

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
1	Elimination of the release of Ethylene Dioxide to the atmosphere	HI and DGH: We purchased three DR50 ETO Air Scrubbers from Advanced Air Technology. It is a safe cell that uses a proprietary high-volume dry bed filter to destroy EtO leaving no hazardous or toxic by-products. The Safe Cell II is used to safely destroy EtO.	HI 2 scrubbers: \$3780.00 (Advance Air) DGH 1 scrubber: installation \$1000.00, most labour was in-house.	Stopped the release of EtO into the atmosphere. Project completed at HI: 2011. Project completed mid January 2014 at DGH site.
2	Conversion of plants to natural gas	Conversion to natural gas has been done at all three plants, completed in 2012.	IO# 2700026 Heritage Gas \$7,314,948.66	Natural gas is the cleanest burning fossil fuel with 30% less carbon than oil thus contributing to cleaner air quality. At CDHA, we have reduced our sulphur dioxide emissions by 99%.
3	Oil leak, HI Site	Underground storage tank leak, releasing Bunker C into the ground. This was discovered on January 6, 2011. The two 20,000 litre tanks were removed May 4, 2011 and soil remediation is now complete. The new tanks are installed. Project completed July 2012.	A-RR-2011-09-0011 Replace fuel tank oil power plant IO# 2700231 Mark Yeadon Cost: \$759,792.73	
4	VGH light oil storage tanks	There are four bunker C tanks at the VG plant that will be replaced with two storage tanks. In design phase.	Bunker C heating design \$25,000.00 budget A-RR-2013-09-017 Estimate: \$700,000.00 installation	No funding – try for 2014/2015.
5	Underground diesel tank removal	Underground diesel tanks provide fuel for the generators. There are four diesel tanks left underground and two underground furnace oil tanks. A) VG Site, Incinerator Bldg., 4000 litres B) NS Rehab, 2200 litres C) Dickson Building, 500 litres D) Hants, 4546 litres. Also there are two underground furnace tanks 22,730 litres each.	Part of A-RR-2012-09-016 total budget for ESMH \$495,000.00 MUSQU \$455,000.00 TOTAL \$950,000.00	Require additional funding. On DHW oil tank removal list.
6	NSH storm sewer	Storm sewer has a direct connection to sanitary sewer at the Purdy Building, contributing to sewer overflow at the Halifax Water pumping station.	Anticipated funding for Purdy Exit.	Proposed relocation of laundry off site will also reduce flow significantly. Purdy Exit is expected to take two-to-three years.
7	Upgrade ventilation VMB A-RR-2012-09-046	DHW approval date: November 31, 2012. Demand-controlled ventilation for the exhaust hoods in the main kitchen. Rather than running continuously, sensors in the hoods respond to heat and steam from kitchen equipment and exhaust appropriately.	\$60.3K budget IO# 2700401 \$91,163.88 cost \$29.7K rebate from ENS	\$20,000/yr

