Initiatives Driving Sustainable Prosperity in Nova Scotia and EGCCRA Goals

Title	Story
Prototyping of Nova Scotia Loyal Program	On June 28th, 2022, the prototyping phase was launched for the Nova Scotia Loyal program. The program will celebrate everything Nova Scotia has to offer - our food, our culture, our vibrant communities, our creativity, ingenuity and can-do spirit. The prototyping phase will encourage Nova Scotians to offer ideas and opinions on the development of the program and will include a team visiting stores and markets across the province this summer to research consumer behaviour and hear directly from Nova Scotians. In addition to the work of the prototyping team, the government will be working with retailers of all sizes and has also launched an engagement campaign to hear from people about Nova Scotia Loyal branding, including the creative look and feel.
Nova Scotia Clean Technology for Agriculture Program	The Nova Scotia Clean Technology for Agriculture Program was established in 2021. The province provided a \$5 million investment to help farmers and value-added food processors carry out projects to reduce greenhouse gas emissions and adopt sustainable, clean technologies. This program focuses on strengthening food security for Nova Scotians by encouraging projects that increase year-round food production and offset food imports. The Department will support the adoption of clean technologies that help reduce greenhouse gas emissions, improve energy efficiency, promote sustainable and clean growth, and increase value-added agricultural production.
Agriculture Equity, Diversity and Inclusion	The Department of Agriculture established the Agriculture Equity, Diversity and Inclusion Unit in 2021 to work with underrepresented communities in the agriculture industry (Indigenous people, African Nova Scotians, immigrants, women, and people with disabilities) to increase their participation. Two permanent staff positions that are designated for an African Nova Scotian and Mi'kmaw lead initiatives.
	Some initiatives already underway support students from under- represented communities through the <u>Agriculture in the Classroom</u> – Nova Scotia program, the implementation of the <u>Grow Where You're Planted</u> <u>scholarship for African Nova Scotians</u> , and the <u>Honouring Mi'kmaw Roots</u> <u>scholarship for Mi'kmaw students</u> who are pursuing a degree in agriculture at a Canadian university. <u>Career promotion videos</u> and other resources have also been developed and are available online.
	The Department is working with the Department of Education and Early Childhood Development regarding childcare access for farmer parents. Work is also underway to facilitate partnerships with lending organizations that focus on under-represented groups to help the Nova Scotia Farm Loan Board better attract and serve clients from these communities.

Agriculture Energy Partnership





The Agriculture Energy Partnership between the Department and EfficiencyOne has helped reduce agriculture's electricity and fossil fuel footprint through the creation of an Onsite Energy Manager position dedicated to Agriculture at EfficiencyNS. Results show that between September 2017 and February 2022, there were 183 on-site assessments, \$1,020,798 per year in electricity saved, \$976,515 in incentives directly to farmers, and 4044 tonnes/y of CO2 reduced. This program is funded through the Federal- Provincial Canadian Agricultural Partnership.

Geothermal Initiative





The Nova Scotia Department of Agriculture has partnered with the Department of Natural Resources and Renewables and the Department of Fisheries and Aquaculture on a Geothermal Initiative. An investment of \$40K has leveraged an additional \$145K. Phase one involved mapping the geothermal potential of the province. The report and maps are publicly available. Phase two is an economic assessment of direct use of Geothermal heat in Nova Scotia.

The Soil and Water Sustainability Program









The Soil and Water Sustainability Program offers funding for best management practices to agriculture producers that are beneficial for climate change mitigation and adaptation. The Soil and Water Sustainability Program provides grants for best management practices for erosion control, enhancing riparian and agro-ecosystem health, improved manure management, sustainable agricultural water supply and water well management (wells, springs), improved water practices and efficiencies, field water management, winter pasture management, and farmyard run-off control. This program is cost-shared through the Canadian Agricultural Partnership with the federal government. In 2021-2022, the Department of Agriculture provided 80 producers with over \$525,000 in departmental cost-shared support to implement climate change mitigation and adaptation projects.

The Department of Agriculture Climate Adaptation Strategy







The Department of Agriculture (Department) was the first department to participate in the Climate Adaptation Leadership Program offered through the Department of Environment and Climate Change (ECC). The Department of Agriculture has developed and is now implementing its Climate Change Adaptation Workplan. The plan addresses five outcomes relating to: climate data access/sharing, programs, staff awareness, service interruptions, and industry preparedness. Through funding provided by the Department of Environment and Climate Change, an Agricultural Climate Change Coordinator at the Department of Environment and Climate Change and an Assistant Coordinator at Perennia, are leading implementation of the plan. The commodities of horticulture, cattle and sheep, and Christmas trees are currently participating in the Climate Adaptation Leadership Program and are developing their own climate adaptation strategies, which will help them prepare for the impacts of climate change.

<u>Upgrades for</u> <u>Bay of Fundy</u> <u>Dykeland System</u>







In 2019, an 8-year, almost \$50-million capital project began that will upgrade 16 of the most vulnerable agricultural dykeland sites in the province. These sites provide flood protection to tens of thousands of residents and businesses, historical and world heritage sites, Mi'kmaq communities and more than 20,000 hectares of farmland. The project components include dyke topping or aboiteau upgrades and a combination of both depending on the marsh. Climate Change predictions will be used to establish new dyke construction heights to prevent over topping and new flow requirements for aboiteau structures, including vulnerability assessment and flood mapping projections.

The Municipal Flood Line Mapping Project







Nova Scotia is one of the provinces most vulnerable to the impacts of flooding and climate change, notably through the combination of land subsidence, sea level rise, and increased precipitation. Most of the development in the province is located along the coastline or a major watercourse, meaning that the issue of flooding is a significant concern in Nova Scotia. One of the tools available to Municipalities to protect public safety is the development of flood maps. Municipal Planning Strategies and Land Use By-laws can then be developed to control the type of development that may take place within flood-prone areas.

