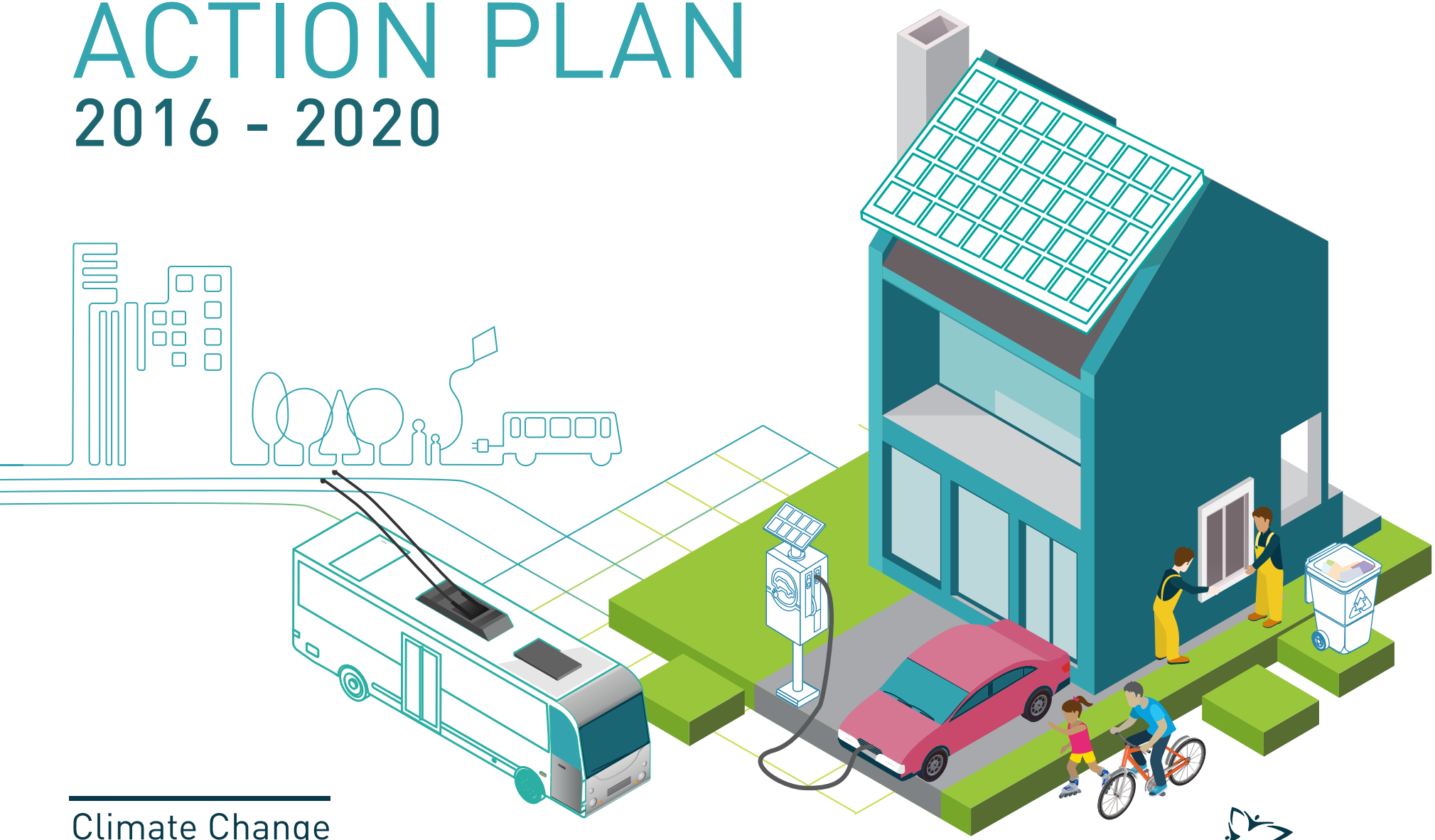
ONTARIO'S FIVE YEAR CLIMATE CHANGE ACTION PLAN 2016 - 2020



Climate Change
Action Plan

Ontario

Contents

Premier's Message

Like every parent and grandparent, I want the best for my children and grandchildren. I want them to live and grow in a province with strong communities, good jobs, clean air and healthy green spaces. As Premier of Ontario, I want this for everyone in our province.