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
8	Upgrade to OR Air Handling Unit (AHU) at HI A-RR-2012-09-047	DHW approval date: November 31, 2012. OR AHUs at the HI have been equipped with VFDs and scheduled for air change rate setbacks during unoccupied periods. Push button override control has been installed in the nurses' station.	\$21.6K budget IO# 2700402 \$39,757.61 cost \$18.4K rebate from ENS	\$10,000/yr
9	Upgrade to AHU 19 & 21 A-RR-2012-09-048	DHW approval date: November 31, 2012. AHUs serving OR support areas at the HI have been equipped with VFDs and scheduled for air change rate setbacks during unoccupied periods.	\$18.5K budget IO# 2700403 \$25,308.31 cost \$6.5K rebate from ENS	\$10,000/yr
10	Upgrade DCW Pump (50 HP) A-RR-2012-09-049	DHW approval date: November 31, 2012. The 50 HP pump providing pressure to the domestic water system for the HI site has been equipped with a new motor and VFD to allow it to reduce operation when demand for water is low.	\$21.8K budget IO# 2700404 \$34,846.49 cost \$13.8K rebate from ENS	\$27,000/yr
11	Upgrade reheat pump (50 HP) A-RR-2012-09-050	DHW approval date: November 31, 2012. A pump providing heat to reheat boxes in the HI has been equipped with a VFD to allow it to reduce operation when demand for heat is low.	\$13.9K budget IO# 2700405 \$34,467.06 cost \$21.2K rebate from ENS	included above
12	Upgrade radiation pump (20 HP), HI A-RR-2012-09-051	DHW approval date: November 31, 2012. A pump providing heat to perimeter radiation heaters in the HI has been equipped with a VFD to allow it to reduce operation when demand for heat is low.	\$10.7K budget IO# 2700406 \$20,817.66 cost \$9.3K rebate from ENS	included above
13	Upgrade radiation pump (10 HP), HI A-RR-2012-09-052	DHW approval date: November 31, 2012. A pump providing heat to perimeter radiation heaters in the HI has been equipped with a VFD to allow it to reduce operation when demand for heat is low.	\$10.4K budget IO# 2700407 \$14,377.51 cost \$4.6K rebate from ENS	included above
14	Upgrade coil pump (15 HP), HI A-RR-2012-09-053	DHW approval date: November 31, 2012. A pump providing steam to an AHU heating coil in the HI has been equipped with a VFD to allow it to reduce operation when demand for heat is low.	\$12.2K budget IO# 2700408 \$14,377.51 cost \$3.8K rebate from ENS	included above
15	Upgrade ventilation VMB A-RR-2012-09-054	DHW approval date: November 31, 2012. The A/C unit in the HI maintenance shops has been equipped with a programmable thermostat and scheduled to turn off during unoccupied periods.	\$6.4K budget IO# 2700409 \$13,290.48 cost \$5.6K rebate from ENS	\$5,000/yr
16	Upgrade parking lighting, HI A-RR-2012-09-055	DHW approval date: November 31, 2012. HPS lighting in the VMB parking garage has been replaced with LED fixtures.	\$24.8K budget IO# 2700410 \$34,700.55 cost \$8.2K rebate from ENS	\$3,500/yr

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
17	Upgrade parking lighting, VMB A-RR-2012-09-056	DHW approval date: November 31, 2012 MH lighting in the HI parking garage has been replaced with LED fixtures.	\$42.9K budget IO#2700411 \$65,640.50 cost \$13.7K rebate from ENS	\$4,000/yr
18	Upgrade lighting, HI Power Plant A-RR-2012-09-057	DHW approval date: November 31, 2012. T12 fluorescent and HPS lighting in the HI central heating plant building has been replaced with T8 fluorescent lighting.	\$13.7K budget IO# 2700412 \$27,479.50 cost \$14.8K rebate from ENS	\$9,700/yr
19	Rehabilitation Centre Recommissioning	The Rehabilitation Centre underwent a recommissioning and AHU optimization process to address HVAC issues in multiple areas. DHW funding approved Sept. 2013, completed March 2014.	\$294,000.00 \$55,000.00 rebate from ENSC Funded by DHW.	\$116,000/yr, improved reliability
20	PC Power Management	As the IT department completes their migration to a new infrastructure management environment, power management of individual PCs will be implemented no later than December 2014 to allow each to shut down automatically when not in use.	\$60,000.00 \$30,000.00 rebate from ENSC	\$165,000.00/yr (estimated for all DHAs in the province, \$20,000/yr for CDHA alone)
21	DGH mechanical room lighting retrofit	HPS lighting has been replaced with T8 fluorescent fixtures. Approved 9/4/2013.	\$16,000.00 \$7,400.00 rebate from ENSC	\$6,200/yr, improved reliability
22	Hugh Bell Gymnasium lighting retrofit	HPS lighting has been replaced with T8 fluorescent fixtures. Approved 9/4/2013.	\$24,000.00 \$7,900.00 rebate from ENSC	\$6,700/yr, improved reliability
23	District-wide replacement of incandescent and halogen lighting with LED	Every site under the CDHA, including leased spaces, has been audited during 2013-2014 to locate incandescent and halogen screw-in lighting. Existing lamps were replaced with suitable LEDs.	Lamps were delivered and installed free by ENSC. Value approximately \$80,000.00	approximately 800,000 kWh/yr reduction or \$80,000/yr, improved reliability
24	Replace rotary oven, VG A-RR-2012-09-058	DHW approval date: November 31, 2012. An old oven at the VG central kitchen has been replaced with a new model that uses one tenth of the electricity on an annual basis.	\$21.5K budget IO# 2700413 \$52,978.55 cost \$26.3K rebate from ENS	\$14,500/yr, improved reliability
25	energy study on refrigeration, Food and Nutrition Services, HI Site	Kitchen refrigeration: Replace open loop cooling with closed loop, consolidate compressors. A report from IB Storey and new design from ONSA have been delivered, capital has been requested to implement the project.	\$900,000.00 pursuing funding 2014-2015	This will not only pay back in terms of energy savings but also utility savings via cooling water. Avoidance of ~\$200,000/yr.
26	Elevator upgrade program Centennial Building 2012 – 3 service cars (traction) – complete elevator upgrade	Change power control from ward-leonard to electronic SCR direct drive Fixture (buttons, arrows, etc.) lamps changed from incandescent to LEDs.	\$416,666.00	Converting power control to SCR direct drive typically provides a 30-40% power saving per elevator.

