PROGRESS REPORT

A CLIMATE CHANGE ACTION PLAN FOR PRINCE EDWARD ISLAND

MAY 2018-MARCH 2019

Prince Edward Island
CANADA

PrinceEdwardIsland.ca/**climatechange**

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Message from the Minister

It is my pleasure to provide an update to the Climate Change Action Plan 2018-2023.

Islanders recognize climate change as an urgent issue and want to see action. Taking bold action is not new to Islanders, we have always been environmental leaders. We had the first province-wide Waste Watch system in Canada and we are the first province to eliminate single-use plastic check out bags. Our children, who will inherit the challenge of climate change, are asking us to be visionary. In partnership with citizens, communities and the federal government, we must take action.

Islanders want us to look at the opportunities to protect our environment as well as the social and economic benefits associated with greening our economy. As a government, we want to be open to good ideas, to share credit and put the interests of Islanders at the heart of every decision. We are making progress. Together, we can create a better future for generations to come.

The Hon. Brad Trivers

Minister of Environment, Water and Climate Change

INTRODUCTION

Last year, the Government of Prince Edward Island released a five-year Climate Change Action Plan. This Plan is helping us reduce greenhouse gas (GHG) emissions and better prepare for a changing climate. The Action Plan includes commitments in five areas, with 32 action items to be completed over a five-year period (2018-2023).

This Progress Report provides an update on activities and achievements from May 2018- when the Climate Change Action Plan was released-to the end of March 2019.

Follow us on **social media** to learn more about what we're doing to address climate change

Online:

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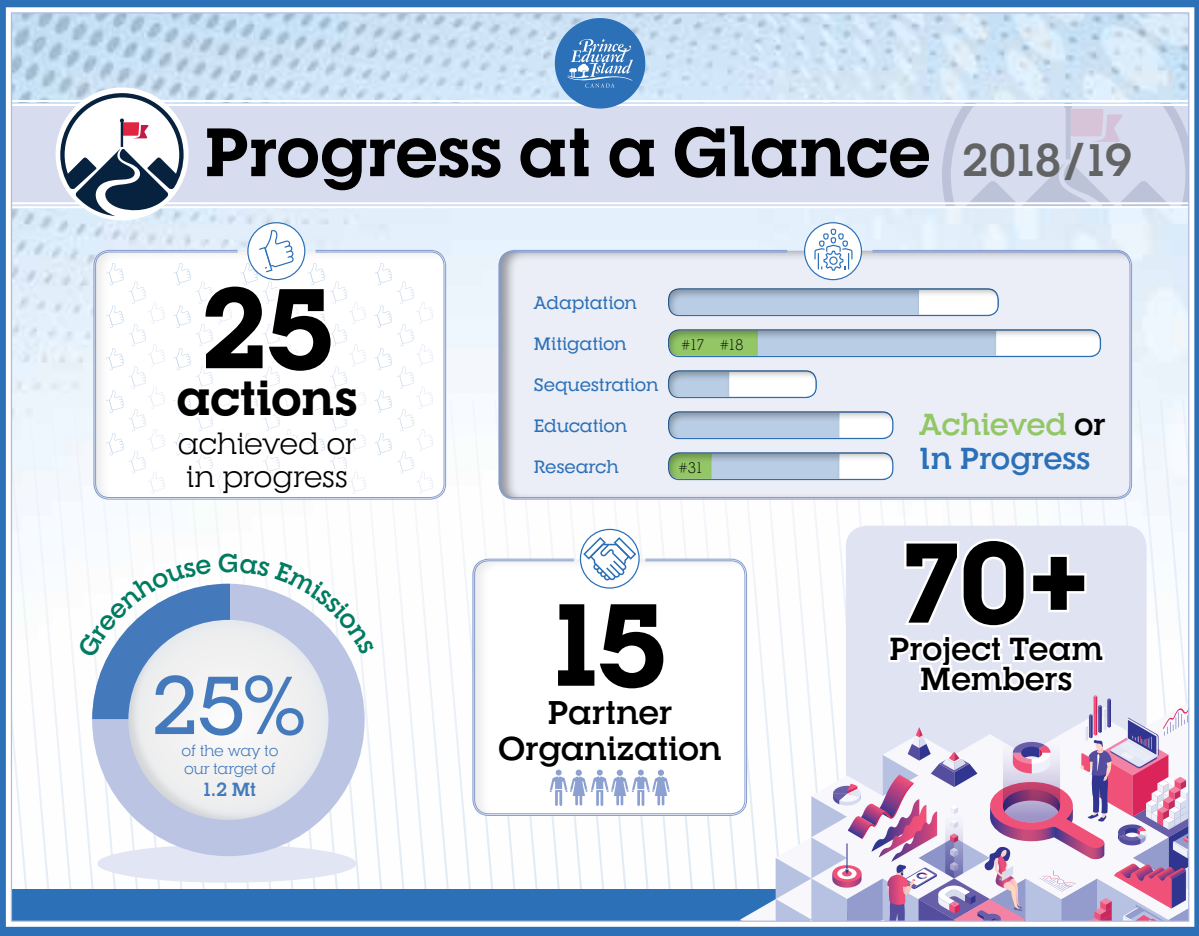