The Municipal Flood Line Mapping (MFLM) Project endeavours to create a set of standards that will apply across the entire province, creating consistency in how flood line mapping is carried out. It is structured to provide guidance to municipalities as they engage consultants to carry out the work, while providing specific technical specification that consultants will follow. The standards were developed in collaboration with academics, experts at all levels of government, as well as the private sector. The end goal is to ensure that all municipalities are applying the Statement of Provincial Interest on Flood Risk to areas in their jurisdiction that are likely to flood. In the current phase of the project the Department of Municipal Affairs and Housing is working with Municipalities to gather the necessary preliminary information and hire qualified consultants to carry out the mapping using the technical specifications.

The Innovation Rebate Program







The <u>Innovation Rebate Program</u> is an ongoing program with an annual investment of \$12 million. It encourages companies to make capital investments in innovative and sustainable processes. Administered by <u>Nova Scotia Business Inc.</u>, the program offers companies up to a 25 percent rebate on eligible project costs for approved projects. Project costs must be between \$350,000 and \$15 million.

AscendBio





<u>AscendBio</u> is a business acceleration program that enables companies in the industrial biotech and agritech sectors to scale up their technologies and business operations. The program leverages the Verschuren Centre's scientific and technical expertise and infrastructure, in partnership with Innovacorp's sector knowledge, business supports and international networks.

Through AscendBio, participating companies are helping address two of the world's biggest sustainability challenges: mitigating climate change and feeding the world's growing population by piloting innovations related to disease detection, crop biostimulation and protection, and sustainable ingredients for industry to replace petroleum-based products.

Establishment of an Emergency Preparedness Work Force for the Department of Health and Wellness and Nova Scotia Health

The Department of Health and Wellness' Public Health Branch will be hiring a Director, Public Health Emergency Management this fiscal year. This will be a new position within the Department. Responsibilities of this position will include a focus on climate change and working closely with partners from other Departments and organizations. The Department of Health and wellness has also funded a manger of Emergency Management in Public Health, Nova Scotia Health. This will add to the system wide capacity to plan and respond to events.



Greening Red Seal Programs



The <u>Nova Scotia Apprenticeship Agency</u> is participating on a national committee to establish a process to add 'green' concepts into occupational standards for the Red Seal trades (national trades programs). Training programs will continue to be updated to include relevant curriculum to support a clean economy. Over the coming year, the committee will begin with the construction trades.

Labour Market Development Programs





The Department of Labour, Skills and Immigration funds labour market development programs, such as the Workplace Innovation and Productivity Skills Incentive (WIPSI), Workplace Education Initiative (WEI), Sector Council Program, and One Journey Initiative. These labour development programs support green jobs by:

- supplementing employer contributions to train full time staff to improve productivity and profitability;
- helping employees develop new skills to take advantage of clean economy opportunities;
- increasing innovation;
- adapting to new technology, machinery, equipment, or work processes;
- · increasing inter-provincial and international competitiveness; and
- fostering workplace diversity.

Safety of Technology in the Face of Climate Change



The Department of Labour, Skills and Immigration's Technical Safety Division is responsible for regulations and standards governing the safety of technologies such as electrical equipment, fuels, boilers and pressure vessels, power engineering, cranes, and elevators. The Division plays an important role in relation to climate change and reductions of greenhouse gas emissions and carbon.

The most current safety standards take climate resilience into consideration – for example, the ability of tower cranes to withstand severe weather events. When adopting new standards and regulations, the Division factors in clean energy requirements for existing and new technologies such as solar, wind, smart grids, and electric vehicles. As a regulator and licensing authority for technicians who work with traditional fossil fuels, the Division will be closely involved in supporting the transition toward use of cleaner fuels and energy sources.

Biodiversity
Challenge - A
Collaborative
project between
the Department
of Natural
Resources and
Renewables and
the Department
of Education and
Early Childhood
Development









The Department of Education and Early Childhood Development (EECD) is collaborating with the Department of Natural Resources and Renewables (NR&R) to create the Biodiversity Challenge for grade 10 classes. The Biodiversity Challenge is a scenario-based learning experience that replicates the decision-making process that department staff engage in through an Integrated Resource Management team (IRM) approach. Students are simultaneously exploring issues related to resource management, Netukulimk, sustainable prosperity, renewable energy, climate change. cultural and historical importance of areas, ecosystem services, biodiversity, and species at risk. Students engage in career exploration as they learn about the roles of the various IRM team members. Communication and critical thinking skills are honed as students practice decision-making and collaboration throughout this student-centred inquiry. This inquiry-based resource will be comprised of documents as well as a video created by the EECD's Learning Resources and Technology Services team in collaboration with NR&R members in the field. Other Branches/Divisions from EECD that are involved include: Education Innovation, Programs and Services Branch (Curriculum Development, Career Pathways, Learning Resources and Technology Services), French Programs and Services Branch, and Mi'kmaw Services Branch. In addition to Provincial Government employees, a team of teachers from across the province are advising and guiding the resource development. The teachers represent the Tri-County, Chiqnecto Central, and Halifax Regional Centres for Education.

Buzzworthy Funding Program Helps Blueberry Growers 'Bee' Successful







The government is investing an additional \$100,000 in the Blueberry Pollination Expansion Program to support blueberry growers who keep bees to pollinate their crops.

"Beekeepers' pollination services are essential to the production of blueberries and other crops in Nova Scotia. To grow more blueberries, we need more bees to pollinate the plants – it's that simple," said Greg Morrow, Minister of Agriculture. "These additional funds help address a need and encourage growers to invest in keeping more hives."

Blueberry growers may apply for funding to expand the number of hives they keep or purchase equipment to improve efficiency in their bee operations.

The program is one of 14 Canadian Agricultural Partnership programs now accepting applications for 2022. The partnership is a five-year federal-provincial-territorial cost-shared initiative that supports farmers and agribusinesses. In Nova Scotia, the annual investment is \$7.4 million.

Efficiency in the Seafood Processing Industry



Nova Scotia's seafood processing industry is a key economic driver for the province. Enabling the modernization of this industry through the adoption of new technologies to make it more efficient is a priority to ensure the province meets its ambitious climate change goals.

The Department of Fisheries and Aquaculture has contracted Efficiency Nova Scotia to hire an Onsite Energy Manager to create energy savings and reduce greenhouse gas emissions in the seafood processing industry. The Onsite Energy Manager completes technical audits for seafood processing clients and department-owned fish hatcheries to identify recommended upgrades for improved efficiency. They also oversee these upgrades. This project is approximately at the halfway mark and continues to be guided by a steering committee consisting of department and industry representatives.

