

School District	School	Community	Project Value	Scope	Project Details
-Southeast Kootenay	Laurie Middle School	Cranbrook	\$434,950	Roof improvements and Hydronic heat improvements	<p>This unit is 16 years old and at the end of its useful life. A new unit will improve air quality and efficiency.</p> <p>Improvements will improve the quality of airflow and circulation within the school as well as the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school</p> <p>Roof is worn out and in need of repair.</p>
	Mount Baker Secondary School	Cranbrook	\$368,000	2 Boilers and circ pumps upgrades	<p>Boilers are currently 19 years old and reaching the end of their useful life.</p> <p>New boilers will be more efficient and replace eight boiler modules with two.</p> <p>Improvements will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school</p>
	Pinewood Elementary	Cranbrook	\$143,800	Gas fired air handling, furnace, heat pumps	Pinewood Elementary - replace two Engineered Air rooftop air handling units that

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	School, Amy Woodland Elementary School and Steeples Elementary School				<p>serve the existing gymnasium. These units are 15 years old and are at the end of their service life.</p> <p>Amy Woodland Elementary- replace five units that are 24 years old and are beyond their service life.</p> <p>Steeples Elementary- replace two existing Keeprite rooftop gas-fired heat pumps that serve corner classrooms. These units are 23 years old and are beyond their expected service life. These will improve the comfort of students and faculty and extend the useful life of the school</p>
6 - Rocky Mountain	Golden Secondary School	Golden	\$220,900	Wood shop sawdust extractor upgrade	Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting. Improvements will include larger ducting, additional filters, explosion relief panels, blowback prevention damper, and improved which improves air quality and safety
	Golden Secondary School	Golden	\$840,000	Protection of Building	Roof reached the end of its serviceable life. The existing roof will be replaced with a new roof membrane, as well as adding insulation, improving drainage
	David Thompson Secondary School	Invermere	\$115,000	Replace Digital Direct Control Panel	Replace aging Direct Digital Control in the boiler system as the DDC has reached the end of its serviceable life. Allows for upgraded

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					programming and energy and operating savings
	David Thompson Secondary School	Invermere	\$134,300	Saw Dust collection unit	Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting
8 - Kootenay Lake	W.E. Graham Community School	Nelson	\$120,000	Boiler upgrade	Boiler system will be upgraded to bring systems to good design practices, guidelines and standards.

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					The boiler upgrade will save 27 tonnes of CO2 and \$12,400 per year and improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school
	Hume Elementary School	Nelson	\$142,000	Boiler upgrade	<p>The system is at the end of its service life and uses a disproportionate amount of energy. Improvements to the boiler systems are required to save energy and reduce CO2 production.</p> <p>The improvements will save over 36 tonnes of CO2 and \$10,800 per year.</p> <p>Improvements will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school</p>
	LV Rogers Secondary School	Nelson	\$264,000	Boiler upgrade	<p>Boiler upgrades will improve energy efficiency and save an estimated 70 tonnes of CO2 per year and ~\$15,400 in operating costs.</p> <p>Improvements will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school</p>

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10 - Arrow Lakes	Lucerne Elementary-Secondary School	New Denver	\$339,000	Heating, Ventilation, and Air Conditioning system Upgrades	<p>24 year old boiler plant approaching the end of its serviceable life.</p> <p>Re-commissioning and condensing Boiler Plant retrofit is estimated to save energy and costs. Estimated CO2 gas reduction 12 tonnes/year and ~\$5,000 in propane savings / year</p>
	Nakusp Elementary School	Nakusp	\$245,400	Solar power installation	<p>Upgrading old inefficient lighting to high efficiency LED lighting.</p> <p>This will result in energy savings.</p>
19 -Revelstoke	Arrow Heights Elementary School	Revelstoke	\$900,000	Phase one of mechanical upgrade	<p>A new heating water system will improve energy efficiency and reduce the school's carbon footprint. A high-efficiency boiler plant design is recommended, which will utilize condensing boiler technology to heat the school on mild days and boost hot water supply temperature for the coldest winter days.</p> <p>Replace electric fan coils with new self-contained air handling units located in individual classrooms or office areas.</p> <p>An upgraded digital control system is required to allow more precise temperature control within the building to optimize building energy consumption</p>