We know that climate change is real and is happening at an alarming rate. Ontario has a responsibility to tackle the immediate threat — and seize the opportunity — that climate change poses. Our coordinated efforts will protect and improve our way of life, while bolstering the economy and leaving a sustainable legacy for our children and grandchildren.

Already we've taken strong action by ending dirty coal emissions in our province for good, making unprecedented investments in transit, building an innovative clean-technology sector, introducing a cap and trade program that will further drive down emissions and setting aggressive greenhouse gas reduction targets.

We are establishing ourselves as global leaders in the fight against climate change. By showing the important role that provinces and regions play in building a low-carbon economy, we are influencing action around the world.

Last year, we hosted more than 300 delegates at the Climate Summit of the Americas. It was a pivotal meeting of provincial, state and municipal leaders that focused on turning the threat of climate change into an incredible opportunity through collaboration and innovation.

Last fall, we strengthened this global partnership when we participated in the United Nations Framework Convention on Climate Change COP21 Paris conference, engaging with national and sub-national governments and other groups, and promoting Ontario's vibrant clean-tech sector.

COP21 was also an opportunity to welcome the new federal government, which recognizes the need for thoughtful and immediate action and the importance of partnering with the provinces to fight climate change.

We are making real progress, but we know there is more work to do. A little over a year ago, we spoke with people across the province about a made-in-Ontario strategy for fighting climate change. We heard from tens of thousands of individuals and hundreds of businesses. We also heard feedback through initial engagement sessions with Indigenous communities and organizations with more planned. And we used that feedback to develop Ontario's Climate Change Strategy, which we released last November. That strategy forms the foundation for this action plan.

This action plan brings together practical, creative and effective actions from across government. It reaffirms our commitment to invest every single dollar from cap and trade into green projects to help families and businesses. Through the plan we will create good jobs, help families and businesses become more energy-efficient, and accelerate our shift to a prosperous low-carbon economy and a more sustainable province.

When my grandchildren ask me what we did to help our planet, I want to be proud of what we accomplished. Together, we will build a greener, more prosperous future for them, and for generations to come.

Kathleen Wynne
Premier of Ontario

Minister's Message

Climate change is a fact in our daily lives — raising the cost of our food, causing extreme weather that damages property and infrastructure, threatening outdoor activities we love, and melting winter roads that provide critical seasonal access to remote northern Indigenous communities. It affects every aspect of our lives, so it is our collective responsibility to fight climate change together to ensure our children benefit from a cleaner planet.

This plan describes the actions we will take over the next five years to fight climate change: to reduce greenhouse gas pollution and help move us to a prosperous low-carbon economy. It recognizes the tremendous economic opportunities that exist for Ontario as the world seeks to mitigate and adapt to climate change. It ensures our businesses, innovators and researchers are well positioned to develop the clean technologies and low-carbon solutions that will ensure competitiveness, maintain existing jobs and create new ones.

This plan will help households and First Nation and Métis communities transition to the low-carbon economy, use less energy and save more money by investing in initiatives that reduce greenhouse gas pollution, such as home energy retrofits, electric vehicle incentives, transit, and social housing retrofits. Whether you live in northern or southern Ontario, in a rural area or big city, the actions in this plan will help you reduce your carbon footprint.

Fighting climate change means transforming the way we live, move and work. We already have the technology we need to make that transition, but we need to get more low-carbon technologies into Ontario homes and businesses. Through this action plan, we will help protect and transition existing jobs, create new jobs, and help Ontario families along the way.

Our actions will help more Ontario households and businesses adopt low- and net zero carbon energy solutions in homes, vehicles and workplaces. We will lead North America in low-carbon and zero-emission transportation, and we will halt rising greenhouse gas pollution from buildings by retrofitting existing buildings and ensuring that future buildings have the lowest possible emissions. We will continue to be a strong centre of modern, clean manufacturing and jobs — and a leader in the clean-tech sector. We will become a leading North American hub for low- and zero carbon technology companies.

Your government is leading by example. We are committing to make government carbon neutral in 2018.