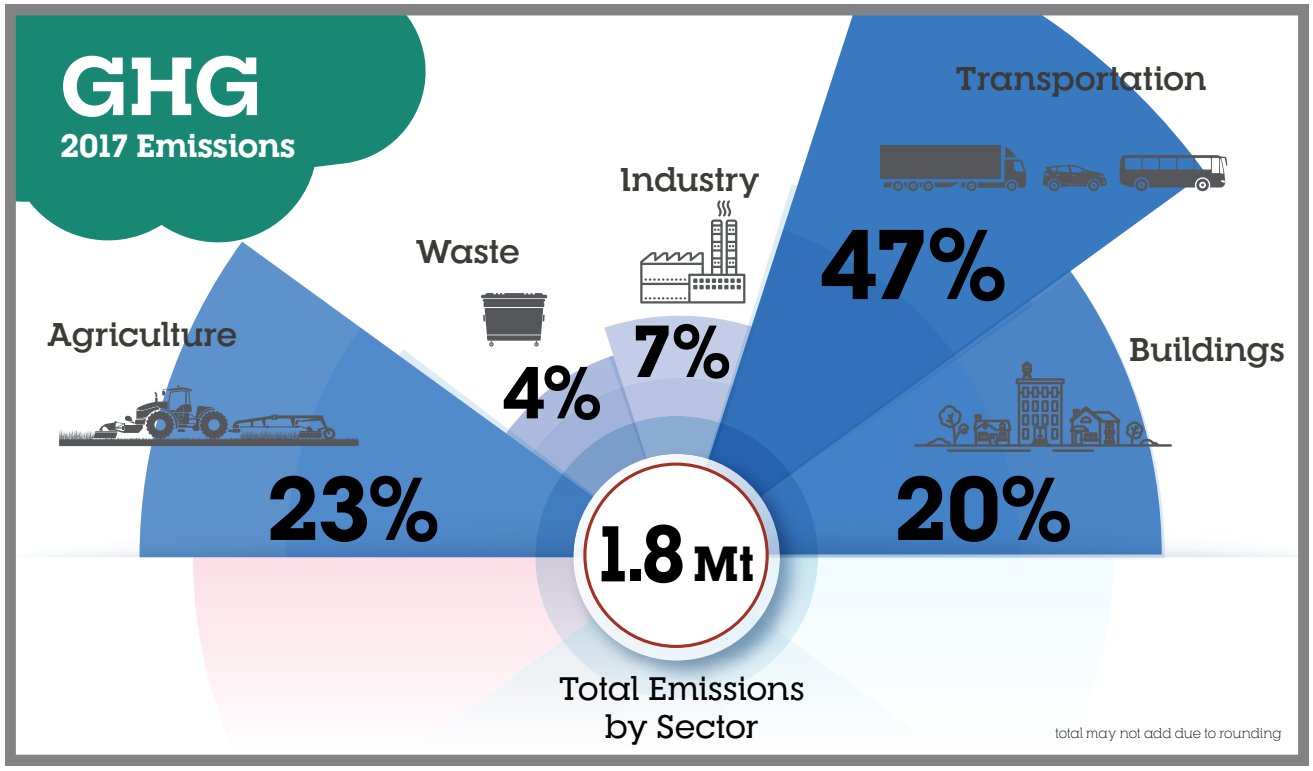
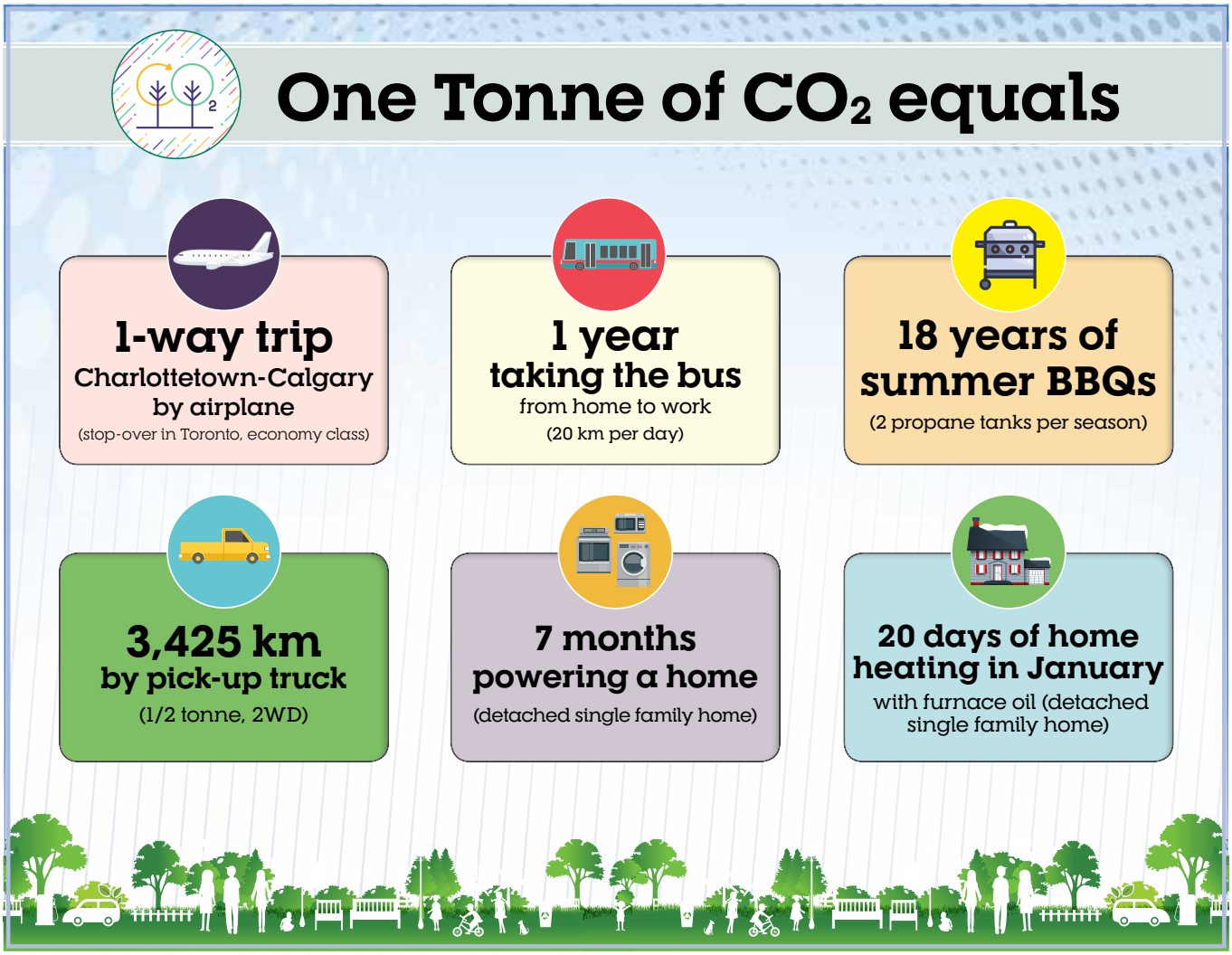