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20 - Kootenay-Columbia	Kootenay-Columbia Learning School	Trail	\$405,000	Boiler upgrade	Improvements will be made to the heating / ventilations system that will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school
22 -Vernon	W. L. Seaton Secondary School	Vernon	\$1,029,500	Roof replacement	Replace 20 year old roof. Nearly all the roof areas suffer from crazing and large blisters, with evidence of leaks. Due to the current failed membrane condition and age of the roof, an immediate complete replacement is recommended, as the roof cannot be relied upon to protect the building's structure or its contents.
	Beairsto Elementary School	Vernon	\$192,000	New transformer, cabling and switchboard	Current service is near its limit. School District will work with BC Hydro to provide a new transformer and service cabling. A new switchboard will be installed allowing monitoring of energy use, power demand and power quality in the school
	W. L. Seaton Secondary School	Vernon	\$264,000	New transformer, power pole, service cabling and switchboard	The indoor unit substation is at the end of its' useful life. School District will work with BC Hydro to provide a new transformer, power pole and service cabling. A new switchboard will be installed allowing monitoring of energy use, power demand and power quality in the school

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	Okanagan Landing Elementary School	Vernon	\$600,000	PHASE 1: Geothermal ground systems and central systems installation	<p>This will complement the Hydronic Heating system that was upgraded in 2014.</p> <p>This is estimated to save 72 tonnes Co2 / year and ~\$15,000 in operating costs</p>
23 - Central Okanagan	A.S. Matheson Elementary School	Kelowna	\$683,000	Roof replacement / upgrade	Roof reached the end of its useful life and is worn in portions of the school roof. Replace worn areas and incorporate additional venting.
	Springvalley Middle School	Kelowna	\$160,800	Replace Sawdust Collection System - update to meet codes and standards	<p>Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting.</p> <p>Improvements will include larger ducting, additional filters, explosion relief panels, blowback prevention damper, and improved which improves air quality and safety.</p>
	Glenmore Elementary School	Kelowna	\$232,000	Electrical system Direct Digital Controller installation	<p>Install higher efficiency fluorescent lighting to replace lamp systems which are at the end of their service life.</p> <p>Energy use is project to be reduced by 22,000 kilowatt hours per year</p>

28 -Quesnel	Correliou Secondary School	Quesnel	\$490,000	Heating Ventilation and Air Conditioning upgrade	<p>Replacement of the main air handling unit serving the original 1972 classroom block and four furnaces serving the 1980 Multi-purpose, Drama addition.</p> <p>Projected CO2 savings are estimated to average 22 tonnes per year</p>
33 - Chilliwack	Tyson Elementary School	Chilliwack	\$186,000	Mechanical system upgrades	<p>Air handling unit are in poor condition and have reached the end of their serviceable life. Units are located in difficult areas to maintain. New air handling unit for the gym& select classrooms. Improved controls and sensors.</p>
	AD Rundle Middle School	Chilliwack	\$710,000	Mechanical system upgrades	<p>New roof mounted HVAC unit, dust collection system, gymnasium & select classroom / area ventilation units, provide new high efficiency condensing boiler.</p> <p>Expected to improve air quality, flow and energy efficiency by up to 10%.</p>
	Vedder Middle School	Chilliwack	\$444,000	Replace existing roof top units with roof top heat pumps	<p>Replace existing roof top units which are beyond useful life with new roof top heat pumps. Install Direct Digital Controls for improved efficiency</p>

34 - Abbotsford	Blue Jay Elementary School	Abbotsford	\$168,000	Condensing unit & Domestic hot water tank replacement	Condensing (cooling) units and hot water heaters are well beyond useful life and require replacement. The condensing units used r-22 refrigerant which is ozone depleting and no longer acceptable for cooling systems. New Direct Digital Control system will also be installed to maximize performance
	Centennial Park Elementary School	Abbotsford	\$567,600	Roof upgrade	Areas of the roof are worn and beyond useful life, these areas will be replaced. Improvements will be made to the roof that will help protect the building from the elements, extend the useful life of the school and prevent accelerated where. Ensuring schools roofs are kept in a state of good repair is critical to the operation of schools
	W.J. Mouat Secondary School	Abbotsford	\$348,000	Heating, Ventilation, and Air Conditioning system Upgrades	Install new roof top heat pumps, and high efficiency condensing air units. Install Direct Digital Controls for improved efficiency.

