

Annual Green Fund Report, 2021-22

Introduction

Nova Scotia's Cap-and-Trade Program started on January 1, 2019. The Green Fund was established in the *Environment Act* (the "Act") as the mechanism to receive and disburse proceeds generated from Nova Scotia's Cap-and-Trade Program.

The Act requires that investments made from the Green Fund meet one or more of the following criteria:

- financing measures to reduce, limit or avoid greenhouse gas (GHG) emissions;
- financing the research and development of innovative technology to reduce, limit or avoid GHG emissions;
- financing measures to mitigate the economic and social impact of measures to reduce, limit or avoid GHG emissions;
- financing public awareness campaigns respecting climate change or measures to reduce, limit or avoid GHG emissions;
- financing adaptation to climate change;
- financing the development of, and the participation of the Government of the Province in, regional and international initiatives respecting climate change.

The Act also requires the Minister of Environment and Climate Change to table a report on the use of the Green Fund no later than July 31st each year. This report fulfills this obligation.

Since 2019, the Cap-and-Trade Program has raised \$73,715,800 for redistribution back into projects and programs that address climate change and benefit Nova Scotians'. Funding has been invested across a broad range of themes (Table 1) and a large percentage (30%) is specifically dedicated to supporting priority populations¹.

Table 1-Funding distribution by theme

Funding Category	%	Total investment to date	2022	2021
Energy efficiency	44%	\$32,700,000	\$13,000,000	\$19,700,000
Renewable energy	20%	\$15,000,000	\$9,500,000	\$5,500,000
Communities	20%	\$15,000,000	\$15,000,000	
Public awareness, education, and training	6%	\$4,100,500	\$2,100,500	\$2,000,000
Electric vehicles	3%	\$2,500,000	\$2,500,000	
Climate change adaptation	3%	\$2,100,200	\$1,787,600	\$312,600
Program administration	3%	\$2,315,100	\$1,068,400	\$1,246,700

¹ Priority populations: children, youth, families, newcomers, older adults, persons with a disability, women and girls, Mi'kmaq, African Nova Scotians, and LGBTQ2+. Priority populations include groups that are more likely to experience adverse economic and social conditions (poverty, violence/abuse, lower levels of education and income, discrimination).

Total	100%	\$73,715,800	\$44,956,500	\$28,759,300
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Note: Many program investments are applicable to more than one funding category but are classified here in only one category.

Green Fund Revenues, 2021-22

In 2021, the Cap-and-Trade program held two auctions of emission allowances. The first auction occurred on June 9th and resulted in the sale of 767,000 allowances at a settlement price of \$36.71 per allowance. Total revenue from the auction was \$28,156,570. The second auction was held on November 23rd and resulted in the sale of 790,000 allowances at a settlement price of \$21.09 per allowance. Total revenue for the second auction was \$16,661,100.

In addition to allowance sales, \$138,855 in interest was accrued in fiscal year 2021-22.

In 2021-22, total revenue in the Green Fund was \$44,956,525 which was fully allocated as of March 31st, 2022.

More information on the auction results can be found here: <https://climatechange.novascotia.ca/cap-trade-regulations>

Green Fund Expenses, 2021-22

In 2021-22, Nova Scotia used the Green Fund to invest in renewable energy and energy efficiency programs, electric vehicle charging infrastructure and engagement, training and skills development in the clean economy, the Sustainable Communities Challenge Fund, climate change adaptation research, data collection, skills-development, and capacity-building. Funding announcements can be found:

- [Province Invests in Climate Adaptation Projects, Communities](#)
- [Province Invests in Energy Efficiency, Low-carbon Economy](#)

The investments in this section are presented by program grants, operational funding, and salaries and benefits. Funding amounts are rounded to the nearest hundred.

Program Grants (\$43,448,200)

In 2021-22, the Green Fund supported numerous organizations that deliver climate change projects and programs across the province, providing over \$43 million in grants (Table 2).