Progress since April 2021:

- 127 site visits, resulting in ~85 audits/projects (exceeding the original target of 25 audits/projects)
- Actual GHG Emissions saved to date: 2,089 tonnes (metric)
- Actual Operational cost savings to date: \$779,017
- Incentives paid out as of Jan 25, 2022: \$391,982
- Est. total external funding for projects completed as of Jan 25, 2022: \$2,112,484

This project will continue until March 2023.

Nova Scotia Schools Celebrate First Black Excellence Day





On June 17, 2022, Nova Scotia students, teachers and school staff marked their first Black Excellence Day. Black Excellence Day recognizes and celebrated Black student achievements, stories, art, innovations, and people and communities.

"Black Excellence Day contributes to realizing the vision begun in the BLAC (Black Learners Advisory Committee) Report on Education by highlighting the brilliance, gifts and talents of Black students. Black Excellence Day honours the first-voice accounts of Black educational leaders historical and current, and their allies throughout the province, as well as the educational opportunities which are inspiring African Nova Scotian students to achieve their promise and potential." -Marlene Ruck Simmonds, EdD, Executive Director of African Canadian Services, Education and Early Childhood Development

Clean Power Road Map Final Report Release







On March 11, 2022, the Clean Power Planning Committee (co-chaired by Nova Scotia Intergovernmental Affairs and Natural Resources Canada) released the Clean Power Roadmap for Atlantic Canada, which outlines how the federal government and the Atlantic provinces can collaborate to phase out coal fired power and increase the generation and sharing of clean electricity in the region. Starting in 2019, this Atlantic Growth Strategy initiative involved the Government of Canada, with the Atlantic provincial governments, their respective utilities, and input from the Government of Quebec and Quebec Hydro. The work and report consider regional commitments to electrify the economy, reduce Greenhouse Gas Emissions and reach Net-Zero, as well as opportunities to increase the generation and use of clean power through an enhanced regional electrical transmission grid (the Atlantic Loop). The next stage involves multi-lateral work to further explore the regulatory and financing aspects of potential projects under the initiative.

Repurposing Space for Affordable Housing and Wellbeing









Lack of affordable housing is a major concern for Nova Scotians. It contributes to homelessness, poverty, and food insecurity. This long-standing issue was highlighted during the pandemic when higher numbers of individuals were released from provincial correctional facilities, as a public heath measure, but many experienced housing insecurities impacting their ability to access the support services needed in the community. The Department of has partnered with several organizations and departments to address this issue. Justice, Health and Wellness, Municipal Affairs, and Housing and Community Services is working with the John Howard Society, Elizabeth Fry Society, and Affordable Housing of Nova Scotia (AHANS) to find solutions. Funding has been provided in the amount of \$92,250 for 2020-21 and \$369,000 annually for 2021-22 and 2022-23 for the John Howard Society of Nova Scotia to operate a supportive housing pilot project in Pictou County. The program is located at 199 Elliott St. Pictou, and was previously used as a Detox facility by the Department of Health. The building has been divided into three separate wings: one for the residents, another used for administrative space and programs, and the last wing will be used for potential partnerships with community organizations. This section of the building has a fully functioning industrial sized kitchen. The John Howard Society has had discussions with some community partners about using this space to provide services to the residents and broader community. Additionally, the Department of Community Services has had discussions with the John Howard Society about using this space to fund a 10-week trades-based employability program that the residents and other individuals involved in the justice system can attend. The John Howard Supportive Housing HUB opened January 3rd, 2022. Correctional Services has provided in-kind supports in the form of training and staff assistance in building preparations.

Supporting Indigenous Youth in the Clean Economy







The Office of L'Nu Affairs provides funding to the Clean Foundation for it's Aboriginal Leadership Program, which partners with Indigenous organizations and provides 15-week internships to university-level interns in the province. Every year the Clean Foundation aims to not just broaden the number of Indigenous interns that are part of the program, but also to broaden the scope of Indigenous information and training provided to all interns in their Clean Leadership Program, and the resources available to the Indigenous interns.

The Future of Work









The Government has established flexible work arrangements in response to the widespread shifts in how and where people work. This supports climate action by reducing the greenhouse gas footprint of the civil service. Flexible work arrangements also support increased well-being and quality of life, rural areas by supporting growth outside the urban core, thriving communities and opportunities for employees in rural areas to be considered for advancement in the public service that they may not have previously had access to.

Energy Efficiency of Long-Term Care Facility Builds





The Department of Seniors and Long-term Care has taken a first step in 2022 to mandate increased energy efficiency requirements for new nursing homes and residential care facility developments in Nova Scotia. Through an amendment of the Facility Development and Approval Process (FDAP), new buildings must exceed the current National Energy Code of Canada standard by a minimum 25%. This will better position the sector to positively contribute to the overall Provincial goals of 53% reduction from 2005 levels in GHG emissions by 2030 and net zero by 2050.

Housing Nova Scotia









Housing Nova Scotia is contributing to sustainability in the province in a variety of ways. First, they have developed a 5-year Energy Management Strategy 2021-2026 with the same provincial and the federal greenhouse gas emissions reduction targets for 2030 and 2050. This strategy will address financial and operating cost reduction; optimization of building envelopes, systems, and equipment; enhanced tenant living environment; and strengthened community leadership and environmental stewardship.

Also, Housing Nova Scotia is currently in year three of a four-year greening project to improve the efficiency of the affordable Public Housing Stock. The province has contributed \$11 million in cost matched funds as part of the Investing in Canada Infrastructure Program for investments in insulation, new windows, new roofs, photo-voltaic and heating and ventilation system upgrades.

Over the next 4 years, Housing Nova Scotia will complete upgrades in over 220 one-and two-unit Public Housing properties located in Cape Breton Regional Municipality (CBRM). This includes fuel switching from oil fired heating systems to ducted heat pumps targeting 50% reductions in energy consumption, building envelope upgrades, and electrifying domestic hot water systems.