35 -Langley	Betty Gilbert Middle School H D Stafford Middle School D W Poppy Secondary School Brookwood Secondary School R E Mountain Secondary School	Langley	\$126,350	Lighting Upgrade	Exterior lighting replacement with new LED fixtures. Upgrade will improve energy efficiency and increase visibility and safety.
	Langley Fine Arts Elementary-Secondary	Fort Langley	\$149,500	Lighting Efficiency Improvements	Retrofit fluorescent fixtures, reduce number of lamps with high efficiency LED lamps, add occupancy sensors to improve energy efficiency. Estimated power savings are 184,000 kWh / year with a anticipate savings of \$21,000 / year.

36 - Surrey	Lord Tweedsmuir Secondary School	Surrey	\$80,000	Phase 1 – design and tender prep for boiler replacement	Design and tender preparation of boiler replacement project for improved energy efficiency and reliability with a reduced carbon footprint
	Portable Classrooms Remediation	Surrey	\$560,000	Mechanical system upgrades and portable upgrades.	Furnace replacements to improve system efficiency and air quality. Improvements will be made that will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school
	Portable Classrooms Remediation	Surrey	\$330,000	Roof replacement and repairs	Replace or repair worn roofing to protect the structure, extend the useful life, reduce the chance of mold and water leakage and improve energy efficiency
	Portable Classrooms Remediation	Surrey	\$300,000	Exterior repairs	Building envelope repairs to exterior, including windows, siding and doors to protect the structure, extend the useful life, reduce the chance of mold and water leakage and improve energy efficiency
37 - Delta	South Delta Secondary School	Delta	\$159,500	Replace transformer and related switchgear	Elimination of antiquated high voltage transformer in building, upgrade and replacement of BC Hydro pad-mounted transformer and related switchgear. Reduce fire hazard within building Reduce risk of school downtime

38 - Richmond	Robert J Tait Elementary School	Richmond	\$665,000	Roof upgrade	Worn roof ~ 20 years old. Replacement of worn areas. Improvements will be made to the roof that will help protect the building from the elements, extend the useful life of the school and prevent accelerated where. Ensuring schools roofs are kept in a state of good repair is critical to the operation of schools.
	General Currie Elementary School	Richmond	\$193,500	Boiler replacement	Phase 1 - Acquire high efficiency condensing boilers, direct digital control panels and control valves and mechanical room piping for future installation as boilers approaching the end of their serviceable life. Improvements will be made that will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school
	Robert Alexander McMath Secondary School	Richmond	\$139,700	Boiler replacement	Two Boilers reaching the end of their serviceable life and requiring regular repair. Replace with two high efficiency condensing boilers, direct digital control panels and control valves and mechanical room piping. Replacement will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school

40 -New Westminster	Lord Kelvin Elementary School	New Westminster	\$140,000	Lighting upgrade	Complete lighting upgrade
	Lord Tweedsmuir Elementary School	New Westminster	\$170,000	Complete Lighting upgrade	Replace fluorescent fixtures with high efficiency LED lamps; add occupancy sensors to improve energy efficiency. Estimated power savings are 184,000 kWh / year with a anticipate savings of \$21,000 / year.
41 -Burnaby	Aubrey Elementary School	Burnaby	\$205,800	Phase 1 – Design and tender preparation & materials acquisition for installation of new ventilators and direct digital control system	Design and tender preparation for installation of new ventilators and Direct Digital Control system. Project includes purchase of ventilators for installation as part of the project’s second phase
	Stride Avenue Community School	Burnaby	\$315,000	Phase 1 – Design and tender prep and materials acquisition of boilers and ventilation units	Phase 1: Engineering design and tender fees and purchase of boilers and ventilation units. (Boiler plant upgrade, which will reduce fossil fuel consumption (natural gas). Indoor Air Quality upgrade to meet ASHRAE Ventilation Standard 62 requirements. Digital controls upgrade).

42 - Maple Ridge-Pitt Meadows	Albion Elementary School	Maple Ridge	\$216,000	Central boiler plant and domestic hot water system upgrade	Currently using 2 low efficiency condensing boilers at the end of their serviceable life. Replace wit new high efficiency boilers pumps, valves, Direct Digital Control panel, and hot water heater. Improvements will be made that will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school
	Fairview Elementary School	Maple Ridge	\$216,000	Central boiler plant and domestic hot water system upgrade	Currently using 2 low efficiency condensing boilers at the end of their serviceable life. Replace wit new high efficiency boilers pumps, valves, Direct Digital Control panel, and hot water heater. Improvements will be made that will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school
	Westview Secondary School	Maple Ridge	\$414,000	Phase 1 – Purchase only of 46 roof top heat pumps with gas fired backup heating	Phase 1: Pre-purchase only. 46 Roof top heat pumps with gas fired back-up heating.