Ontarians have an important role to play in many of the actions in this plan. And we want to work with you to build a greener, healthier, low-carbon Ontario. This plan will help pay the costs of making your home more energy-efficient. It will help you reduce your carbon footprint and how you commute through low-carbon fuels, more zero-emission transit or by supporting the switch to more electrified vehicles. It will work with industry to make lower-carbon products available and affordable for you. It will work with industry and businesses to reduce their greenhouse gas pollution, ensuring that Ontario companies and jobs stay in Ontario and help to create more good jobs in the clean-tech sector. And it will help prepare you and your family to work in the low-carbon economy.

I urge you to read the plan and take advantage of opportunities to get involved as we roll out actions over the next five years.

Glen Murray
Minister of the Environment and Climate Change

Introduction

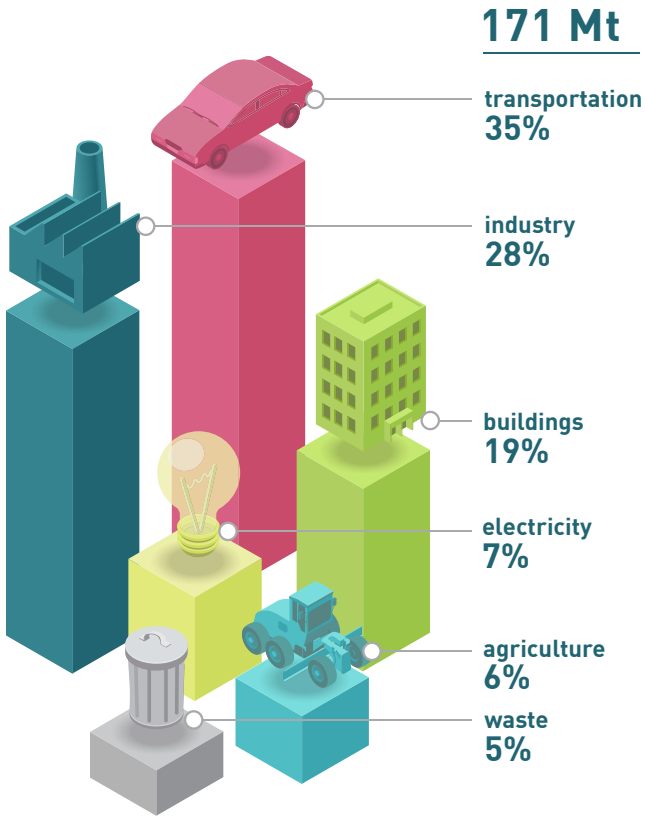
Ontario's Climate Change Action Plan is a five-year plan that will help Ontario fight climate change over the long term.

It responds to an indisputable fact. Global warming is real. Ontario's people and businesses are already feeling the effects and paying the price. Climate change has damaged the environment. It has caused extreme weather events such as flooding and drought. It has damaged and destroyed infrastructure. It has hurt our ability to grow food in some regions. Climate change is a grave concern but by moving ahead now – Ontario will help make the difference that must be made by reducing pollution and growing the low-carbon economy.

Fighting climate change also presents a major economic opportunity. According to the U.S. State Department, expansion of the global green economy is forecast to be six times greater than the technology boom of the 1990s — which saw the growth of the Internet, the first smart phones, and other breakthroughs that affect everyday life today.

With our highly skilled workforce, abundance of natural resources, globally competitive tax system, diverse economy, and the world's soundest banking system – Ontario can deliver the next generation of clean technology solutions that will help the world mitigate, and adapt, to climate change. By acting now, Ontario can foster innovation. And as researchers, entrepreneurs and start-ups rise to the challenge, Ontario will be well-positioned to export low-carbon goods and services to markets around the world.

Emissions by Sector, 2013



This action plan will create jobs. It will help provide business certainty and a stable investment climate, improve productivity and promote innovation. It's about providing the tools that will help businesses and individuals become more energy-efficient, and accelerate the shift to a low-carbon society.