Finally, Housing Nova Scotia, with Nova Scotia Community College, is conducting a study which explores the feasibility of community solar gardens and vehicle fleet electrification for Housing Nova Scotia's affordable housing properties in Halifax Regional Municipality.

Silvicultural Guide for the Ecological Matrix







Implementation of the new forest practices guide, as part of the work to ensure a sustainable forestry industry in Nova Scotia, continues to be implemented. The Silvicultural Guide for the Ecological Matrix applies to Acadian Forest on Crown land and is being phased in gradually. The guide outlines the types of forest practices that can be used within matrix – also known as mixed forest – areas on Crown lands. In these areas, the triad model of ecological forestry prioritizes biodiversity conservation through lower impact forestry and reduces clearcutting.

As of February 1, 2022, the Department of Natural Resources and Renewables has required that new harvest plan proposals follow most of the practices in the new guide. The requirement also applies to proposals that were submitted before February 1 but not approved by that date. These harvest proposals now reflect the latest requirements when they are posted on the Harvest Plan Map Viewer for public consultation. Effective June 1, 2022, the requirement to follow practices in the new guide has been extended to most harvest plans that had been approved using previous guidelines. In the few cases where meeting that time frame is not possible, licensees must work with the Department of Natural Resources and Renewables to transition their harvest plans as quickly as possible.

Next steps toward full implementation of the new guide include more training for people in the forestry industry as well as developing a software solution to translate proposal data into final harvest plans (prescriptions) that follow all practices in the guide. Implementing the Silvicultural Guide for the Ecological Matrix is a key step required to implement the triad model of forestry.

Increasing Renewable Energy







The Department of Natural Resources and Renewables made amendments to the Electricity Act to support our fight against climate change and adopt renewable sources of energy. Changes were made in support of a thriving solar industry which will help us in our goal of generating 80 per cent of our electricity through renewables by 2030. Amendments to the Electricity Act will ensure Nova Scotians can generate their own renewable power, such as with solar panels and gain more control of their energy use.

Attracting Low-Cost Innovative Solutions





In February, the Department of Natural Resources and Renewables launched a Request for Proposals to attract low-cost and innovative solutions to supply 10% of Nova Scotia's electricity from wind and solar. That is 350 megawatts of electricity from renewables. Once these projects are up and running, they will reduce Nova Scotia's greenhouse gas emissions by more than 1 million tonnes each year. This represents the largest potential by far to reduce greenhouse gas emissions through any single government action. It supports the Government's goal of achieving a 53% reduction in greenhouse gas emissions by 2030 and becoming net-zero by 2050.

Electric Vehicle Charging Stations





As Nova Scotia greens its grid, it is making more and more sense to also advance the electrification of transportation.

It is a key component of reducing our greenhouse gas emissions, and the Government of Nova Scotia is working with the federal government to advance EV adoption through incentives, education, and building charging infrastructure across Nova Scotia. In January, the Department of Natural Resources and Renewables announced \$500,000 to install more electric vehicle charging stations across Nova Scotia. In there 2022-23 budget, they are investing another \$2 million to expand EV charging stations across the province. That investment in infrastructure will give people reliable options so they can use their electric vehicles anywhere in Nova Scotia.

From Stakeholders in Various Sectors

Title Story Solar Energy The Province is funding a solar energy generation system for the lobster Generation for storage facility at Eskasoni Cold Logistics. The investment of more than the Lobster \$128,000 will support the development and installation of a 583-kilowatt Storage Facility ground-mounted solar energy system that will reduce overall energy demands at Eskasoni Cold and lower energy costs. This project will reduce greenhouse gas emissions and Logistics. provide training opportunities for community members in the installation and maintenance of solar energy systems. The federal government is contributing more than \$1.1 million to the project while the Eskasoni First Nation is contributing more than \$245,000. "Eskasoni First Nation is committed to finding ways to grow our renewable energy sector and find sustainable solutions that are environmentally conscious. We are moving towards green energy commercially and residentially and we are proud to do so. As Mi'kmag, we are always keeping the future generations at the forefront of our decision making in an effort to ensure environmental stewardship." -Leroy Denny, Chief of the Eskasoni First Nation. Antigonish The Teasdale Apothecary offers reusable glass vials for prescriptions. pharmacy tackles While they're being used in some pharmacies in other parts of Canada, the waste with Pharmacy Association of Nova Scotia believes the Teasdale Apothecary is reusable the first to try the system in Nova Scotia. Patients at the pharmacy have glass vials an option. They can use plastic vials from an environmentally–friendly Canadian company, or opt into the bottle program. The program diverts waste from landfills. Indigenous-Led In the spirit of truth and reconciliation, the stewards of Windhorse Farm, Charity works a beautiful property of nearly 200-acres that includes pristine old growth with Land forest located on Wentzell Lake [Atuomkuk] in the LaHave River [Pijnuiskag] Stewards to watershed near Bridgewater [Sin So'sepe'katik], Nova Scotia, have returned **Acquire** the land to the Mi'kmag. Through a combination of purchase and gift, Windhorse Farm has been transferred to the Ulnooweg Education Centre, an Indigenous-led registered charity serving Atlantic Canada. Windhorse Farm will become a place of learning, healing and gathering. It will be a place to connect with Mother Nature, to learn about culture, language, ecology, health, science, and to heal and grow. The primary focus will align with land-based learning and healing for people of all ages, but especially for children and youth to explore and learn from the land. The ancient forest will be protected forever, and Windhorse Farm will be a place for the Indigenous communities to welcome all who wish to come and learn.

Uprooted Market and Cafe









Located in Musquodoboit Harbour, Uprooted Market & Café aims to improve the accessibility of local and sustainable food options for the Eastern Shore of Nova Scotia. They sell locally grown and produced goods and are champions of community-led initiatives like the food bank and Old School Food Pantry. In addition to improving accessibility to local and sustainable food options, Uprooted Market & Café is also committed to the environment. They buy and employ locally and work to reduce food and plastic waste. To reduce food waste they redirect food scraps by donating them for compost and animal feed.