43 - Coquitlam	Anmore Elementary School	Anmore	\$220,000	Power generator upgrade	Supplementing the BC Hydro service with a standby power generator is proposed to improve the reliability of service at the school for operation and safety, as well as to ensure the operation of the storm and sanitary pumps.
	Gleneagle Secondary School	Coquitlam	\$498,000	Improve heating/ventilation system	Improvements will be made to the heating / ventilation system that will improve the quality of airflow and circulation within the school as well as the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school. These improvements will reduce natural gas consumption by 16% annually and will result in an estimated reduction in green house - gases in the range of 70-90T per year
44 - North Vancouver	Cleveland Elementary School	North Vancouver	\$573,198	Window replacement	Phase 1 - Acquire windows for future exterior window installation / replacement with high efficiency, energy saving windows

45 -West Vancouver	Ecole Cedardale School	West Vancouver	\$206,300	Install elevator - provide handicapped access for 2 story building currently without any interior handicapped access	Install elevator - provide handicapped access for 2 story building currently without any interior handicapped access
	Caulfield Elementary School	West Vancouver	\$131,000	Phase 1 – Acquire new HVAC unit and components for gymnasium & select classrooms for future installation	<p>HVAC system reaching the end of its serviceable life and some classrooms currently have no ventilation system due to the age of the school.</p> <p>Phase 1 – Acquire new HVAC unit and components for upgrades to ventilation of the gymnasium & select classroom / areas for future installation.</p>
	Cypress Park Primarym School	West Vancouver	\$400,000	Replace boiler plant, replace classroom ventilation system, install Digital Direct Control controls	<p>HVAC system reaching the end of its' serviceable life and the administration offices currently have no ventilation system due to the age of the school.</p> <p>Once complete, it will greatly improve the ventilation system inside the building and this will improve the system's energy consumption and reduce carbon emissions</p>

46 - Sunshine Coast	Madeira Park Elementary School	Madeira Park	\$453,750	Boiler plant replacement	Improvements will be made to the heating / ventilations system that will improve the quality of airflow and circulation within the school as well as the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school.
	Cedar Grove Elementary Langdale Elementary Elphinstone Secondary Davis Bay Elementary Kinnikinnick Elementary West Sechelt Elementary Chatalech Secondary Sechelt StrongStart Centre Halfmoon Bay Elementary Madeira Park Elementary Pender Harbour Elem-Secondary Roberts Creek Elementary Board Office	Gibsons Sechelt Halfmoon Bay Madeira Park Roberts Creek	\$371,000	Digital Direct Control upgrade	Improvements include upgrading Direct Digital Controls at 13 facilities to latest hardware and to take advantage of the new energy efficiency features.

47 - Powell River	James Thomson Elementary School	Powell River	\$211,750	Electrical system upgrade.	<p>Improvements will be made to the electrical system that will increase energy efficiency of the school, reduce operating costs and improve the comfort of students.</p> <p>The existing service has reached its expected life span and needs to be replaced; In addition the existing location of the service does not meet the current Electrical Code.</p>
48 - Sea to Sky	Howe Sound Secondary School and Squamish Montessori Elementary School	Howe Sound	\$436,000	Share a common biomass plant located between two schools and extend life of existing boilers.	<p>Phase 1 - Purchase biomass plant for future installation to reduce energy costs and extend the life of the existing boilers for both elementary schools.</p> <p>These improvements will lower greenhouse gas emission from 396.0 tCO₂e to 107.0 tCO₂e for the two schools combined. This represents a 75% reduction in natural gas consumption</p>
49 - Central Coast	Shearwater Elementary School	Hagensborg	\$375,000	Development of water source - Drilling and testing two wells, geologist's fees, barging and mobilization costs,	Develop plan, including preliminary works, for replacement water system as the oldest part of the water system which serves the school has been on a boil water advisory since 2002.