Table 2: Summary Green Fund Grants, 2021-22

Initiative	Fiscal 2021-22
Affordable Housing Retrofits	\$ 2,000,000
Clean Energy Training	\$ 2,000,000
Electric Vehicle Chargers for Multi-Unit Residential Buildings	\$ 1,000,000
Flood Line Mapping Program	\$ 998,500
Home Energy Assessment	\$ 8,000,000
Industrial Energy Managers	\$ 1,500,000
Next Ride – EV Engagement Campaign	\$ 1,500,000

Off Oil Pilot	\$ 1,500,000
Solar for Non-Profit Organizations	\$ 1,500,000
SolarHomes	\$ 8,000,000
Sustainable Communities Challenge Fund	\$ 15,000,000
Other small grants²	\$449,700
Total Allocation	\$ 43,448,200

Affordable Housing Retrofits – Municipal Affairs and Housing (\$2,000,000 for 1 year)

This project upgrades affordable one and two-unit public housing units in Cape Breton to be more energy efficient, reducing costs and GHG emissions. Upgrades include energy efficiency measures such as building envelope upgrades (insulation, efficient lighting, air sealing, etc.), electrical panel upgrades, smart thermostats, removal of oil heating equipment/oil tank and replacement with central heat pumps and heat pump hot water heaters. Municipal Affairs and Housing also contributed \$2,000,000 to the project. In partnership with the Clean Foundation, Municipal Affairs and Housing have completed energy assessments for each of the identified units, using funding provided by the Natural Resources and Renewables' Low Carbon Communities Program.

Clean Energy Training – Clean Foundation (\$2,100,500 for 3 years)

The Clean Energy Training Pilot was launched in 2021 with support from the Departments of Natural Resources and Renewables, Environment and Climate Change, Labour, Skills and Immigration, and the Native Council of NS. The pilot includes recruitment, design, and the development of clean energy training and skills programs. The pilot has successfully trained people from racialized and Indigenous groups to become energy advisors and clean energy tradespeople. Funding supports the expansion of the existing pilot and the development of new training opportunities and materials. A minimum of 105 additional people are expected to participate in the programs as a result of this funding.

Electric Vehicle Chargers for Multi-Unit Residential Buildings – EfficiencyOne (\$1,000,000 for 3 years)

Electric Vehicle Chargers for Multi-Unit Residential Buildings is a new pilot program with the goal to incent the installation of Level-2 smart charging stations in new and existing condos and apartments. Existing buildings will be eligible to receive up to \$2,500 per charger installation and the cost of study/design documents. New buildings receive a reduced incentive to install smart chargers. Funding for this program will accelerate the adoption of EVs in multi-unit residential buildings, enable EV load flexibility, access important data, and grow the sector. It is estimated that over 200 additional smart chargers will be installed as a result of this funding.

Flood Line Mapping Program – Municipal Affairs and Housing (\$998,500 for 1 year)

The Flood Line Mapping Program is a collaborative initiative between the Departments of Municipal Affairs and Housing, Environment and Climate Change, GeoNova and Public Safety Canada. Public Safety Canada provided \$362,220 in additional funding for this project in 2021-22. The program is working with communities across Nova Scotia to develop coastal and inland flood line maps that incorporate climate change. The program aims to reduce disaster related financial losses for all levels of government and

² Other small grants include, but is not limited to, research and engagement grants provided through the Climate Change Risks Assessment, the Climate Adaptation Leadership Program and the Atlantic Climate Services Hub.

reduce risk by developing new tools, building capacity to implement flood risk information, and enhancing climate change resilience. Flood line maps are also used to inform land use planning, the siting of new developments and infrastructure, loss prevention and emergency management, and other local level decision making.

Home Energy Assessment Program – EfficiencyOne (\$8,000,000 for 1 year)

The Home Energy Assessment program is administered by Efficiency Nova Scotia and offers participants subsidized energy assessments and cash rebates up to \$5,000 for energy efficiency retrofits. Eligible retrofits, which include heat pump installations and insulation, save Nova Scotians money on their energy bills. Funding for this foundational energy efficiency program supports Nova Scotians to reduce energy consumption, save money and reduce GHG emissions. It is estimated that this funding will benefit over 4,900 new participants.

Industrial Energy Managers – EfficiencyOne (\$1,500,000 for 3 years)

This funding expands the On-site Energy Manager Program to medium and large electricity-consuming industrial facilities. EfficiencyOne provides energy management support to an initial group of five industrial facilities over a three-year engagement period. A key component of this program is the provision of on-site Industrial Energy Managers who assists participants in addressing all needs and challenges related to using and reducing energy consumption and GHG emissions.