Energize Bridgewater – Energy Poverty Reduction Program









The Town of Bridgewater manages the **ENERGIZE BRIDGEWATER project**. The project's mission is to help lower energy costs for Bridgewater's homeowners, tenants, landlords, and businesses. By 2050, Bridgewater's green, self-supportive economy will be securely powered by clean and efficient energy systems. The community's conscious investments into energy infrastructure, equipment, training, and education will make energy affordable and accessible for all members of the community and contribute to the town's prosperity and resilience in the face of a changing climate and world. The project is:

- connecting those who need help to community services
- retrofitting homes and buildings to lower monthly bills
- building a local energy investment hub
- helping residents install and get credit for renewable energy
- setting up an energy information system
- helping everyone to easily get around town.

Tidal Energy







Sustainable Marine harnesses the power of moving water, to offer a clean alternative to diesel or coal. Recently it delivered the first floating in-stream tidal power to Nova Scotia's grid. Nova Scotia has allocated circa 30MW of capacity via demonstration permits and berths at Fundy Ocean Research Center for Energy for developers to demonstrate the effectiveness, cost and environmental effects associated with this new form of energy generation. These demonstration projects provide developers with a pathway to reduce costs on route to commercial projects with regulatory framework already in place to deliver up to 300MW of installed capacity. It further aligns with the region's net-zero commitments to accelerate the phase-out of coal-fired electricity by 2030.

Bridge into Agriculture Program





Bridge Into Agriculture is a program aimed at meaningful career development and establishing employment pathways in diverse communities, particularly with people who are experiencing underemployment or who are unemployed. This project serves as a bridge for African Nova Scotian communities to explore entrepreneurship and career pathways in local agriculture.

Growing Forests











Growing Forests is a company that reduces carbon in the atmosphere by preserving at risk private forests and growing them to store more carbon. It is a community of citizen-shareholders investing in the conviction that ecological forest management pays superior returns to our communities, ecosystems and shareholders. Growing Forests identifies private forests that are at risk of being clearcut and preserve them through acquisition. To fund these acquisitions, they raise community investment using the Community Economic Development Investment Fund program, allowing large numbers of regular citizens to invest small amounts of money to preserve the forests they call home. Growing Forests' citizen-investors receive a return on their investment through the sale of carbon offset credits to carbon neutral corporations and log sales from their ecological forest harvests. Growing Forests is helping to ensure that Nova Scotian forests are put to work capturing and storing carbon immediately and, in the process, growing the provincial green economy.

Rayleigh Solar Tech





Rayleigh Solar Tech is a climate tech start-up based in Dartmouth, Nova Scotia. The company is working to commercialize perovskite solar cells: a solar technology that is cheaper, lightweight, and more flexible than traditional silicon solar technology. Commercialization of this technology will help reduce reliance on fossil fuels, which will help combat climate change.

Rayleigh Solar Tech [was founded in 2016 by Dr. Sam March. Since then, Rayleigh has grown from a single scientist working in a lab at Dalhousie University to a diverse team of 15 scientists, engineers, and business professionals with their own space at The Bays at Innovacorp. Possible applications for Rayleigh's technology include electric vehicles, internet of things (smart objects), mass transit, commercial transportation, marine, aviation, and even utility-scale solar.

In the spring of 2022, Rayleigh finished extensive renovations in their space, and commissioned their state-of-the-art pilot manufacturing and research and development facility. The centrepiece of the facility is the industrial slot-die coater, which was purchased from a supplier in California. This industrial coating machine allows Rayleigh to create solar modules that are up to 30cm wide on a continuous roll-to-troll basis. The solar film can then be cut to size based on it's intended application. The facility also includes all the equipment that Rayleigh's research team needs to continue optimizing their technology.

This new facility will allow Rayleigh to facilitate innovative new industry collaborations, and better support their current collaboration with Magna International, a Canadian Tier 1 automotive manufacturer. Rayleigh and Magna are working together on a research project to explore the possibility of creating solar integrated automotive panels.

In the spring of 2022, Rayleigh received federal funding from Sustainable Development Technology Canada (SDTC) and NGen Canada. This funding, combined with the continued support of Innovacorp will ensure that Rayleigh Solar Tech is able to continue on the path to commercialization.

Pop-Up Bike Hub











The <u>Pop-Up Bike Hub</u> is the newest initiative of the Ecology Action Centre's Active Transportation Team. It is a project driven by the needs and desires of communities to have bicycle repair spaces for their residents. A fundamental component of the program is not only providing a bike repair service and knowledge, but also to build relationships and capacity within the community. Since its pilot in 2020 this project has collaborated with 24 communities across the province and has been requested by many more. It tuned up or repaired over 900 bikes in 2021 alone.

Towards Greater Well-Being





Through the Nova Scotia Quality of Life Initiative, Engage Nova Scotia aims to prompt fresh perspectives and new action—by all of us—that better balances our social, environmental, cultural and economic priorities. Since the release of the NS Quality of Life Survey Results in 2020, Engage has been working to get them into the hands of as many people as possible. This continues to be done through tools, data-sharing agreements, workshops and presentations, partnerships, collaborative analyses, and clear communications. Making sense of the results, give them meaning, and bring data points to life through stories, ideas, and actions requires everyone around the table. This is why this initiative continues to be led by Engage with the support of many.

Bringing Sustainable Development Champions Together







Engage Nova Scotia is leading a <u>3-year Sustainable Development Goals</u> (<u>SDGs</u>) <u>Program</u> in support of their vision for a more vibrant, inclusive, equitable and resilient province. Under this program, four areas of work were recently launched:

- SDG Map: A crowd-sourced interactive map that shows projects, people, resources, and organizations who are advancing the SDGs in NS
- Partnership opportunity: Engage Nova Scotia is partnering with organizations to springboard their ideas for community projects by guiding them through a facilitated process that is community-informed, data-driven, and supported by resources. Partnerships to date, include:
 - Spencer House: Partnership to explore, design, and implement a project that will pair seniors and newcomers in HRM
 - Schools Plus: Partnership to explore, design, and implement a school cupboard program across 5 schools in Cape Breton
 - Proud Pairs: Supporting them in their 2SLGBTQIA+ mentorship program
- SDG Network: A growing group of folks across the province who are paying attention to, curious about, or working with one or more of the 17 SDGs. It's a network of people who meet monthly to share ideas, stories, resources, projects, research, and best-practices about the SDGs.
- Survey Snapshots: An infographic report that shares NS Quality of Life Survey results relevant to each SDG in an approachable and eye-catching way.