				access road construction. Site preparation and tank installation and construction of pump houses and treatment works	
51 – Boundary	Grand Forks Secondary School	Grand Forks	\$220,000	Sawdust collection system improvement	Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting. Improvements will include larger ducting, additional filters, explosion relief panels, blowback prevention damper, and improved which improves air quality and safety
	Boundary Central Secondary School	Grand Forks	\$208,000	Saw Dust collection system for wood working	Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting
52 -Prince Rupert	Charles Hays Secondary School	Prince Rupert	\$458,000	Install high-speed, peer-to-peer network of Digital Direct Control controllers and engineered lighting control center and software	Existing pneumatic control system is at the end of its service life. Project consists of installation of high-speed, peer-to-peer network of DDC controllers and engineered lighting control center and software. The controls upgrade is forecast to electricity-use reductions of over 100,000 kilowatt hours annually or 20% less power

53 - Okanagan Similkameen	Oliver Elementary School	Oliver	\$140,000	Replace remaining sections of roof	Replace remainder of roof not completed in summer 2015.
	Similkameen Elementary Secondary School	Keremeos	\$436,000	Building envelope improvements	Building envelope improvements including new windows, Access for Disabilities improvements to meet code requirements and washroom upgrades.
	Osoyoos Secondary School	Osoyoos	\$271,000	Saw Dust collection system for wood working	Dust collection unit undersized for the machinery in the shop area, combined with ducting improvements
54 - Bulkley-Valley	Telkwa Elementary School and Silverthorne Elementary School	Telkwa and Houston	\$398,200	Upgrade mechanical system controls. Lower energy cost and GHG reduction.	Rooftop HVAC units at the end of their serviceable life as well as Direct Digital Controls. Replace components. Improvements will be made that will upgrade and improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school
57 - Prince George	Polaris Montessori Elementary School	Prince George	\$100,000	Fire Protection system upgrade - code requirement	Sprinkler system upgrades to bring fire suppression system into current building code and improve the safety of the school and reduce the potential of loss due to fire

	Polaris Montessori Elementary School	Prince George	\$130,000	Upgrade Gymnasium heating and ventilation unit obsolete parts no longer available	Terminal systems for the gym are based on gas fired air handling units, all of which are at the end of their service life and need to be upgraded, to bring the systems to meet current engineering standards and codes, and good design practices
58 - Nicola-Similkameen	Diamond Vale Elementary School	Merritt	\$250,000	Boiler replacement	<p>Currently using 2 low efficiency condensing boilers at the end of their serviceable life. Replace with new high efficiency boilers pumps, valves, Direct Digital Control panel, and hot water heater.</p> <p>Improvements will be made that will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school and achieve savings of \$4,000/year and 21 tonnes of CO2.</p>
	Collettville Elementary School	Merritt	\$225,000	Boiler replacement	<p>Install a new heating water system to improve energy efficiency and reduce the school's carbon footprint. A high-efficiency boiler plant design is recommended, which will utilize condensing boiler technology to heat the school on mild days and boost hot water supply temperature for the coldest winter days.</p> <p>An upgraded digital control system is required to allow more precise temperature control within the building to optimize</p>

					<p>building energy consumption. The boiler replacement upgrade will reduce greenhouse gas emissions, saving 14 tonnes of CO2 annually.</p>
59 - Peace River South	Dawson Creek Secondary School	Dawson Creek	\$282,500	Sawdust collection system replacement	<p>Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting.</p> <p>Improvements will include larger ducting, additional filters, explosion relief panels, blowback prevention damper, and improved which improves air quality and safety</p>
	Tumbler Ridge Secondary School	Tumbler Ridge	\$236,000	Sawdust collection system replacement	<p>Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting.</p> <p>Improvements will include larger ducting, additional filters, explosion relief panels, blowback prevention damper, and improved which improves air quality and safety</p>

	Chetwynd Secondary School	Chetwynd	\$206,000	Sawdust collection system replacement	<p>Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting.</p> <p>Improvements will include larger ducting, additional filters, explosion relief panels, blowback prevention damper, and improved which improves air quality and safety</p>
	McLeod Elementary-Secondary School	Groundbirch	\$94,000	HVAC Controls upgrade	<p>The existing control systems are considered obsolete and inefficient, allowing the existing mechanical systems to waste a disproportionate amount of energy. Significant upgrades to control systems are required to meet to meet current engineering standards and codes, and good design practices.</p> <p>A controls upgrade will reduce greenhouse gas emissions, saving 27 tonnes of CO2 annually.</p>