Greenhouse Gas Emissions

Prince Edward Island's GHG emissions were 1.8 megatonnes (Mt) in 2017. Emissions have been about the same since 2013, even though our population and economy have grown.



Greenhouse Gas Emissions



Cars, trucks, SUVs and other vehicles are the largest sources of GHG emissions in Prince Edward Island. Emissions from vehicles continue to grow each year. This should not come as a surprise, as we are buying twice as many vehicles as we did 15 years ago and we are more likely to buy a truck or an SUV than a small, more efficient car.

The good news is that emissions from buildings are shrinking. Residents, business owners and institutions are using energy more efficiently and switching to cleaner fuels.

Next April, information on Prince Edward Island's 2018 GHG emissions will be publicly available from Environment and Climate Change Canada. The release of this information will tell us if we are making progress in our efforts to reduce GHG emissions.

Greenhouse Gas Emissions Target

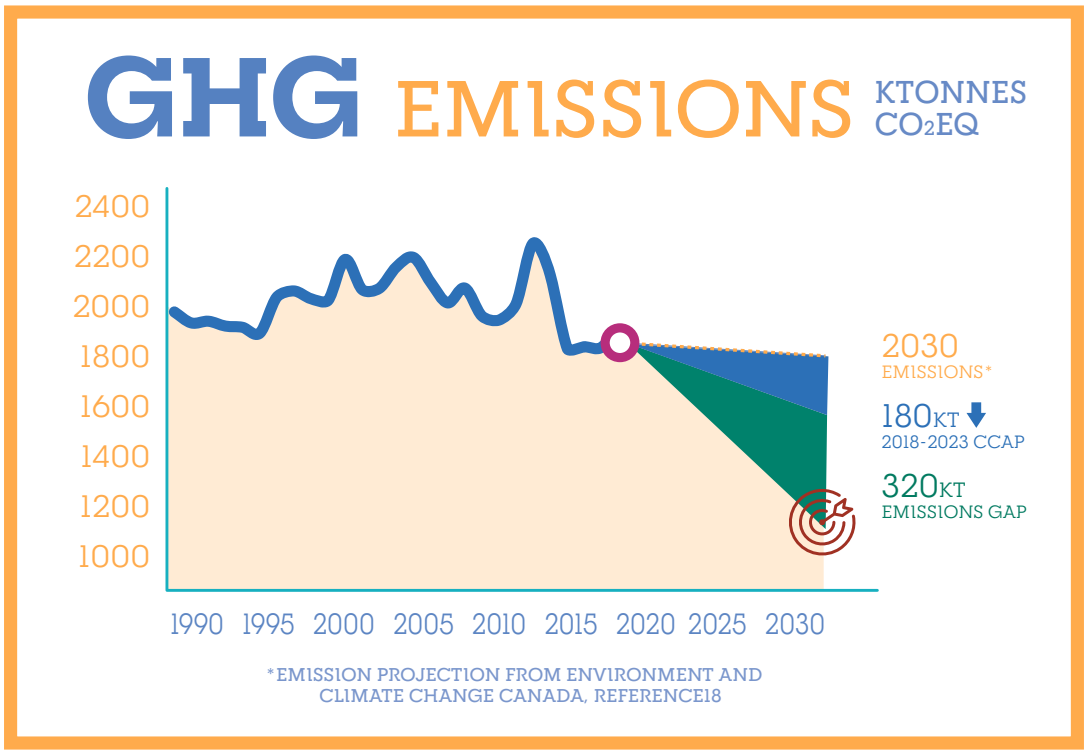
The Climate Change Action Plan set a goal of reducing GHG emissions by 30% below 2005 levels by 2030 (1.4 Mt CO_2e). This target was consistent with global efforts to limit global warming to 2°C.