Atlantic Central:
Moving from
Corporate Social
Responsibility to
taking a ValuesBased Business
Strategy

Atlantic Canada is the trade association for credit unions in Atlantic Canada. One of the ways Atlantic Central has helped build communities in the past has been through their cooperative social responsibility (CSR) program, which was mainly focused on charitable giving. Now they're going a step further – integrating social and environmental impact directly into their business strategy so they can "live their cooperative values every day". This has led to a shift in how the company thinks about community building. Atlantic Central wants to ensure the cooperative values of fairness, honesty, trust and community mindedness are not only reflected in their corporate giving but are also reflected throughout their business operations in a purposeful and strategic way.

CLIMAtlantic







CLIMAtlantic facilitates access to regionally relevant climate information and supports its effective use in planning and decision making for New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador. They are user-driven, focusing on the needs of Indigenous communities, academia, provincial governments, municipalities, local service districts, non-profits, industry, and land-owners. CLIMAtlantic works with all regional and local groups to ensure there is a strong network of collaboration, and data and tools are easily accessible. CLIMAtlantic was created in partnership with the Canadian Centre for Climate Services (CCCS), all Atlantic Canada's Provincial governments, and the support from the Ecology Action Centre, New Brunswick Environmental Network (NBEN), and Aster Group. The Canadian network of climate hubs in partnership with CCCS includes Ouranos (Quebec), the Pacific Climate Impacts Consortium (BC), and ClimateWest (Prairies). Regional climate data hubs support efforts to make all communities more resilient to extreme weather events.

Nova Scotia Community College







At Nova Scotia Community College's 14 campus and multiple community learning sites, sustainability is woven into nearly all aspects of student and employee life. From photovoltaic arrays that feed into the province's electrical grid and a multitude of electric vehicle charging stations, to a robust recycling program that diverts 75% of garbage away from landfills, NSCC takes its commitment to positively impacting the environmental sustainability of the province very seriously.

And, with an equally strong commitment to innovation, NSCC's novel approaches to sustainability are gaining international recognition.

Read more at nscc.ca/EGCCRA

Divert Nova Scotia: Retrofitting Operations for Sustainability





In the spring of 2021, consultant group CBCL was hired to complete an assessment of the carbon impact of our operations at the Kemptown Processing Facility (Phase 1). Recommendations were made to reduce our carbon footprint. As a result, the following investments are being implemented:

- Replacement of all linear fluorescent lighting with LED (Light Emitting Diode) lighting
- Upgrade existing rooftop HVAC (Heating, Ventilation & Air Conditioning) units with high efficiency heat pumps
- Upgrade the controls for the infrared propane heaters
- Convert from propane forklifts to Electric forklifts
- Install a 100kW PV (Photovoltaic) solar panel array to generate 72% of the building's total energy consumption. 100kW is the maximum allotted system for commercial solar projects.

These measures are expected to reduce GHG emissions by 77% with a payback period of 15 years. Divert NS is now having an assessment completed of the balance of its facilities and operations (Phase2) and will have more to report on next year.

Confederacy of Mainland Mi'kmaq and Netukulimk









The <u>Confederacy of Mainland Mi'kmaq</u> (CMM) is a not-for-profitorganization that proactively promotes and assists Mi'kmaw communities' initiatives toward self determination and enhancement of community.

All the projects and initiatives under their Aquatic Resources & Fisheries Management and Environment & Natural Resources departments use two-eyed seeing and promote and restore Netukulimk. Netukulimk is a concept that grants us the ability to use the gifts of our lands to sustain ourselves without jeopardizing the ecological integrity of our natural resources. The CMM implements all of its programs and initiatives while using the two-eyed seeing approach which includes viewing all of the elements of the natural world as interconnected because so long as these elements remain healthy the people will remain healthy.

Some projects include:

Salmon Snorkel Surveys and Netukulimk – As part of the East River Monitoring Project, Mi'kmaw Conservation Group staff members carry out snorkel surveys in both the East River of Pictou and River Philip to estimate the abundance of adult Atlantic salmon returning to these rivers to spawn. The salmon are an important traditional species to the Mi'kmaw that has been traditionally harvested for thousands of years. It is a priority of the Mi'kmaq to restore salmon populations in Nova Scotia, as the loss of a species is the loss of the Mi'kmaw ability to practice their culture and traditions, it results in the Mi'kmaq losing a part of who they are as a people.

The Mi'kmaq Forestry Initiative – restoring and promoting the concept of Netukulimk when harvesting forest products on large land tenures across the province that are managed by the Assembly of Nova Scotia Mi'kmaq Chiefs

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Species at Risk Recovery – Applying Two-eyed seeing for the recovery of species such as Black Ash by using western science and Mi'kmaq perspectives and knowledge to conserve the culturally significant species.

The Earth Keeper Network – The Nuji Kelo'toqatijik Earth Keeper Network consists of Mi'kmaw community members, called Earth Keepers or Nuji Kelo'toqaijik, who take a leading role in protecting the natural world through environmental monitoring and reporting, the education on Mi'kmaw rights and responsibilities, and the revitalization and intergenerational sharing of Mi'kmaw Knowledge. Additionally, Earth Keepers play a central role in upholding and educating about Mi'kmaw environmental laws, concepts, and principles, such as Netukulimk, Ms~t No'kmag and Etuaptmumk.

The Amu Esmit project is working towards building agriculture and apiculture capacity in communities by being guided by Netukulimk to utilize the gifts given from the earth, while sustaining our future generations.

Mi'kmaq Climate Monitoring Initiative – Enhancing community capacity to monitor indicators of climate change by utilizing western knowledge techniques such as weather monitoring equipment and citizen science alongside Mi'kmaq traditional knowledge, providing a two-eyed seeing/Etuaptmumk approach.