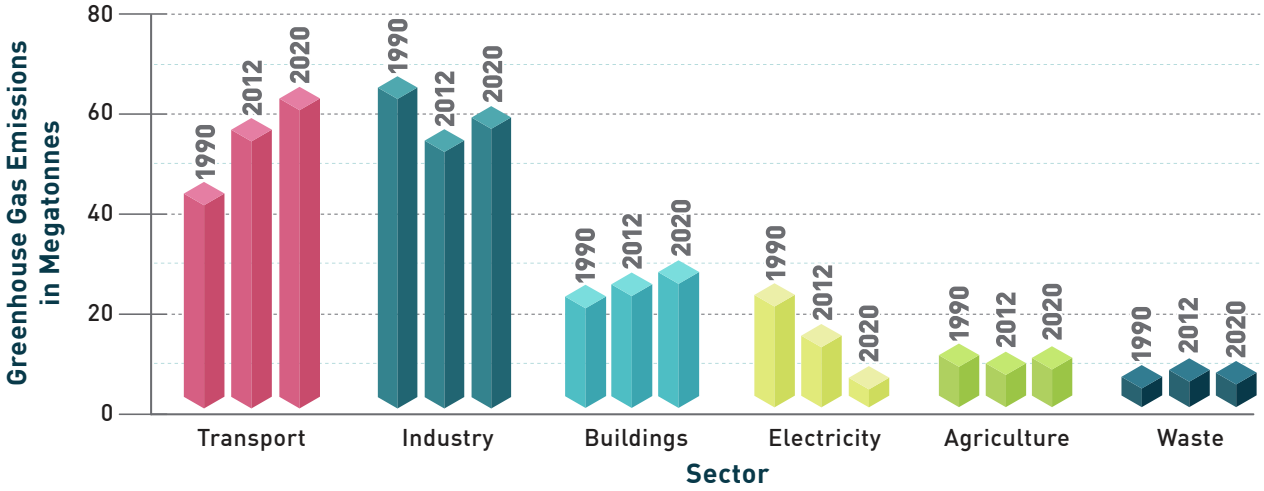
It will not take away personal choice: no one will have to stop using gas in their home or give up their gas-powered car by a certain date. Rather, the plan creates the conditions that provide choice. It gives consumers and businesses more reasons to reduce their carbon footprint, and creates competitive conditions for the adoption of low-carbon technology.

This action plan is built on collaboration. Ontario will work with people, businesses, industries, municipalities, environmental organizations and other partners to build a greener, more prosperous future. Ontario will work closely with First Nations and Métis communities that are facing significant challenges from climate change. Ontario will collaborate in the spirit of the Political Accord to develop and implement actions to combat climate change and promote shared environmental stewardship goals through a new working relationship. Ontario recognizes the importance of a clear process that will allow a discussion of shared priorities and identify climate actions that are appropriate to each community.

Ontario's cap and trade program generates revenue and is a cornerstone in the fight against climate change. This action plan helps define how cap and trade auction proceeds will be spent. By law, these proceeds must be invested in projects and programs that help reduce greenhouse gas pollution. Ontario will further ensure all cap and trade proceeds are managed in transparent and accountable ways.

Fundamentally, through this action plan, the government is ensuring choice. Science has confirmed that climate change is profoundly affecting this planet — that it is caused by human behaviours. People and businesses want to know how to change their behaviours and their actions to make a difference. They want information, tools and assistance to reduce their energy use and save money, reduce emissions, protect the environment and protect the climate. This plan creates options and choices for individuals and businesses. At the same time, it seizes the opportunities that are available in a low-carbon economy that builds a competitive advantage for Ontario.

Emission Trends 1990 - 2020 (Forecast)



Note: 2020 forecasts are based on Ontario's Climate Change Update Report 2014 and the 2014 National Inventory Report

Introduction

The areas of action in this plan cross a wide spectrum, and are broadly outlined as follows:

- Establishing a green bank that would help homeowners and businesses access and finance energy-efficient technologies to reduce greenhouse gas pollution from buildings.
- Creating a cleaner transportation system by addressing greenhouse gas pollution from cars on the road today, by increasing the availability of zero-emission vehicles on the road tomorrow, by deploying cleaner trucks, and making transit more available.
- Halting the ongoing rise in building-related emissions by giving Ontarians more choices, incentives and tools to make the right energy choice for their homes and businesses, by providing better information about energy use by buildings and homes, and by making new buildings increasingly energy efficient over time.
- Making Ontario one of the easiest and most affordable jurisdictions in North America for homeowners and businesses to install or retrofit clean-energy systems like solar, battery storage, advanced insulation and heat pumps, while helping to protect and support low-income households, vulnerable communities and many renters from the cost impacts of carbon pricing.
- Supporting a carbon market that drives the lowest cost greenhouse gas emission reductions. Actions in this plan, supported by cap and trade proceeds, will help business and industry make investments that reduce greenhouse gas pollution. This will help save energy costs, improve productivity and global competitiveness, and protect and create jobs.
- Working in partnership with First Nations and Métis communities to address climate change, with actions guided by Traditional Ecological Knowledge, and helping to build capacity in these communities to participate in the economic opportunities that may arise from the actions.
- Building on progress, leading by example and acting on opportunities to make government operations carbon neutral. Ontario will achieve this by reducing greenhouse gas pollution across our facilities, operations and procurement.
- Ensuring natural, agricultural, and forested lands are used in ways that are efficient, sustainable and enhance the removal and storage of carbon from the atmosphere while working with Ontario's waste sector to leverage different practices and technologies to capture greenhouse gas pollution that would otherwise be released into the air.