Several months after the adoption of this target, the Intergovernmental Panel on Climate Change recommended that global efforts should focus on limiting warming to 1.5°C rather than 2 °C and that urgent action is needed within the next 11 years. Allowing global temperature to increase more than 1.5°C will significantly worsen the risks of drought, floods, extreme heat, and poverty for hundreds of millions of people around the world.

In response, the Legislative Assembly of Prince Edward Island adopted a new, more ambitious GHG reduction target of 1.2 Mt CO_2e by 2030, which is a 40% reduction below 2005 levels.

Currently, Prince Edward Island's GHG emissions are 10% below 2005 levels, or 25% of the way towards the newly adopted target. Current efforts are expected to lower emissions by 0.18 Mt CO_2e (or 180 kilotonnes) by 2030. Efforts to reduce emissions by an additional 0.32 Mt CO_2e (or 320 kilotonnes) will be needed to meet the new target.

Meeting this target will not be easy, but it is possible if we all work together. A Special Legislative Committee was created to find ways to meet this new target.



ADAPTING TO CLIMATE CHANGE

Prince Edward Island is finding new and innovative ways to adapt to a changing climate. Projects are underway to help us better understand coastal flooding, build better roads, bridges, buildings and other infrastructure, and protect our land and water resources.

Inter-tidal Reef Project Wins Award

The PEI Department of Transportation, Infrastructure and Energy received Engineers PEI's 2018 Environment Award for using a new approach to protect coastal infrastructure. The Souris Causeway, an important gateway to the town and a growing tourist attraction, is vulnerable to coastal erosion and flooding. The newly installed inter-tidal reef is growing the beach, protecting the causeway, and providing habitat for fish and plants.

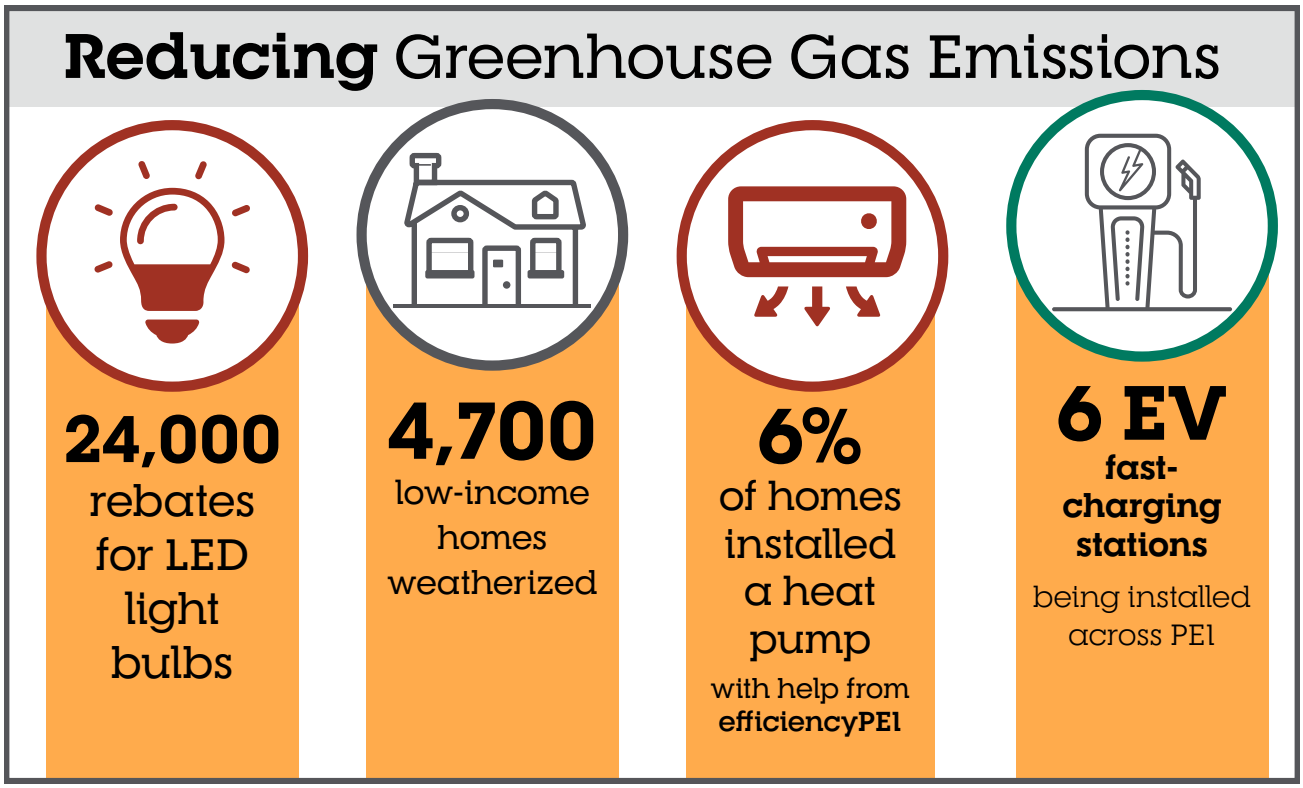
ACTION	PROGRESS to March 2019
1. Identify vulnerable public assets and infrastructure along the coast	The Province began identifying and assessing provincially owned roads, bridges, buildings, and other assets that are vulnerable to erosion and flooding. Coastal hazard maps are being developed (see Education and Capacity Building Section) to help with these assessments.
2. Retrofit, relocate, or protect critical and vulnerable public infrastructure to address the impacts of climate change, as is feasible and cost-effective	Climate change is considered in the design, retrofit, relocation, and protection of new and existing provincially-owned roads, bridges, buildings and other assets. This work continued using the most up-to-date information available. Solutions to address flood and erosion risk are being developed for five different locations (Borden-Carleton, Georgetown, Oyster Bed Bridge, Souris, Victoria) identified through Action Item #1.
3. Introduce new hazard guidance to inform development decisions and design in coastal areas	Over 58,000 properties across the Island are in the coastal area. New developments in these areas should be designed to avoid or limit the impact of coastal flooding. Guidance is being created to help builders and developers keep living spaces above coastal flood levels, both now and in the future.
4. Pilot green infrastructure projects for stormwater management and shoreline protection	Protecting coastal roads and bridges from erosion and flooding can be difficult. Recently, the Province tried a new approach, building innovative, inter-tidal reefs in Souris to protect the coastline and causeway. The project won the 2018 Environment Award from Engineers PEI *(see Inter-tidal Reef Project Wins Award)*.
5. Model the impacts of climate change on streams, wetlands, and drinking water resources	The impacts of climate change on streamflow and groundwater was studied in the Bear, Mill, and Wilmot rivers. This research showed changes in snowpack and snowmelt will cause annual stream flow and groundwater levels to increase slightly in the winter and early spring. A small decrease in stream flow will happen in the summer.
7. Increase the province's protected land base in order to connect habitats and enhance biodiversity	Prince Edward Island has established a goal of protecting 7% of PEI's land by the end of 2020. This year, PEI added 91 hectares of land in Prince County and 108 hectares of land in Kings County. This brings the total protected land to 3.6%.
8. Increase collaboration with watershed groups and other community organizations, building local capacity to improve habitat resilience	The PEI Watershed Alliance, the Federation of Agriculture and the PEI Potato Board are working together to encourage agricultural practices that better protect the environment, manage climate change, and help farm families build a strong future. The PEI Agri-Watershed Partnership (PEI-AWP) was formed in the Winter of 2019 and includes staff from the provincial Departments of Agriculture and Land and Environment, Water and Climate Change.