Coastal Restoration





<u>Clean Foundation's Clean Coasts team</u> uses nature-based approaches, restoration, and adaptation techniques to manage degraded sites as the result of rising sea-level and coastal erosion resulting from climate change. The work done by the Clean Coasts team has been focused on three main areas near or around the Northumberland Shore. They have included:

- Marshall's Crossing: Clean Coasts team and our partners identified a failing culvert in Marshall's Crossing, Pictou County that was restricting both tidal and freshwater flow as well as fish passage. In September 2019, a bridge was installed in the area to restore a more natural flow to the system, while improving tidal wetland habitat and fish passage.
- Sitmu'k Clean Coasts team and their partners have been working with Pictou Landing First Nation to restore the shoreline of an important beach in the community called Sitmu'k (Moodie Cove/Lighthouse Beach area). We did this by taking restorative measures such as placing coir logs and reef balls along the shore to help capture sediment to rebuild the shoreline and planted new salt grass plugs. (Work was completed in summer 2021). Community Elders were involved with this project
- Ferguson's Cove: The movement of the tides in this degrade salt marsh in the Brule Point area, near Tatamagouche, have been restricted because of an old dyke blocking tidal flow and holding water on the surface. The Clean Coasts team strategically placed runnels (shallow channels that allow water that is stuck on the marsh surface to drain in a controlled way) in the marsh to improve tidal flow and allow for vegetation to grow. (Completed in summer 2021)

This work would not have been possible without the collaboration of the Confederacy of Mainland Mi'kmaq.

Environmental Education Fun



The <u>Clean Foundation's Education and Engagement team</u> work to inspire environmental change through outreach, engagement and education opportunities that bring a multitude of programs around climate awareness and action to students and youth. This year:

- More than 900 students across Nova Scotia schools tuned into <u>Clean's</u>
 <u>'I Wonder'</u> webinar series designed to teach youth to ask tough questions about renewable energy, the greenhouse gas effect, our coastlines and the weather. These webinars were newly designed to support educators throughout another school year during the COVID-19 pandemic, as part of a hybrid model offering programs virtually and in-person.
- Over 3,000 students across the province joined <u>Eddie</u>, the <u>environmental</u> <u>superhero cat</u>, on <u>his Litterless Quest</u> to learn the importance of keeping their neighbourhoods clean.
- 3 new educational summer camp programs were created: Water Ways, Carbon Nation and Characters of Change.
- 217 kids attended camps in partnership with 6 community organizations.
- The Clean Climate Action School and Clean Energy School was delivered to 653 students in 24 classrooms at 10 schools.

Electrify Nova Scotia Rebate Program



The <u>Electrify Nova Scotia Rebate Program</u> celebrated its one-year milestone in February. Since it launched in 2021, Electrify has saved residents and business owners in the province more than \$2 million, handing out 2,254 rebates this past year alone for both EVs and e-bikes.

Next Ride



Next Ride is a not-for-profit low carbon transportation initiative. The Next Ride team is touring the province to help Nova Scotians experience the excitement of an electric ride and discover all the ways electric vehicles are more affordable and versatile than ever. This past year, the Next Ride team held more than 65 test-drive events across the province, helping over 1100 Nova Scotians feel the thrill of driving electric.

Advancing the Blue Route







Bicycle Nova Scotia has partnered with the Department of Public Works and is supported by the Departments of Community, Culture, Tourism and Heritage and Natural Resources and Renewables to implement the Blue Route. The Blue Route is a planned connected active transportation route throughout the province. Bicycle Nova Scotia is also working with six municipalities through the Blue Route Hubs project to implement municipal active transportation plans. To date, over 500 kilometers of Blue Route have been designated on rural roads and trails. This initiative will increase active transportation by Nova Scotian's and increase opportunities for sustainable tourism.

Bicycle Friendly Business Certification







Through the <u>Bicycle Friendly Business Certification</u>, the private sector can contribute to supporting low carbon and active transportation. Currently over 100 businesses are recognized in Nova Scotia by this certification. Initiated by <u>Bicycle Nova Scotia</u>, this program has the potential to demonstrate how active transportation and sustainable prosperity for small businesses can go hand in hand.

Reducing Emissions of Lobster Vessels







NetZero Atlantic and Oceans North have partnered on a project to assess how the lobster fleet can help meet Nova Scotia's commitment to emissions reductions. An initial study will assess the emissions profile of the fleet, alternative technologies and fuels that could support the transition to net zero, examining the regulations and policies needed to incentivize this transition and explore economic benefits associated with building a modern lobster fleet in Atlantic Canada.

Advancement of Hydrogen







Everwind Fuels will work to establish a green hydrogen hub in Point Tupper, re-using a previous tank farm and creating green energy jobs for an industrial area of Cape Breton. These facilities will create new clean energy jobs, help support Nova Scotia's carbon emissions reduction targets, and establish Nova Scotia as a global leader in the production of green hydrogen for domestic and export markets.

Farmers' Markets of Nova Scotia Cooperative











The Farmers' Markets of Nova Scotia Cooperative advances growth and prosperity for Nova Scotian member farmers' markets and their vendors through training, resources, advocacy, promotion, and community. Their Nourishing Communities program gives participants an anonymous alternative currency—or "food bucks"—that can be redeemed at any vendor stall at their local farmers' market. Last year 27 farmers' markets participated and over \$260,000 worth of food coupons were distributed to over 550 low-income households. This program helps to address food insecurity, build community and support small, local businesses.