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
27	Elevator upgrade program Mackenzie Building 2012 – 3 passenger cars (traction) – complete elevator upgrade	Change power control from ward-leonard to electronic SCR direct drive. Change hoist motor from DC to AC power supply. Fixture (buttons, arrows, etc.) lamps changed from incandescent to LEDs.	\$358,342.00	Converting power control to direct drive and changing motor typically provides a 30-40% power saving per elevator.
28	Elevator upgrade program Hants Community Hospital 2013 – 3 cars (hydraulic)	Convert existing fluorescent lamps to T8 type fluorescent lamps. Fixture (buttons, arrows, etc.) lamps changed from incandescent to LEDs.	Included with tender price of \$224,126.00.	6 x 4-foot lamps per car – 3 cars total.
29	Elevator upgrade program Abbie J. Lane Building 2013 – 3 passenger cars (traction)	Change power control from ward-leonard to electronic direct drive. Change hoist motor from DC to AC power supply. Fixture (buttons, arrows, etc.) lamps changed from incandescent to LEDs.	Included in tender price of \$441,000.00.	Converting power control to direct drive and changing motor typically provides a 30-40% power saving per elevator.
30	Elevator upgrade program Dickson Centre 2013 – 3 passenger cars (traction)	Change power control from ward-leonard to electronic direct drive. Change hoist motor from DC to AC power supply. Fixture (buttons, arrows, etc.) lamps changed from incandescent to LEDs.	Included with tender price of \$397,814.00.	Converting power control to direct drive and changing motor typically provides a 30-40% power saving per elevator.
31	Elevator upgrade program Dartmouth General 2013 – 3 cars (traction)	Change power control from ward-leonard to electronic direct drive. Change hoist motor from DC to AC power supply. Convert existing 4-foot cab fluorescent lamps to T8-type fluorescent lamps. Fixture (buttons, arrows, etc.) lamps changed from incandescent to LEDs.	Included with tender price of \$550,000.00.	Converting power control to direct drive and changing motor typically provides a 30-40% power saving per elevator.