60 - Peace River North	Bert Ambrose	Fort St. John	\$500,000	Replace aging furnaces with new boiler plant	Equipment purchase and site preparation for the replacement of aging furnaces. Overall upgrades will be made that improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school
	Robert Ogilvie Elementary School	Fort St. John	\$781,250	Replace aging furnaces with new boiler plant; install classroom unit ventilators with CO2 control	Upgrades will be made that improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school
61 - Greater Victoria	Cloverdale Traditional Elementary School	Victoria	\$105,000	Construct student drop-off area (traffic safety issue)	Improvements will be made to the school site that will establish a designated drop off/pick up area. This will increase student comfort and safety and address historic safety concerns
62 - Sooke	Journey Middle School	Sooke	\$299,000	Boiler replacement	Replace aging boilers with new high efficiency boilers, pumps, valves, Direct Digital Control panel, and hot water heater Improvements will be made that will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the

					school and achieve estimated savings of 28 tonnes CO2.
	Sooke Elementary School	Sooke	\$209,000	Boiler replacement	Boiler plant upgrade to provide condensing boilers replacing standalone 45-year old cast-iron boiler. This will reduce fossil fuel consumption (natural gas) and result in an estimated reduced annual consumption of natural gas of 345 GJ, resulting in lowering of greenhouse gas emission by 17.0 equivalent tonnes CO2.
63 - Saanich	Prospect Lake Elementary School	Victoria	\$175,000	Replace aging boilers, furnace with new high efficiency boilers pumps, valves, direct digital control panel and hot water heater.	<p>Replace aging boilers, furnace, with new high efficiency boilers pumps, valves, Direct Digital Control panel, and hot water heater.</p> <p>Improvements will be made that will improve the efficiency of the system, resulting in operational savings. This will also improve the comfort of students and faculty and extend the useful life of the school with savings of estimated 30 tonnes CO2/ year and \$14,000 in operating.</p>
67 - Okanagan-Skaha	Princess Margaret Secondary School	Penticton	\$190,600	Dust collector replacement	<p>Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting.</p> <p>Improvements will include larger ducting, additional filters, explosion relief panels, blowback prevention damper, and improved which improves air quality and safety.</p> <p>Improvements will reduce carbon emission from the school from 26.9 to 4.1 equivalent</p>

					tonnes of carbon dioxide (tCO2e) annually, a reduction of 85-percent
	Summerland Middle School	Summerland	\$219,300	Saw Dust collection system for wood working	Dust collection unit undersized for the machinery in the shop area, combined with ducting improvements
68 - Nanaimo-Ladysmith	Georgia Avenue Elementary School	Nanaimo	\$360,000	Boiler upgrade	Boiler plant upgrade to provide condensing boilers replacing existing atmospheric boilers past the end of their expected useful service life. Upgrade to include replacement of boiler for domestic water heating. Reduced annual consumption of natural gas in the range of 270-400 GJ, resulting in lowering of greenhouse gas emission by 13.5-20.0 equivalent tonnes of CO2.
	Quarterway Elementary School	Nanaimo	\$302,500	Boiler upgrade	Boiler plant upgrade to provide condensing boilers replacing existing atmospheric boilers past the end of their expected useful service life. Upgrade to include replacement of boiler for domestic water heating. Reduced annual consumption of natural gas in the range of 270-400 GJ, resulting in lowering of greenhouse gas emission by 13.5-20.0 equivalent tonnes of CO2.

69 - Qualicum	Nanoose Elementary School	Nanoose	\$89,000	Boiler replacement	Boiler plant upgrade as boiler has reached the end of its serviceable life. Phase 1 - Acquire high efficiency condensing boiler, direct digital control panels and control valves and mechanical room piping Improvements projected an annual natural gas reduction of 345 GJ of natural gas, which would provide reduction of the carbon emission from the facility by 17.0 equivalent tonnes of carbon dioxide (tCO2e) annually.
	Bowser Elementary School	Bowser	\$220,000	Boiler replacement	Heating plant upgrade to provide condensing propane boilers which will replace atmospheric cast-iron boilers and provide an air source heat pump. The improvement will result in reduced annual consumption of propane and will lower greenhouse gas emission by 43.5 equivalent tonnes CO2.
71 - Comox Valley	Lake Trail Middle School	Courtenay	\$127,000	Electrical system Direct Digital Control Replacement.	Replace aging Direct Digital Control in the boiler system as the DDC has reached the end of its serviceable life. Allows for upgraded programming and energy savings estimates of 32 tonnes / year and operating savings estimates of \$8,000 per year.