Theme	Goal	Responsible Department
Climate Action	Greenhouse gas emissions in Nova Scotia are, by 2030, at least 53 per cent below the levels that were emitted in 2005.	Natural Resources and Renewables/ Environment and Climate Change
	Greenhouse gas emissions in Nova Scotia are, by 2050, net zero by balancing greenhouse gas emissions with greenhouse gas removals and other offsetting measures.	Natural Resources and Renewables/ Environment and Climate Change
	Creation of a 'Climate Change Plan for Clean Growth" which addresses:	Environment and Climate Change
	a) achieving the greenhouse gas emission targets set out in the Act	
	b) adapting to the impacts of climate change and building a climate resilient Province	
	c) accelerating the integration of sustainable and innovative technologies and approaches	
	d) clean inclusive growth	
	e) releasing an annual progress report and reviewing and renewing the Climate Change Plan within five years.	
	Develop and implement a zero-emission vehicle mandate that ensures, at a minimum, that 30% of new vehicle sales, for all light duty and personal vehicles in the province will be zero emission vehicles by 2030. Develop and implement supporting initiatives.	Natural Resources and Renewables
	By 2030, 80 per cent of electricity needs being supplied by renewable energy.	Natural Resources and Renewables
	Support, strengthen and set targets for energy efficiency programing while prioritizing equitable access and benefits for low-income and marginalized Nova Scotians.	Natural Resources and Renewables
	Complete and release a province-wide climate change risk assessment in 2022, with updates in 2025 and every five years thereafter.	Environment and Climate Change

Climate Action	Phase out coal-fired electricity generation by the year 2030.	Natural Resources and Renewables/ Environment and Climate Change
	Provincially adopt the 2020 National Energy Code for Buildings within 18 months of it being published by the Government of Canada.	Municipal Affairs and Housing/ Office of the Fire Marshal
	The government will support the well-being of Nova Scotians through active transportation by:	Public Works/ Natural Resources and Renewables
	a) completing Core Active Transportation Networks that are accessible for all ages and all abilities in 65 per cent of Nova Scotian communities by 2030	
	b) developing a Provincial Active Transportation Strategy by 2023 to increase active transportation options.	
	The government will demonstrate leadership and contribute to greenhouse gas emission reductions by ensuring that:	Public Works
	a) any new build or major retrofit in government buildings, including schools and hospitals, that enters the planning stage after 2022, is to be net-zero energy performance and climate resilient	
	b) to encourage landlords who currently lease office space to government, to transition existing office space to meet net-zero energy performance	
	c) to prioritize leased office accommodations in buildings that are climate resilient and meet net-zero energy performance starting in 2030; and	
	d) to decrease greenhouse gas emissions across government owned buildings by 75%, by the year 2035.	
	Work with Nova Scotian municipalities, First Nations and African Nova Scotian communities to take immediate and long-term action on their climate change priorities.	Environment and Climate Change/ Municipal Affairs and Housing/ L'Nu Affairs
	Build climate change adaptive capacity and resilience by requiring climate adaptation planning across every government department.	Environment and Climate Change

Lands and Forestry	By 2023, implement an ecological forestry approach for Crown lands, consistent with the recommendations in "An Independent Review of Forest Practices in Nova Scotia" prepared by William Lahey in 2018, through the triad model of forest management that prioritizes the sustainability of ecosystems and biodiversity in the Province. Also by 2023, identify the percentage allocation of Crown land dedicated to each pillar of the triad model of forest management.	Environment and Climate Change/ Natural Resources and Renewables
	Conserve at least 20% of the total land and water mass of the Province by 2030 as protected areas and other effective area-based conservation measures, including Indigenous Protected and Conserved Areas, in a manner consistent with national reporting criteria.	Environment and Climate Change/ Natural Resources and Renewables
Clean Air and Water	 Ensure that Nova Scotians have clean air to breathe by: a) managing Nova Scotia's air zones consistent with the Canadian Ambient Air Quality Standards b) reviewing and updating Nova Scotia's air emission targets and ambient air standards by 2025 and continuing to review and update as required or every five years. 	Environment and Climate Change
	Improve drinking water safety and water quality in lakes, rivers, and groundwater by: a) developing by 2026 provincial water quality objectives that will guide activities that affect water quality b) addressing by 2026 key barriers Nova Scotians face to testing and treatment of rural wells.	Environment and Climate Change
Environmental Assessment	Modernize the environmental assessment process by 2024, including consideration of: a) cumulative impacts b) diversity, equity and inclusion c) independent review d) Netukulimk e) climate change.	Environment and Climate Change

Aquaculture and Food	Support low-impact, sustainable aquaculture through a licensing process that weighs environmental considerations and includes provincial regulation for potential environmental impacts, animal welfare and fish health.	Fisheries and Aquaculture
	Develop a Provincial Food Strategy for enhanced awareness, improved access, and increased local production to meet a goal of 20 per cent local consumption by 2030.	Agriculture
Circular Economy and Waste	Encourage the growth of the circular economy, including expanding extended- producer responsibility, reducing single-use plastics, and reducing solid waste disposal rates to no more than 300 kilograms per person per year by 2030. A plan will be developed by 2023 to meet this solid waste goal, including specific actions and interim targets.	Environment and Climate Change/Economic Development/ Municipal Affairs and Housing
Supporting Business	Demonstrate leadership in sustainable procurement by increasing innovation, sustainability, diversity and inclusion in government procurement, as well as consider community benefits attached to procurements.	Service Nova Scotia and Internal Services
	Actively encourage innovative, sustainable and green businesses to establish or relocate to the province and promote an environment to enable innovative, sustainable and green business start ups.	Economic Development
	Work with small businesses across the province and in all sectors to get their feedback on potential ways to further enable them in taking action to reduce emissions, including through rebates, targeted investments and other supports.	Economic Development
Youth	Support youth in Nova Scotia in engaging in the clean economy through sustainability-based youth employment leadership programs in Nova Scotia.	Environment and Climate Change

Training and Education	Collaboratively work with businesses, the community college and the labour sector to modernize apprenticeship programs in Nova Scotia so the province has the trades people needed to meet the demands of the clean economy.	Labour, Skills and Immigration/ Advanced Education
	Promote and support climate change education and sustainability through the knowledge and teachings of Netukulimk and environmental stewardship through ongoing curricula renewal and the development of inclusive and accessible resources and professional learning that incorporates diversity and honours Etuaptmumk.	Education and Early Childhood Development
Diversity, Equity and Inclusion	In 2022, initiate work with racialized and marginalized communities to create a sustained funding opportunity for climate change action, and support community-based solutions and policy engagement.	Office of Equity and Anti-Racism Initiatives/ Environment and Climate Change
	Office of Equity and Anti-Racism Initiatives/Environment and Climate Change	Office of Equity and Anti-Racism Initiatives/ Environment and Climate Change/ L'Nu Affairs