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
32	Biohazard Waste Reduction	Our journey began in early 2009. At this time we recognized that many items disposed of in this waste stream did not belong (Tim Horton cups, newspapers, Styrofoam cups, plastics, etc.). Developed a Biomedical waste reduction strategy. The entire program consisted of the educating staff, "What goes Where". Developed a slide presentation (see the link below), and hit the road, speaking to any group that would listen. Biohazard Waste Reduction http://cdhaintra/departmentservices/housekeeping/documents/bio-MedicalWasteReductionStrategy.ppt#259,3,Slide	Bio-med (pre-tax stats) April 1, 2008–March 31, 2009 1,644,110 KGs \$1,890,726.50 April 1, 2009–March 31, 2010 1,621,998.3 KGs \$1,865,297.70 April 1, 2010–March 31, 2011 1,571,180.6 KGs \$1,806,857.00 April 1, 2011–March 31, 2012 1,373,556.00 KGs \$1,579,589.40 April 1, 2012–March 31, 2013 1,261,958.7 KGs \$1,451,252.51	In 4 years, we have saved approximately \$1,000,000.00.
33	Steam trap maintenance program VG/HI/NSH/DGH	Annual steam trap survey to identify energy loss from faulty steam traps. It verifies that the steam loss from the previous year has been corrected and also identifies any new traps that have failed since the last survey.	to complete the survey, purchase traps and have them installed: \$103,950.00 Completed March 2014.	The estimated annual steam loss was \$660,376.00. Steam cost for the purpose of this survey is based on the cost of fuel only to produce 1,000 lbs steam.
34	VG Central Heating Plant motor control	Boiler feedwater pumps and forced-draft fans equipped with new high efficiency motors and VFDs to allow their operation to be reduced during times of low or variable steam demand. Approved Oct 17/2013, complete March 2014.	\$300,000.00 \$95,000.00 rebate from ENSC	\$60,000.00/yr, lowered noise levels on the plant floor and control booth
35	Fractional horsepower motors	Approximately 350 Fractional horsepower motors in refrigeration applications at the NSH, VG, and HI sites are replaced with high efficiency units. Approved March 2013, complete March 2014.	\$70,000.00 \$50,000.00 rebate from ENSC	\$33,000.00/yr, improved reliability
36	Energy monitoring at NSH/DGH	Sub meters have been installed at every building on the NSH site and screens in public areas are displaying energy consumption and tips. Started in 2012.	\$14,000.00/yr	Building utility usage is now monitored remotely for peak loads and daily usage through a web portal.
37	Replace outdoor lighting at Cobequid	HPS parking lot lighting replaced with LEDs. Completed March 2014.	\$32,000.00 \$7,300.00 rebate from ENSC	\$9,000.00/yr, improved reliability

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
38	Cold aisle containment in Data Centre	The data centre in the AJL has been equipped with curtains which isolate the delivery of conditioned air to individual servers/storage/racks. This allows less air to be delivered continuously and reduces the overall required A/C capacity. Approved June 2013.	\$20,000.00 \$10,000.00 rebate from ENSC	\$40,000.00/yr, improved reliability
39	Hugh Bell kitchen exhaust	Programmed the kitchen exhaust and supply to turn off after 6 p.m. and come on at 6 a.m.	\$200.00	Eliminates exhausting all of that warm air.
40	Hugh Bell pool	We closed the pool on December 31, 2012.	0	Eliminates the heating load for the water.
41	Hugh Bell mechanical room	We repaired damaged pipe insulation in the mechanical room.	\$6,000.00	Reduces heating and cooling costs.
42	Hugh Bell garage door	We installed a new insulated garage door.	\$1,500.00	Cuts down on air leakage.
43	Marshall Treatment Building	Due to reduced hot water need and consumption, we installed a 40-gallon hot water tank.	\$400.00 in-house labour	Eliminates steam supply to that building in the non-heating season.
44	Marshall Treatment Building	Repaired all the pipe insulation in the mechanical room.	\$5,000.00 outside contractor	Reduces wasted energy.
45	Marshall Treatment Building	Installed new main doors.	\$1,500.00 in-house labour	Eliminates air leakage.
46	Mount Hope Building	Repaired insulation in mechanical rooms.	\$5,000.00 outside contractor	Eliminates wasted energy.
47	Mount Hope Building	Installed a new AC unit.	\$250,000.00	Provides better more efficient cooling to the building.
48	Maintenance Laundry Building	Building heating system is on a timer.	in-house labour	Cuts down on cost of heating the empty building.
49	Dartmouth General	Installed new domestic hot water heating system.	\$80,000.00	It is on demand style where we don't need to heat a large tank of water.
50	Dartmouth General	Installed automatic doors in Receiving.	\$7,500.00	Reduced loss of heating and cooling to the outside.
51	Dartmouth General	Large portion of glass was replaced on Levels 2, 3 and 4 with Low E Argon and insulated spacers. All new glass replacement is done with the same.	\$300,000.00 done through Bill Levangie's team.	Reduces energy costs. Reduced loss of heating and cooling to the outside.
52	Bungalows	Bungalows were built to Leadership in Energy and Environmental Design (LEED) silver. Opened 2012.		
53	Upgrade 5th floor Infirmary ventilation	OR areas and the recovery and block rooms have been equipped with demand-controlled ventilation, which allows a lower level of ventilation to be delivered to the space when it is unoccupied.	\$63,500.00 cost \$21,900.00 savings \$25,000.00 ENS rebate	