ADAPTING TO CLIMATE CHANGE

Next Steps

- **An assessment of vulnerable public assets and potential solutions will be completed. This will inform decisions on design, retrofit, relocation, or protection of current and future public infrastructure.**
- Guidance on keep living spaces above coastal flood levels will be shared.
- **The Souris inter-tidal reefs project will be monitored to see how well it is working. Similar adaptation projects are being considered for other coastal locations.**
- The research on the impacts of climate change on streamflow and groundwater will be reviewed by other experts, with the intention of publication in a scientific journal. This helps the work reach a bigger audience, will ensure the research is conducted properly, and its findings are credible.
- **An additional 2,000 hectares of land will be sought for inclusion in PEI's protected land base in 2019-20.**
- The PEI-AWP will develop a list of beneficial management practices, criteria for identifying on-farm high-risk areas, and opportunities to pilot practices with farmers.

Reducing Greenhouse Gas Emissions



Reducing PEI's GHG emissions will require government, residents, businesses and industries to **work together**.

Lowering emissions that come from our buildings and transportation system will be *key to meeting our GHG target.*

ACTION	PROGRESS to March 2019
9. Provide more opportunities to reduce their energy consumption and switch to lower-carbon energy systems and technologies by offering new and expanded programs and services through efficiencyPEI	**efficiencyPEI** expanded their programs and services for residents and businesses in the first year of the Action Plan, including: • *New Home Construction Incentive[NEW] (ENERGY STAR® or R2000 standard)* • *Home Insulation Rebates* • *Energy Efficient Equipment Rebates (heat pumps, water saving devices, biomass heating devices, and other energy saving product)* • *Energy Efficient Appliance Rebates (refrigerators, washing machines, toilets)* • *Winter Warming (air-sealing and energy efficient upgrades to low-income Islanders)* • *Home Comfort (deep retrofits for low-income Islanders)* • *Business Energy Rebates (equipment)* These programs and services have been very popular, reducing emissions by 12,000 tonnes in 2018-19. Almost $6 million in incentives and rebates have been provided to nearly 4,500 Islanders.
11. Develop initiatives that contribute to a more sustainable transportation system	A Sustainable Transportation Committee-with members from six government departments-was established to identify and develop initiatives. The committee conducted public and stakeholder consultation and received more than 200 submissions. This feedback is being used to draft a Sustainable Transportation Action Plan.
12. Design and install a province-wide electric vehicle charging network to meet the needs of both residents and visitors to Prince Edward Island	Federal and provincial funding support was secured to build PEI's first level 3 electric vehicle fast charger network. Six public locations-O'Leary, Summerside, Borden-Carleton, Charlottetown, Wood Islands, and Souris-were chosen.
13. Install 20 additional biomass heating systems in public buildings	Biomass heating systems were chosen for four public buildings across PEI-West Royalty Elementary, Westwood Primary, ME Callaghan Intermediate, and a combined plant for Kensington Intermediate Senior High School and Queen Elizabeth Elementary.
14. Increase the use of electric vehicles in its light-duty vehicle fleet	The Province has a fleet of over 360 passenger vehicles. These include cars, vans, SUVs, light duty and heavy duty pick-up trucks. The fleet is being converted to electric and alternatively fueled vehicles. In 2018-19, this included three electric and two hybrid vehicles.
16. Work to achieve the goals of the Pan-Canadian Framework and, through relative pricing on cleaner energy, mitigation efforts and clean growth, building on PEI's existing record of low emissions	Carbon pricing legislation (Climate Leadership Act) was introduced during the Fall 2018 sitting of the legislature. Carbon pricing took effect on April 1, 2019. PEI continues to work with federal, provincial and territorial colleagues on implementation of the Pan-Canadian Framework.
17. Adopt the federal backstop for industrial emitters	The Province joined the Government of Canada's Output-Based Pricing System (OBPS) for large industrial emitters. The federal OBPS applies to all PEI industries that emit more than 50 kilotonnes of CO_2e per year. Smaller facilities-those that emit between 10 and 50 ktonnes of CO_2e per year-may voluntarily participate.
18. Ensure exemptions are applied to marked fuel in the agriculture and fisheries sectors	The *Climate Leadership Act* (Division 3) exempts farmers, fishers and aquaculturists from carbon pricing when purchasing marked fuel for their operations.

Reducing GREENHOUSE GAS EMISSIONS

Next Steps:

- **efficiencyPEI** will introduce additional energy efficiency programs within the next year. These will include a solar energy incentive and additional programs and services for businesses.
- **A Sustainable Transportation Action Plan will be released within the next year, focused on reducing GHG emissions from transportation. The Action Plan will focus on urban and rural transit, vehicles and transportation, active transportation, and community design and infrastructure.**
- The Province will install 6 level-three electric vehicles charging stations. Level three or fast-charging stations are more powerful and can charge an EV much faster than at level two stations. There are over 30 level-two charging stations and the Province is exploring ways to add additional stations.
- **Four biomass heating facilities will be installed and begin operating.**
- Additional electric and hybrid vehicles will be added to the government fleet.

Carbon Sequestration

Our natural environment is able to absorb carbon dioxide from the atmosphere. Carbon sequestration (the removal and storage of carbon from the atmosphere) plays an important role in reducing PEI's GHG emissions.

ACTION	PROGRESS to March 2019
19. reforest areas, targeting abandoned or marginal agricultural land to increase biodiversity and enhance carbon sequestration	The Carbon Capture Tree Planting program-an initiative to plant native tree species on about 250 ha of abandoned or marginal public and private land-was launched earlier this year. At the end of March 2019, 40 landowners had applied to participate with 120 ha available for planting.

Trees are Part of the Solution

Did You Know

Prince Edward Island has about 250,000 hectares (ha) of forest on public and private land. These trees naturally remove carbon dioxide (CO_2) from the atmosphere when they grow. The carbon stored in these trees is returned to the atmosphere when used as firewood or allowed to decompose. However, trees can be managed and harvested efficiently so that carbon can continue be stored in buildings and wood products.

CARBON SEQUESTRATION

Next Steps:

- Seventy ha of trees will be planted in 2019-2020 through the Carbon Capture Tree Planting program. As well, the J. Frank Gaudet Nursery will begin growing trees for planting in the following year.

- **The Province will begin prepare for the 2020 Land Use Inventory. This inventory will provide information for the development of the 2020 State of the Forest Report.**