Low-carbon economy

This action plan will help Ontario take steps to help consumers, businesses and workers smoothly transition to a low-carbon economy.

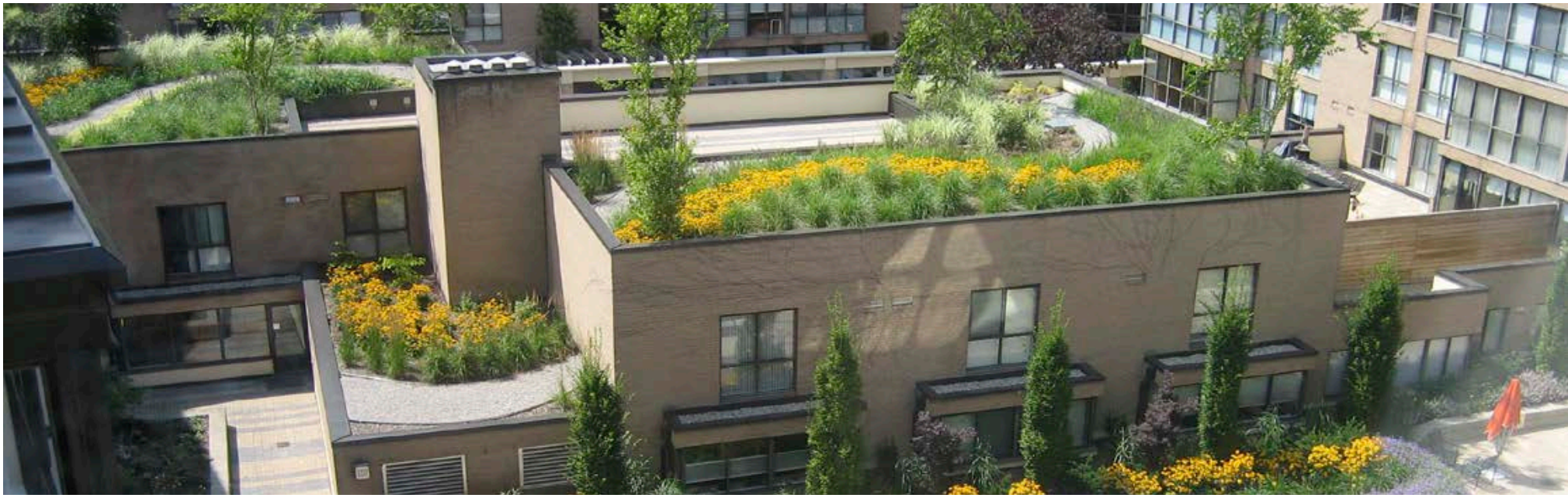
Households will save money from investments in home-energy retrofits, public transit, electric-vehicle incentives, social-housing retrofits and more.

Businesses and industry will benefit from programs and initiatives to help them thrive in a low-carbon economy. The province will continue to build Ontario's clean-tech sector. It will work to retain existing businesses, protect existing jobs and create new ones. It will support innovation and productivity, business certainty and stability. People from across Ontario will gain opportunities that coincide with a robust, competitive and prosperous province.

Creating a Just Transition

This plan will support Ontario businesses in the province and protect existing jobs by spurring innovation and rewarding efficiency, which will make businesses more competitive. It will also create conditions for new sectors to emerge and new businesses to thrive. As Ontario transitions to a low-carbon economy, it will build on its existing workforce in areas from clean-tech to design, to engineering, transportation, manufacturing, construction and more. The economy will require skilled workers like tradespeople, architects and inspectors who are able to design, install and operate low-carbon-building technologies.