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
54	Replace refrigeration system with a closed loop system in the VMB central kitchen	replace current water cooled units (26)	total project cost: \$956,500.00 ROI 4.7 years FUNDS REQUESTED, PROJECT NOT YET APPROVED	reduce energy consumption by 295,980 kWh electrical energy per year reduce 246 tons of CO2 per year annual water savings of \$181,267.00.
55	Chemical-free floor-stripping machine	May 2013. No chemical required. sensitivities / no odor		less water consumption saving time/less inconvenience for staff
56	Using Microfibre material pre-soaked in cleaning solutions – at VG Site only	Is a new technology in cleaning patient rooms with microfibre material pre-soaked in cleaning solutions.	\$15,000.00	20% reduction in chemicals and 60% reduction in water consumption
57	Finance & Decision Support: Audit Documentation	transitioning from paper-based into more electronic as of December 2012		reduces paper
58	Finance & Decision Support: EFT Functionality	Ongoing work to eliminate paper cheques. December 2012: Implemented paying certain vendors by EFT as opposed to cheque. Constantly enrolling vendors for EFT, however, have a long way to go before all vendors are paid via EFT.		goal is to see functionality employed to gain significant impact
59	Finance & Decision Support: Accounts Receivable	Similar functionality exists to receive payments electronically; will be focusing effort on this over the next few years. 2014 May: Volume has increased but it will be a few more years before we see 80% or more. It is based on how quickly the technology here and with our clients develops.		reduces paper
60	Finance & Decision Support: Printing/Copying	Participated as a department in the organizational printing review. The department will look to the recommendations to streamline and reduce printers.		Reduces the amount of printers throughout CH and the amount of toners purchased for these printers.
61	Finance & Decision Support: On-line Forms	Many paper forms are on-line.		reduces the need to print, store and move paper around
62	Green Purchasing:	Request rationalized packaging and other environmentally responsible actions from vendors of health care products; promote safer substitute to reduce exposure to toxic substances; purchase locally to minimize transportation; Green Produce specification; potential for vendor 'take-back' of used products and packaging for recycling.		reduces exposure to toxic substances minimizes transportation vendor can 'take back' used products and packaging for recycling

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
63	Obtain membership in the Canadian Coalition for Green Health Care	The Canadian Coalition for Green Health Care is an alliance of committed Canadian health service organizations, associations and environmentally-focused business associates that promote the adoption of environmentally friendly and sustainable health care service delivery to complement the compassionate delivery of health care.		
64	Sustainable Buildings:	<ul style="list-style-type: none"> i) Lean Pre Design; ii) Choice of environmentally friendly building sites; iii) Prioritize parks, green and healing spaces; iv) Design for bikeways (including security & shower facilities); v) Utilize views of garden and green spaces from patient rooms; vi) reuse of existing or recycled building materials; vii) design for durability and low maintenance; viii) generic design to allow for adaptability; ix) utilize shared spaces; x) optimize daylight, solar energy and utilize shade; xi) exceed minimum insulation requirements for walls, ceilings, windows, etc.; xii) landscape with drought-resistant native plants; xiii) employ on-site composting; xiv) designate idle-free zones (signage in front of HI, Bethune, etc.); xv) ensure proper and adequate space for storage of hazardous waste (Biomedical, chemical, radioactive, etc.); xvi) design to LEED standards. 		<ul style="list-style-type: none"> i) Analyze work processes to eliminate square footage. Master Facilities Plan advocates for 'flexible' design principles that reduce footprint by working differently, use of open office design. Current HI level 4 ambulatory redesign reduces footprint by using shared clinic rooms, centralized registration, etc. ii) Rehabilitate existing lands, share parking/transit infrastructure, preserve local habitat, green fields and natural resources. iii) Green roofs connecting bungalows. iv) Ride-a-Bike program. Reduces vehicles on the road. Reduces carbon footprint. v) Garden on 'green roof' behind AJLB. xiii) Urban Garden. xiv) reducing carbon footprint.
65	Sustainable Energy and Greenhouse Gases:	Employ building energy management systems; employ heat recovery systems; employ high efficiency heating and cooling equipment; employ renewable energy sources; automate lighting and computer shut off/startups; upgrade to energy efficient lighting; assure all building elements are installed and calibrated properly to maximize utilization; engage in green power contract with local utilities.		
66	Sustainable Transportation:	promote bikeways; promote use of public transport and car pooling		Less vehicles on the road. Reducing our carbon footprint.