Education and Capacity Building

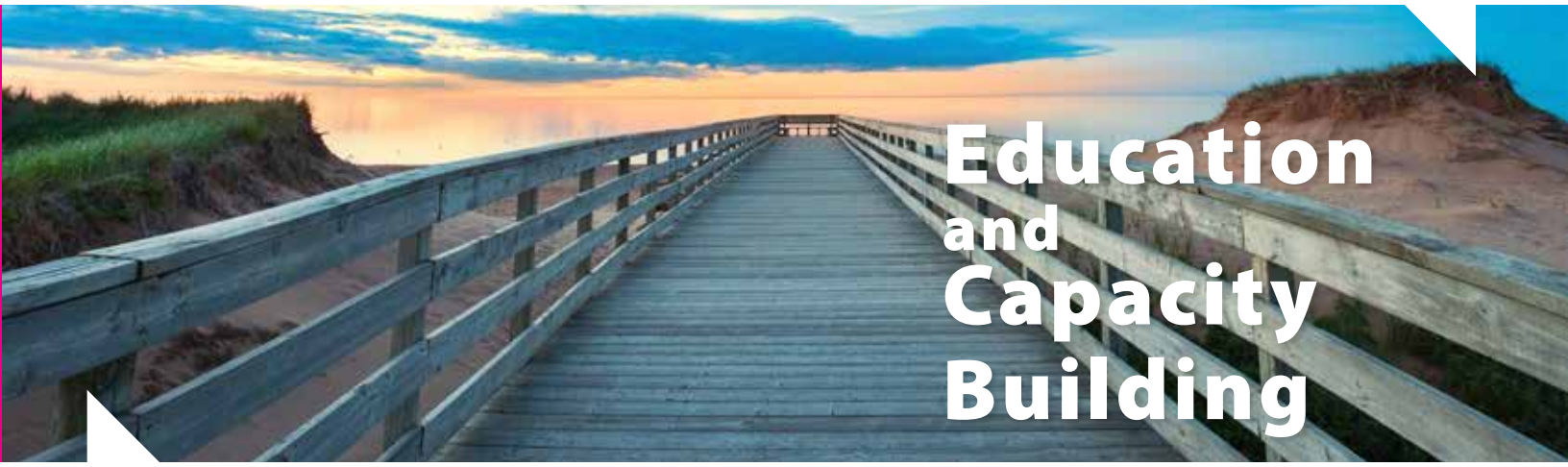
All Islanders-communities, businesses, and residents alike-are encouraged to take action on climate change. Increasing awareness and building our knowledge and skills are important first steps in our efforts to reduce emissions and prepare for a changing climate.

ClimateSense
Training Climate Leaders

The Province of PEI partnered with Natural Resources Canada and the University of Prince Edward Island (UPEI) to deliver *ClimateSense*- an initiative to increase climate change knowledge and expertise of local professionals. *ClimateSense* will provide training and professional development to engineers, planners, emergency management personnel, and other practitioners to help integrate climate change considerations into decision-making on PEI. *ClimateSense* also includes an internship program, which will place interns within provincial government departments, local businesses, and non-government organizations (NGOs) as a way to enhance adaptive capacity amongst early career professionals and to build climate resilience across all sectors.

All Islanders are encouraged to take action on climate change.

ACTION	PROGRESS to March 2019
22. Develop initiatives to inform, educate, and motivate Islanders about the many implications of climate change	In March 2019, the province launched the *Take Charge: Action for Climate Change* campaign (takechargeforclimate.com). A website and multi-media campaign provides Islanders with information about climate change and its impact, while inspiring individuals and families to make changes in their day-to-day lives.
24. Enhance capacity amongst engineers, planners, emergency management personnel, and other practitioners by supporting learning opportunities that integrate climate change considerations into their professional development	*ClimateSense*-a new training program for recent graduates and professionals-received support from Natural Resources Canada. This program will be delivered in partnerships with UPEI, Engineers PEI, the PEI Institute of Professional Planners, Architects Association of PEI, and the PEI Watershed Alliance.
25. Integrate climate change considerations in its policies, procedures, decisions, long term strategies and financial planning. Government will also support similar integration at the municipal level of government	The Province is working to include climate change in policy and spending decisions. A multi-departmental team is developing guidance to help staff easily identify issues that relate to climate change and create workable solutions.
26. Develop and share coastal hazard maps incorporating the latest information on future sea level rise, storm surge, and coastal erosion	Island-wide coastal hazard maps are being developed. These maps will identify coastal areas at greater risk of flooding from sea level rise and storm surge, both now and in the future.
27. Facilitate and support sharing of information, knowledge, and best practices that will enable sectors and disciplines to learn from each other	Multi-disciplinary committees, project teams, and networks are carrying out the Action Plan. These groups are sharing best practices and learning from each other. Efforts also focused on supporting employees to pursue vlimate change training in exchange for sharing the learnings when training is complete.