	Mark R. Isfeld Senior Secondary School	Courtenay	\$166,800	Digital Direct Control Replacement.	Replace aging Direct Digital Control in the boiler system as the DDC has reached the end of its serviceable life. Allows for upgraded programming and energy savings estimates of 32 tonnes / year and operating savings
	Courtenay Elementary School	Courtenay	\$170,100	Building envelope cladding and window replacement	Remove all existing stucco cladding and replace with a new rain screen cladding assembly to include improved detailing at interfaces and penetrations. Windows will be replaced during the cladding replacement. Improvements will protect the structure, extend the useful life of the facility, reduce the chance of mold and water leakage and improve energy efficiency.
72 - Campbell River	Pinecrest Elementary School	Campbell River	\$458,000	Sprinkler system upgrades	Sprinkler system upgrades to bring fire suppression system into current building code and improve the safety of the school and reduce the potential of loss due to fire

73 - Kamloops/ Thompson	Nor Kam Secondary School	Kamloops	\$233,700	Replacement of all interior wiring, receptacles, and electrical panels	Upgrade and replace aging electrical panels and wiring with high efficiency panel and receptacles
	Summit Elementary School	Kamloops	\$225,000	Boiler system upgrade	Replace aging boiler system and install Direct Digital Control system that will increase efficiency 20-30%. This will benefit students through increased comfort as well as reduce operating costs of the school.
	Valleyview Secondary School	Kamloops	\$304,800	Lighting retrofit of entire school to LED	Upgrade lighting system, including distribution panels, fixtures and controls; and install occupancy sensors. Total energy savings are estimated at 60,000 kWh/year, resulting in annual operating savings of \$6,000 and annual maintenance savings of \$2,000 - \$4,000, plus an additional rate saving of \$6,400 in the first three years after implementation.
	Brocklehurst Middle School	Kamloops	\$355,600	Lighting retrofit of entire school to LED	Upgrade lighting system, including fixtures and controls; and install occupancy sensors. Total energy savings are estimated at 75,000 kWh/year, resulting in annual operating savings of \$7,000 and annual maintenance savings of \$3,000 - \$5,000, plus an additional rate saving of \$8,000 in the first three years after implementation

74 - Gold Trail	Kumsheen Elementary-Secondary School	Lytton	\$836,520	Change room / washroom upgrades	Entire space being upgraded to meet code requirements as well as provide handicapped access.
	Lillooet Secondary School	Lillooet	\$177,700	Woodshop local exhaust system improvements	Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting. Improvements will include larger ducting, additional filters, explosion relief panels, blowback prevention damper, and improved which improves air quality and safety
75 - Mission	Silverdale Elementary School	Mission	\$210,000	Replacement of boiler plant , domestic hot water system and three package Roof Top Units	Aging existing water heating plant has reached the end of its useful life and were installed in 1999. Install new domestic hot water tank and heater water boilers, pumps, tanks and related components. Install new roof top pumps and high efficiency Direct Digital Control system. Improvements will be made that will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school
	Hatzic Middle School and Heritage Park Middle School	Mission	\$433,600	Heating, Ventilation, and Air Conditioning system Upgrades	Condensing (cooling) units are well beyond useful life and require replacement. A new Direct Digital Control system would also be installed to maximize performance. Improvements will be made that will improve the efficiency of the system. These will

					improve the comfort of students and faculty and extend the useful life of the school
	Hatzic Middle School	Mission	\$330,000	Phase 1 – pre-purchase of boilers, racking and heating water distribution pumps	Phase 1: Pre-purchase only. 24 Boilers and racking + Heating water distribution pumps for West Half of School and East Half of School including Kitchen and Gyms.
78 - Fraser-Cascade	Silver Creek Elementary School	Hope	\$160,000	Complete lighting efficiency upgrades	Replace fluorescent fixtures with high efficiency LED lamps; add occupancy sensors to improve energy efficiency. Estimated power savings are 184,000 kWh / year with a anticipate savings of \$21,000 / year.
	Kent Elementary School	Agassiz	\$1,300,000	Mechanical upgrade	Replace 17 existing rooftop units with new heat pumps and condensing boiler back up to provide heat on colder days. New Direct Digital Control system will also be installed. This will improve the efficiency of the system as well as the comfort of students and faculty and extend the useful life of the school.
79 - Cowichan	Palsson Elementary School	Lake Cowichan	\$200,000	Phase 1 – envelope efficiency upgrade	Phase 1 of total envelope efficiency upgrade including cladding assembly, and windows to be replaced during the cladding replacement. Improvements will protect the structure, extend the useful life of the facility, reduce the chance of mold and water leakage and improve energy efficiency