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
67	Business Development: Disposition of Surplus Equipment via PFC	Items going to landfill.		Saving money.
68	CarShare Program:	dedicated parking spaces which in part reduces the number of personal vehicles. CarShare can be rented for an hour or two.		reduces the number of personal vehicles
69	Business Development: VG Farmers Market	purchase locally to minimize transportation		purchase locally to minimize transportation
70	Materiels Management: RFPs	have an environmental impact statement		
71	Materiels Management: Capital Equipment	Includes evaluation and inclusion of life cycle costs and end-of-life disposal costs.		
72	Materiels Management: Packaging	Looking at inclusion of language around proper packaging of items specifically around consumables.		
73	Materiels Management: Disposable Items:	CH has entered into a contract where single-use disposable items are reprocessed; reducing waste as well as costs.		
74	Housekeeping: Earth Day Celebrations	2010 – waste separation in cafes throughout CH; hands-on assistance by housekeeping to customers in restaurants in all sites. 2011 – education sessions of what goes in black versus yellow bags. This will be repeated during CH week – September 26–30/11.		
75	Housekeeping: Waste Management Initiatives	Includes separation of recycling, cardboard, compost, plastics, newspaper, and confidential waste. Implemented four container waste receptacles in public areas throughout CH with picture attached to make waste separation easy for all. CH policies include confidential waste management, recycle and general waste management, and biomedical waste management.		Actual amount going to landfill is much reduced.
76	Buy Local:	Buy local is attached to our food contracts.		purchase locally to minimize transportation

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
77	Pathology and Lab Medicine Solvent Recycling Initiative	The Division of Anatomical Pathology were paying approx. \$94,958.00 for reagents (xylene, alcohol and formalin) and \$21,100 for xylene and alcohol solvent disposal. Formalin was being poured down the sink. With improved technology it became feasible to recycle, which is better for the environment and it reduced reagent/disposal costs.	Capital purchase of \$155,600.00 for 4 recyclers.	FY10/11 approx. savings of \$55,000 for recycling of xylene and alcohol, includes reduced reagent purchases and disposal of waste. FY11/12 estimated savings were \$72,430.00 for the VG and DGH sites. FY 12/13 introduction of formalin recycling, further additional savings of \$11,550. Product recovery for both xylene and alcohol is 87% and 80% for formalin. Continual reagent costs and disposal are approx. \$20,800.00.
78	Laundry facility water reduction	Water discharged from the washing machines at the NSH central laundry is being directly recycled through the use of screens, filtration tanks, and UV sterilization. The system is insulated to retain as much heat as possible to reduce the inputs of makeup water and steam as much as possible. 2014	\$340,000.00	Total annual reduction in steam and water costs, including net increase in electricity required: approximately \$220,000.00.
79	Mackenzie building recommissioning	A study was done with the support of ENSC and DHW to determine the plan for recommissioning the Mackenzie building in the upcoming year. 2014–2015	\$50,000.00	Numerous measures for the reduction of energy use were identified and costs estimated.
80	Electric car charger, HI Site	A charger for fully electric cars.	Was given to CDHA. Cost approximately \$2,000.00 to install. 2011–2012	Environmental benefits. When used, reduces CO2 emissions from the atmosphere.
81	Formation of The Environmental Program July 2013	To be better environmental stewards.		Consolidate all activities related to environmental sustainability under one umbrella.
82	Paladin Security partnership with Efficiency NS & NSHA	Paladin Security working in conjunction with Efficiency NS and NSHA to shut off lights in unoccupied areas after-hours.		reduces energy consumption
83	Eastern Shore Memorial Hospital Lighting Retrofit	T-12 fluorescent lighting upgraded to T-8 fluorescent, ballasts changed from magnetic to electronic.	\$58,000.00	reduction in electricity costs of ~\$8,000 per year
84	Mackenzie and Annex VFD Repair/Replace	Non-functioning VFDs are being replaced with new units, will allow for scheduled setbacks during nighttime and evening hours.	\$120,000.00	reduction in electricity costs of \$75,000 per year