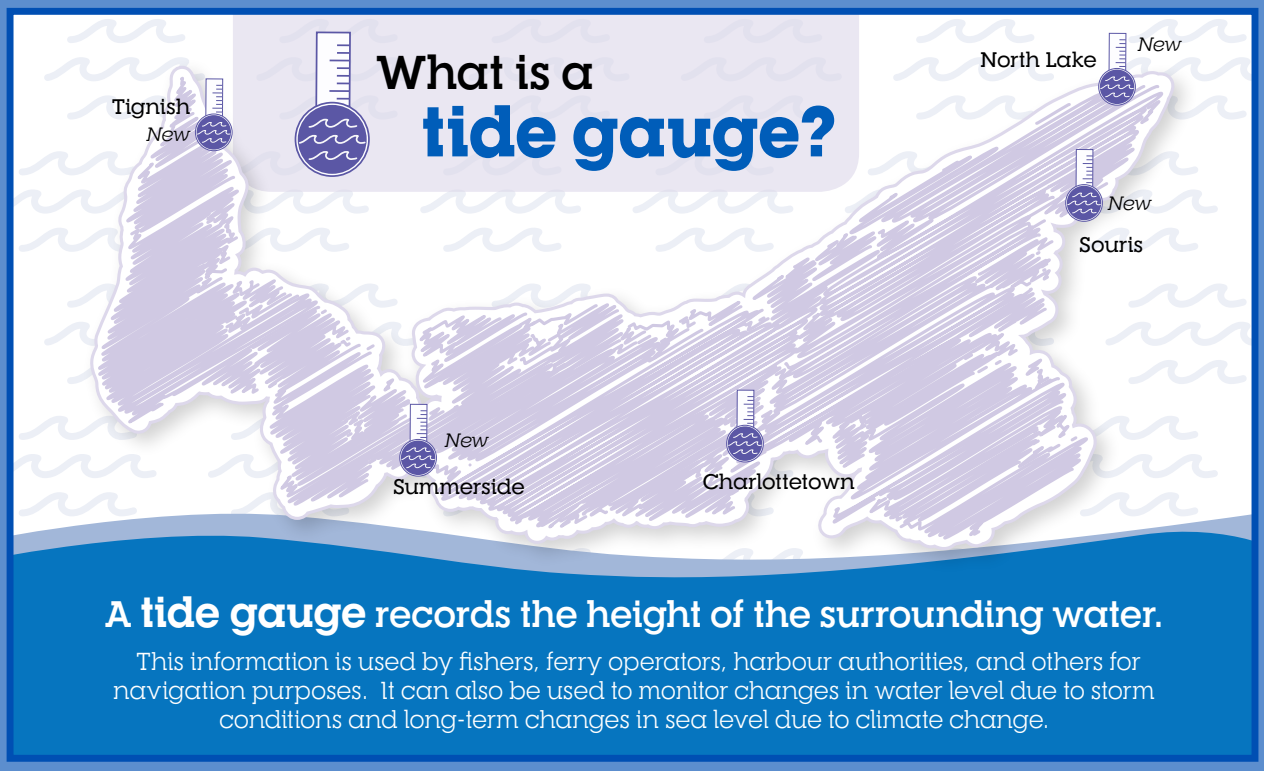
Education and Capacity Building

Next Steps:

- The Province will promote climate change awareness and solutions through its Take Charge: Action for Climate Change campaign.
- **The *ClimateSense* program launched in 2019, offering a range of training and development opportunities to early and mid-career professionals.**
- Guidance for government decision-makers will be completed and shared so that climate change is considered in all major policy and spending decisions.
- **Coastal hazard maps will be completed and made available to the public.**
- Committees, project teams, and networks will continue to meet and learn from each other and government staff will continue to take training that helps them build their understanding of climate change.

Research and Knowledge Building

Research, monitoring, and adoption of new technologies and innovative approaches all have an important role to play in helping PEI reduce GHG emissions and adapt to a changing climate.



ACTION	PROGRESS to March 2019
29. Support research, monitoring, and modeling of climate change through local and regional partnerships	The Province continued to support the UPEI Climate Lab's research, monitoring and modeling of climate change. This includes a coastal erosion monitoring program that began in 2014 and includes simple on the ground measurements and drone technology.
30. Assess future climate impacts upon sectors and stakeholders to help prioritize efforts to adapt to climate change	PEI plans to complete a province-wide assessment of climate change risks. This work will help us better prepare and prioritize in a changing climate. Support from Natural Resources Canada is being sought for this project.
31. Deploy new tide monitoring stations to better measure storm surge and sea level rise	Government installed four new permanent tide gauges in Summerside, Tignish, North Lake, and Souris. This information is used to monitor water levels during storms and better understand the risk of coastal flooding.
32. Consult with farmers to develop a series of farm practices that reduce GHG emissions and better sequester carbon. Farm-specific GHG reduction plans will be piloted on 20 to 30 participating farms	The PEI Federation of Agriculture completed research on opportunities to reduce and remove GHG emissions in the agricultural sector. The final report offered 9 promising best management practices which could result in big GHG reductions on Island farms.

Next Steps:

- The Province submitted a proposal to request federal funding support for a province-wide climate change risk assessment. If successful, the assessment will begin in early 2020.
- **The Province and the Federation of Agriculture are looking at ways to pilot best management practices identified in the first year of the Action Plan. A plan will be developed in 2019/20 and piloted on participating farms the following year.**

ACKNOWLEDGEMENT

Many of the initiatives mentioned in this progress report were funded, in part, by the Government of Canada. This funding was provided through the Low Carbon Economy Leadership Fund (Environment and Climate Change Canada), the Building Regional Adaptation Capacity and Expertise program (Natural Resources Canada), and the National Disaster Mitigation Program (Justice and Public Safety Canada).

PROGRESS REPORT

A CLIMATE CHANGE ACTION PLAN FOR PRINCE EDWARD ISLAND

MAY 2018-MARCH 2019

There is no longer any doubt that our climate is changing and this presents a number of challenges for Prince Edward Island. It drives where we build our homes and businesses, what crops and shellfish we harvest, and all aspects of our economy. This is not a distant problem-one that we can avoid dealing with for years or decades to come.

The good news is that there are practical solutions for Islanders. The actions from this document will help each and every one of us prepare for a changing climate and reduce our greenhouse gas emissions. As an island province, we are in the unique position to see how climate change impacts us, and how the results of our actions can make a difference.

As we insulate our houses, we are saving ourselves money and reducing our emissions at the same time. We have the opportunity to make significant changes, and history shows that our small population does not deter us from doing great things.

This action plan is meant to benefit Islanders, it is now up to all of us to make the changes we need to.

princeedwardisland.ca/climatechange

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