Next Ride – EV Engagement Campaign – Clean Foundation (\$1,500,000 for 3 years)

Next Ride is an award-winning EV engagement campaign that allows people to test drive, learn about EVs without sales pressure to buy, and find local EV dealerships. Education and marketing are essential complements to charging infrastructure and purchase incentives for encouraging Nova Scotians to purchase EVs and help achieve legislated targets.

Green Fund investment provides stable funding for 3 years and expands the campaign to:

- Target mainstream consumers,
- Develop staff expertise related to charging infrastructure to support organizations with their charging questions,
- Develop more focused approach for rural communities,
- Build better relationships with auto dealerships to ensure their staff are knowledgeable about EVs and to help ease supply chain constraints, and
- Focus on systemically underrepresented communities such as African Nova Scotian and French speaking communities.

Off Oil Pilot – EfficiencyOne (\$1,500,000 for 3 years)

The new Off Oil Pilot program works directly with homeowners who wish to eliminate their use of home heating oil. While most of the participants in existing energy efficiency programs retain oil as a supplementary or back-up heating source, this new pilot program requires all oil heating equipment (and the oil tank) to be removed and replaced with an electric-based heating system. The objectives of the pilot are to understand the barriers to completely removing oil systems from homes in Nova Scotia, including knowledge, technical, and financial barriers. The pilot will work directly with up to 100 homeowners across Nova Scotia. EfficiencyOne will have a dedicated staff resource to work directly with the homeowners and tradespeople.

Solar for Non-Profit Organizations – EfficiencyOne (\$1,500,000 for 2 years)

Solar for Non-Profit Organizations is modelled after the successful SolarHomes incentive program. The new program received \$1,500,000 to provide rebates to non-profit organizations for the installation of an eligible solar PV system. The program allows churches, food banks, and other registered non-profit organizations to receive \$0.60/Watt up to 25% of eligible costs or \$15,000, whichever is less. It is estimated that 84 participants will benefit from this funding.

SolarHomes – EfficiencyOne (\$8,000,000 for 1 year)

The SolarHomes program was launched in 2018 and offers incentives to single-family homes (detached, semi-detached, townhouses, rowhouses, and mobile homes) to install solar photovoltaic (PV) systems. The rebate makes solar PV more affordable, saves participants money on their electricity bills and reduces GHG emissions. This investment ensures that Nova Scotians' are able to access financial support to install PV systems and add more renewable electricity to our grid, gives everyone more choice for clean, affordable renewable electricity and grow businesses and create new jobs. It is estimated that 2,200 participants will benefit from this funding.

Sustainable Communities Challenge Fund – Nova Scotia Federation of Municipalities (\$15,000,000 for 3 years)

The Sustainable Communities Challenge Fund is established under the *Environmental Goals and Climate Change Reduction Act*. It aims to create competitive opportunities for communities to undertake climate change mitigation and adaptation initiatives.

In April 2022, the Province announced that the Nova Scotia Federation of Municipalities was selected through a request for proposals to develop and administer the Fund. Work is ongoing and this strategic opportunity for communities to access funding for their climate change mitigation and adaptation projects will enable them to support their visions for a more sustainable Nova Scotia.

(<https://novascotia.ca/news/release/?id=20220414003>)

Operational Expenses (\$1,032,100)

The Department of Environment and Climate Change delivers several programs that received funding in 2021-22 for operational expenses, including the Atlantic Climate Services Hub, the Climate Change Risk Assessment, the Climate Adaptation Leadership Program, and the Western Climate Initiative. Operational expenses include, but is not limited to, communications, telecommunications, and professional services. In total, these programs received \$1,032,100 in 2021-22 for operational expenses.

Atlantic Climate Services Hub (CLIMAtlantic Inc.) – Environment and Climate Change Canada, in partnership with Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland and Labrador, led the procurement process to select and establish CLIMAtlantic Inc, a non-profit organization to serve as the regional climate services hub. The organization receives resources from its provincial and federal partners to facilitate access to data and information that supports adaptation to climate change in Atlantic Canada through collaboration, networking, and partnerships. For more information, please visit <https://climatatlantic.ca/>.