81 - Fort Nelson	Fort Nelson Secondary School	Fort Nelson	\$912,000	Replace roof	Roof reached the end of its serviceable life. The existing roof will be replaced with a new roof membrane, as well as adding insulation, improving drainage, and improve supports for solar panels
82 - Coast Mountains	Caledonia Secondary School	Terrace	\$256,400	Replace Sawdust Collection System - update to meet codes and standards	<p>Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting.</p> <p>Improvements will include larger ducting, additional filters, explosion relief panels, blowback prevention damper, and improved which improves air quality and safety</p>
	Thornhill Elementary School	Terrace	\$375,000	Phase 1: Boiler replacement, Control upgrade.	<p>Install a new heating water system to improve energy efficiency and reduce the school's carbon footprint. A high-efficiency boiler plant design will utilize condensing boiler technology to heat the school on mild days and boost hot water supply temperature for the coldest winter days.</p> <p>Replace the electric fan coils with new self-contained air handling units located in individual classrooms or office areas.</p> <p>An upgraded digital control system is required to allow more precise temperature control within the building to optimize building energy consumption.</p>

	New Hazelton Elementary School	New Hazelton	\$375,000	Boiler replacement	The five boiler plants are over 25 years old and at the end of their useful life. They currently only provide 65 percent seasonal efficiency. An upgraded digital control system is required to allow more precise temperature control within the building to optimize building energy consumption.
83 - North Okanagan-Shuswap	Hillcrest Elementary School	Salmon Arm	\$505,000	Ground thermal field improvements	Install a replacement heating system through the use of a ground-source heat pump to save 58 tonnes of CO2 per year and reduce energy costs by \$12,400 per year.
	Pleasant Valley Secondary School	Armstrong	\$140,000	Digital Direct Control system upgrade	The control system, including CO2 sensors, requires updating to improve occupant comfort, energy efficiency and maintainability.
85 - Vancouver Island North	North Island Secondary School	Port McNeil	\$393,250	Replace existing shop and gymnasium air handling units and exhaust systems	Replacement of existing Shop and Gymnasium Air Handling Units and Exhaust systems which are past their expected useful service life and are currently on an aggressive routine maintenance program to keep in operation.
91 - Nechako Lakes	Fort St. James Secondary School	Fort St. James	\$92,400	Solar Wall - Phase 2 - harvesting of the pre-heated air for other HVAC applications throughout school	A passive Solar Wall system pre-heats intake air to reduce the cost of operating a central heating system by "harvesting" sun-warmed air. This will benefit students through increased comfort and reduce operating costs for the school

	Lakes District Secondary School	Burns Lake	\$111,500	Upgrading the Wood Dust Collection System to WSBC code requirements	<p>Dust collection unit undersized for the machinery in the shop area, combined with long areas of ducting.</p> <p>Improvements will include larger ducting, additional filters, explosion relief panels, blowback prevention damper, and improved which improves air quality and safety</p>
93 - Conseil Scolaire Francophone de la Colombie-ritannique	École Rose des Vents	Vancouver	\$180,000	Replace the boiler with a new high efficiency boiler; install Direct Digital Controls in every room of the school to reduce energy consumption. Asbestos clean-up in the crawlspace required and included.	<p>Replace the boiler with a new high efficiency boiler; install Direct Digital Controls in every room of the school to reduce energy consumption. Asbestos clean-up in the crawlspace required and included.</p> <p>Improvements will be made that will improve the efficiency of the system. These will improve the comfort of students and faculty and extend the useful life of the school</p> <p>Estimated savings are 5 tonnes CO2 / year and ~\$2,000 in operating savings.</p>
	École Océane	Nanaimo	\$175,000	Boiler replacement	<p>Replace existing boiler which is nearing the end of its service life with a new condensing boiler system including Direct Digital Controls.</p> <p>This will improve the efficiency of the system as well as the comfort of students and faculty and extend the useful life of the school.</p>