	Investment	Standards	R&D	Financing	Rebate	Fiscal
BC Ministries (cont'd)								
MF	Motor Fuel Tax Exemption for ATF							X
MF	Social Services Tax Exemption for RE							X
BC NGOs								
BC Academic								
BC Crown Agencies								
BC Hydro	Green Power	X	X	X	X		X	
BC Communities								
BC Private Sector								
Aquila Networks Canada	Green Power						X	

Table C.4: Energy Efficiency Programs by Type

Organization	Program	Information	Investment	Standards	R&D	Financing	Rebate	Fiscal
Federal Government								
CANMET	Advanced Combustion Technology				X	X		
NRCan OEE	C-2000				X			
NRCan OEE	Commercial Building Incentive (CBIP)				X			
Env Can	Environmental Choice - Ecologo		X		X			
NRCan OEE	Energide for Equipment and HVAC		X		X			
NRCan OEE	Energide for Houses	X	X					
NRCan OEE	Energide for Industry					X		
NRCan OEE	Energy Efficiency Regulations		X		X	X		
NRCan OEE	Energy Innovators Initiative			X	X			
NRCan OEE	Energy Star		X					
NRCan OEE	Green Buildings Challenge				X			
NRCan OEE	Industrial Energy Innovators					X		
NRCan OEE	Industrial Programs					X		
NRCan CEDRL	Industrial R&D					X		
NRCan CEDRL	Intelligent Buildings			X	X			
NRCan OEE	Model National Energy Code				X			
NRCan OEE	R-2000		X					

Table C.4: Energy Efficiency Programs by Type (cont'd)

Organization	Program	Information	Investment	Standards	R&D	Financing	Rebate	Fiscal
Federal Crown Agencies								
CMHC	Healthy Housing	X	X					
National Associations								
FCM/ICLEI	Climate Protection Campaigns	X	X	X	X	X		
FCM	Green Municipal Funds			X	X			
Canadian Green Building Council	LEED				X			
National NGOs								
BC Ministries								
MEM	Building Code		X					
MEM	Energy Efficiency Act Social Services Tax Exemption		X		X	X		
		X	X	X	X			
BC NGOs								
CEA	Community Energy Planning	X	X	X	X			
BOMA	Go Green			X				
BC Academic								

Table C.4: Energy Efficiency Programs by Type (cont'd)

Organization	Program	Information	Investment	Standards	R&D	Financing	Rebate	Fiscal
BC Crown Agencies								
BC Buildings Corporation	Green Buildings BC			X	X			
BC Hydro	Power Smart	X	X	X	X	X		
BC Communities								
GVRD	Better Buildings Energy Management Project			X				
CRD				X				
BC Private Sector								
Terasen Gas	Homeworks	X	X					
Aquila Networks Canada	PowerSense	X	X	X	X	X		