Climate Change Risk Assessment – Environment and Climate Change

The Provincial Climate Change Risk Assessment is a goal established under the *Environmental Goals and Climate Change Reduction Act*. The project will provide reliable information that the province, municipalities, businesses, academia, communities, and others, can use to better understand and address climate driven risks, take advantage of opportunities, and adapt to the changing climate. The risk assessment will consider Nova Scotians' wellbeing when assessing climate change risks, including identifying risks to communities, environment, economy, and infrastructure, as well as exploring social, economic, and geographic differences.

Climate Adaptation Leadership Program – Environment and Climate Change

The Climate Adaptation Leadership Program is a skills-development and capacity-building program intended to help enhance climate resiliency amongst provincial government departments and stakeholders. The Program is partially funded by Natural Resources Canada through the Building Regional Adaptation Capacity and Expertise program.

The Adaptation Leadership Program uses a learn-by-doing approach to develop and implement specific department or sector climate change adaptation strategies. The process aims to increase preparation and action on current and future climate related risks and opportunities in Nova Scotia.

Western Climate Initiative Inc. – Environment and Climate Change

The Western Climate Initiative Inc. (WCI Inc.) is a non-profit organization that provides technical and administrative support for cap-and-trade programs, including Nova Scotia's program. WCI Inc. delivers the following services to Nova Scotia:

- Implementing a registry for participants to sign up and manage their greenhouse gas emission allowances,
- Conducting independent market monitoring and oversight, and
- Administering auction and reserve sale events, including financial administration services.

Green Fund Audit – Grant Thornton LLP

Nova Scotia Environment and Climate Change commissioned Grant-Thornton LLP to provide a third-party audit of prepared financial statements showing the Statement of Operations of the Green Fund and the receipts and expenditures of the Fund for fiscal year ending March 31, 2022. The auditor reviewed all financial records associated with the Fund in accordance with Generally Accepted Auditing Standards. Audited Financial Statements are available as part of this Annual Green Fund Report.

Salaries and Benefits- Environment and Climate Change (\$476,200)

Funding is provided for staff resources within the Climate Change Division, Department of Environment and Climate Change, to run programs including the Atlantic Climate Services Hub, The Climate Change Risk Assessment, the Climate Adaptation Leadership Program, the Green Fund, and the Sustainable Communities Challenge Fund. In 2021-22, the Climate Change Division received \$476,200 for staff resources.

Updates and Results from 2020-21 Investments

In 2020-21, the Green Fund supported energy efficiency and renewable energy programs, youth employment in environment and climate change fields, climate change adaptation and program administration. Each initiative is described in the 2020-21 Green Fund report, available here: [Annual Green Fund Report 2020-2021](#).

Energy Efficiency and Renewables

Investing in ways that reduce our reliance on fossil fuels like installing solar panels, conserving energy use, and installing energy efficient equipment in our homes and businesses are cost effective ways to reduce our GHG emissions, save money, and create economic growth and employment.

Efficiency One is a leading partner in reducing energy use and GHGs in Nova Scotia. In 2020-21 the Green Fund provided \$25,221,300 to Efficiency One for the administration of 4 programs, over a period ranging from 1 to 5 years, including:

- SolarHomes (\$5,500,000 for 3 years)
- HomeWarming (\$4,750,000 for 1 year)
- Affordable Multi-Family Housing (\$11,450,000 for 5 years)
- Small Business and Energy Solutions (\$3,521,300 for 3 years)

Most energy efficiency programs that received funding in 2020 are multi-year and ongoing but Nova Scotians are already seeing reductions in energy use (31,890 GJ) and GHG emissions (1,859 tonnes). With the measures installed (upgraded insulation, heat pumps, windows, doors, etc.), EfficiencyOne expects the 785 participants and households that used these programs in 2021-22 to realize \$15.6 million in lifetime energy bill savings (Table 3).

Table 3- Annual GHG emissions reductions, energy savings and bill savings

2021-22 GHG reductions:	1,859 tonnes CO ₂ /eq ³
Energy savings	31,890 Gigajoules
Annual lifetime energy bill savings:	\$15,640,100 ⁴

Youth Engagement and Training

The Clean Foundation completed its first year of a new 5-year agreement to run the Clean Leadership Program. The Program is focused on providing youth with experiential learning and developing the future clean economy workforce. The Program invests in “Clean Leaders” by providing meaningful work placements, professional skills training, networking opportunities and mentorship. To do this, the Clean Foundation partners with organizations across Nova Scotia who focus on environment, conservation, waste management, clean tech, active transportation, and other areas rooted in the clean economy.