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
85	Twin Oaks Lighting Retrofit	Fluorescent lighting in high-use areas is being replaced with LED free of charge by Efficiency Nova Scotia delivery agents.	\$12,067.00	reduction in electricity costs of \$2,529 per year
86	Hants Lighting Retrofit	Fluorescent lighting in high-use areas is being replaced with LED free of charge by Efficiency Nova Scotia delivery agents.	\$35,106.00	reduction in electricity costs of \$18,183 per year
87	Cobequid Lighting Retrofit	Fluorescent lighting in high-use areas is being replaced with LED free of charge by Efficiency Nova Scotia delivery agents.	\$110,000.00	reduction in electricity costs of \$21,497 per year
88	Eastern Shore Memorial Lighting Retrofit	Fluorescent lighting in high-use areas is being replaced with LED free of charge by Efficiency Nova Scotia delivery agents.	\$8,177.00	reduction in electricity costs of \$1,700 per year
89	Musquodoboit Valley Lighting Retrofit	Fluorescent lighting in high-use areas is being replaced with LED free of charge by Efficiency Nova Scotia delivery agents.	\$10,000.00	reduction in electricity costs of \$2,000 per year
90	LED Tube Purchase and Install	Fluorescent lighting in high use areas at the QEII, Dartmouth General, and Nova Scotia Hospital is being replaced with LED.	\$74,072.00	reduction in electricity costs of \$22,604 per year, longer lamp lives
91	HI and NSH Heating Plant VFDs and Controls Condensate pump replacement	Boiler feedwater pumps and forced-draft fans equipped with new high efficiency motors and VFDs to allow their operation to be reduced during times of low or variable steam demand.	\$410,000.00	reduction in electricity costs of \$71,195 per year, lowered noise levels on the plant floors and control booths
92	Repurposed discarded linen items – Central Laundry	Linens no longer acceptable for use in healthcare are repurposed and sent to several non-profit agencies including; SPCA uses our old incontinent pads in their shelters. Sheets, spreads, pillow cases and fitted sheets are repurposed by “Give a Darn, Yarn” and made into yarn. Unclaimed personal clothing and blankets are sent to several shelters for those in need and terry products, bath towels, flannels and face cloths are repurposed as rags for several organizations.		
93	Steam line insulation	Steam distribution lines and headers at the QEII and Nova Scotia Hospital have been targeted for insulation upgrades and repairs.	\$55,000.00	\$95,746.00
94	Shift Energy monitoring system	Fee for upkeep of the energy monitoring system at the Nova Scotia Hospital and Dartmouth General.	\$14,357.00	

Inventory of Nova Scotia Health Authority Green Initiatives – July 15, 2015

	Project Title	Brief Description	Cost	Outcome / Reduction
95	DGH ventilation optimization	Ventilation fans on the main floor of the Dartmouth General have been retrofitted with controls allowing the air flow to be reduced at night.	\$130,987.00	\$43,392.00
96	Mackenzie CCA	Mechanical work completed to allow VFDs in the Mackenzie building to modulate as designed, the majority of savings are captured in project #84.	\$15,000.00	\$143,250.00
97	Steam Traps and valve jackets	Steam traps and large valves at the QEII and Nova Scotia Hospital have been targeted for insulation upgrades and repair.	\$33,585.00	\$147,166.00
98	Circulation pump replacement	10 water circulation pumps at Cobequid Community Health Centre and the Nova Scotia Hospital have been replaced with high efficiency versions.	\$8,500.00	\$4,037.00
99	Air compressor replacement	8 large air compressors at the QEII and Nova Scotia Hospital have been replaced with high efficiency versions.	\$116,997.00	\$4,037.00