To prepare the workforce to meet these needs, Ontario will invest in training and skills development specific to the low-carbon economy, including through training programs for Indigenous workers.



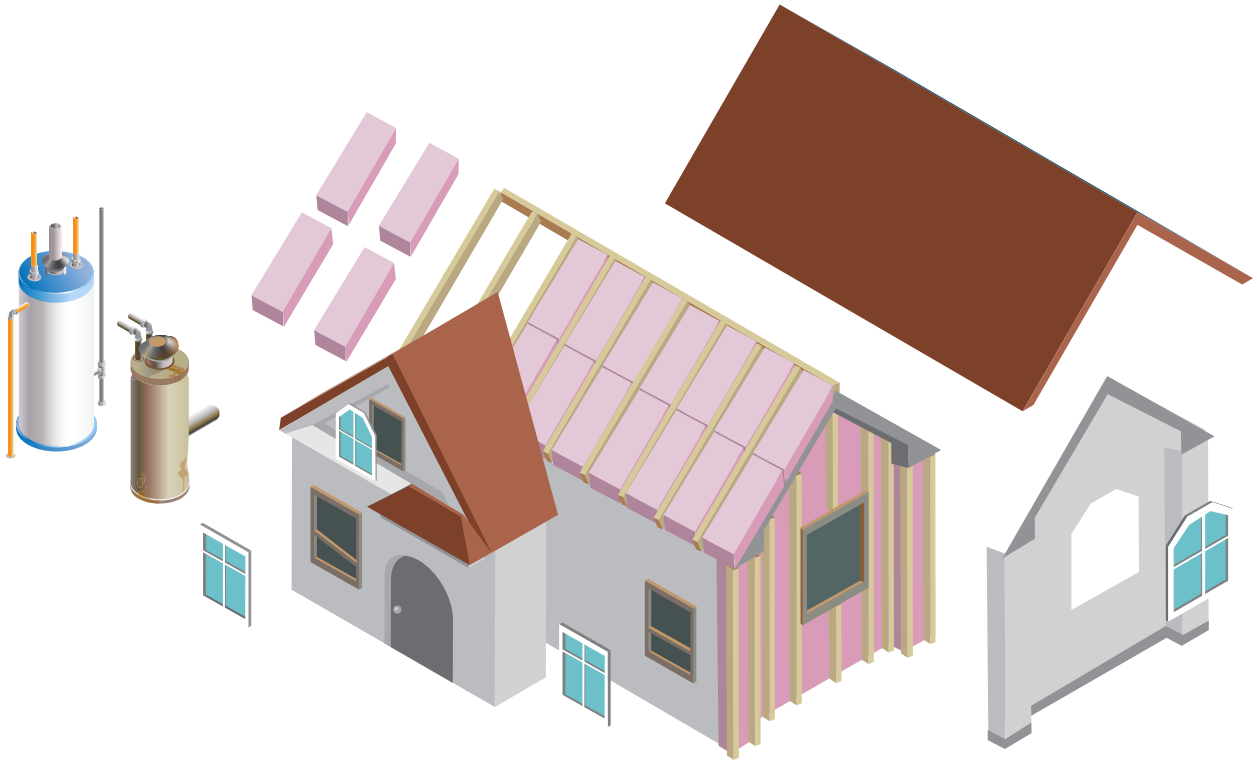
Actions to assist low-income households and vulnerable communities

Ontario will work to reduce the impact of cap and trade on low-income households and vulnerable communities.

To the greatest extent possible, new incentive programs created under this plan are intended to provide an increased benefit to low-income households to ensure they have the resources necessary to reduce their carbon footprint, avoid carbon costs and participate in the low-carbon economy.

These actions will build on a number of programs that are already available to help low-income energy consumers. For example, the Ontario Electricity Support Program, launched in January 2016, provides low-income consumers with a monthly on-bill credit to reduce their electricity bill; and Ontario's Low-Income Energy Assistance Program provides a one-time grant for an electricity or natural gas bill if a low-income consumer is temporarily unable to make ends meet in an emergency situation.

Ontario intends to continue to invest in social-housing retrofits, including energy-efficient windows and thermal insulation on piping, boiler replacements, and other mechanical systems. These are high-impact, high-benefit improvements that will save energy while improving comfort for low-income residents.