³ Carbon dioxide equivalent reduced from completed activities (equipment installation) in 2021-22 fiscal year.

⁴ Lifetime energy bill savings are an estimate of the energy bill savings that will be realized from the completed energy efficiency upgrades, considering the persistence of each of the specific upgrades.

In the summer of 2021, 104 Clean Leaders were placed in a combination of in-person and virtual internships across the Province of Nova Scotia.

Through the continuation of the Indigenous Internship stream, the Clean Foundation partnered with Indigenous community leaders to offer mentorship discussion groups providing direct insight and advice to the Indigenous interns. Twenty-one youth who identified as Indigenous took part in the program.

In 2021, the Black and African Nova Scotian Internship stream was launched. Ten youth who identified as Black, African Nova Scotian or a person of African descent, took part in the program. African Nova Scotian community leaders delivered training for all interns and provided opportunities and resources for mentorship and continued learning for the Black and African Nova Scotian intern cohort.

Beyond the Green Fund, the Program receives support from several other funding partners, including the Department of Environment and Climate Change, the Department of Natural Resources and Renewables, the Department of Labour, Skills and Immigration, the Office of L'nu Affairs, Indigenous Services Canada, Canada Summer Jobs, Divert NS, and the many host employers that receive and support the internships.

Climate Change Adaptation

Governments, businesses, and communities are taking action to adapt and respond to the effects of the changing climate and prepare for future changes. The Province is supporting these efforts in a variety of ways, including investing in relevant and accessible data and research, understanding climate risks, priorities, and opportunities to act, moving this knowledge to action, and supporting adaptation planning and implementation.

Atlantic Climate Services Hub (CLIMAtlantic, Inc)

CLIMAtlantic was founded in May 2021 and has had a busy and productive first year. Activities have included updating a tool for communities focused on coastal flooding and erosion, developing communications materials and a new website (<https://climatlantic.ca/>), ensuring that relevant climate information is available to Atlantic Canadians and updating a database of climate-related data sources, along with networking and engaging with stakeholders to understand needs and opportunities. The Department of Environment and Climate Change has co-hosted the Nova Scotia node and the Climate Services Specialist has supported the climate change risk assessment, responded to data and information requests, and provided training on and improved access to climate data, reaching over 700 individuals.

CLIMAtlantic and the Nova Scotia Climate Services Specialist received 35 data and information requests, held 5 training sessions, 14 stakeholder meetings, and reached 700 individuals through online / in-person training.

Climate Change Risk Assessment

The primary research phase of the risk assessment was completed in 2021-2022 and work is underway to synthesize results and share results with Nova Scotians in 2022. This work has included completing a technical report that includes background research, updating climate projections, and conducting new quantitative analysis at the census division and provincial level on climate risks and opportunities. It also included research to explore options for assessing adaptive capacity and resilience within emerging priority areas to guide future action. The team engaged with community advisors and gathered insights

to inform communicating about climate change in ways that are relevant and meaningful to Nova Scotians.

Climate Change Adaptation Leadership

In 2021-2022, the Climate Change Division worked with four provincial government departments (Environment and Climate Change, Natural Resources and Renewables, Communities Culture, Tourism and Heritage, and Agriculture), and seven sectors (Coastal parks, Electricity, Archeology, Freshwater, Christmas Trees and Greenery, Cattle and Sheep, and Horticulture). These partners formed scan teams, drawn from across their sector or departments who participated in workshops about climate risks, designed and delivered surveys to assess system level risks and priorities, and analysed and interpreted survey findings. Over 100 workshops were held with departments and community stakeholders to support assessing unique climate risks and opportunities and developing context specific strategies.

By 2022, each partner will have produced a data analysis report that presents the priority climate vulnerabilities for their department or sector and developed a specific adaptation strategy to minimize risks and leverage opportunities. In 2022-2023, the Climate Change Division will support the transition to action and strategy implementation.