The province wants to ensure the impact of carbon pricing is not passed on to tenants who are not able to make capital improvements to their buildings. Ontario will consult on and develop options to reduce the impact on residential tenants of increased energy costs from cap and trade. It will also work to ensure building owners have access to energy-efficiency retrofit programs, such as boiler replacements and geothermal technology.

Further, the province will offer a rebate to low- and moderate-income households to help replace their older cars with new or used electric or plug-in hybrid vehicles.

Households in some parts of the province, such as rural and northern communities, including remote First Nation communities, may not have alternative options readily available for the type of energy sources they currently receive, or require. Targeted programs will be available to help these households reduce the costs of heating and cooling their homes.

Helping businesses transition in a carbon priced economy

Ontario's cap and trade program will reward innovative companies, provide certainty for industries, and create more opportunities for investment in Ontario. In order to help business and industry manage the impacts of cap and trade, the government is investing cap and trade proceeds to help them remain competitive. Through the action plan, Ontario will:

- Support significant emissions reductions by large final emitters and small and medium enterprises by providing funds to offset the cost of low-carbon technologies.
- Support research and development, clean technology clusters and commercialization and deployment of low-carbon technologies.
- Provide transitional allowances to industry to help them transition to lower carbon technology while they reduce greenhouse gas pollution.

The delivery model will be finalized in consultation with existing utilities during summer 2016, with the goal of beginning to provide services in the second half of 2017.

Our foundation for a low-carbon future

In November 2015, Ontario released a Climate Change Strategy to set the long-term vision for meeting greenhouse gas pollution reduction targets.

Ontario's reduction targets are ambitious yet achievable, in line with actions taken by other provinces and states and in line with global objectives. Ontario is doing its part with reductions from 1990 emissions levels of 15 per cent in 2020, 37 per cent in 2030 and 80 per cent in 2050. Based on greenhouse gas reporting data, Ontario has met its 2014 target of six per cent below 1990 levels. The province achieved this goal by taking bold steps, including closing all of Ontario's coal-fired electricity-generating stations. This remains one of the single largest greenhouse gas reduction actions implemented to date in North America.

The Climate Change Action Plan builds on Ontario's Climate Change Strategy. It represents the foundation upon which Ontario will establish and build the policies and programs that must be put in place over the next five years to achieve its short- and long-term targets, and start the shift towards a low-carbon economy.

The 2015 Fall Economic Statement committed a $325-million down payment through Ontario's Green Investment Fund. Through this investment, the province supports programs to help households and businesses install energy-efficient equipment, including windows and furnaces.

The recently passed Climate Change Mitigation and Low-carbon Economy Act requires Ontario to develop a Climate Change Action Plan. This plan is to establish the long-term framework for action on climate change to ensure greenhouse gas pollution is reduced while boosting low-carbon innovation. The legislation also requires that the province specify how cap and trade proceeds will be used to reduce or support the reduction of greenhouse gas by investing in green projects.

Based on the timelines presented in this plan, the government will consult with stakeholders regarding the design and implementation of many of its policies and actions.

The plan also outlines an open and transparent process for how and when Ontario will move forward. Each year Ontario will invest in a suite of initiatives to reduce greenhouse gas pollution, investments will be offset with cap and trade auction proceeds. Any spending will need to be authorized under the Climate Change Mitigation and Low-carbon Economy Act, and will be subject to approval by the legislature.

The action plan will serve as the foundation for making annual investment decisions and will be consulted on each time investment decisions are made.

Reducing emissions through cap and trade

In April 2015, Ontario announced its intention to join the cap and trade system under the Western Climate Initiative, partnering with other jurisdictions, including Quebec and California, and making carbon pricing a cornerstone in Ontario's fight against climate change.

A cap and trade program is a cost-effective way to reduce greenhouse gas pollution. It limits the amount of emissions that can come from the economy (the cap), and then allows those covered by the cap to trade among themselves (the trade) in a flexible and cost-effective way, thereby creating a price on carbon pollution.

Cap and trade allows the market – not government – to set the carbon price. The market ensures the price meets the needs of businesses covered by the program. The cap also ensures greenhouse gas reductions: this is what makes it different and more certain than other carbon pricing mechanisms.

Cap and trade fights climate change by giving polluters an incentive to cut emissions, since they must pay for the pollution they are responsible for. It gives companies certainty and predictability, and enables them to find new ways to reduce their carbon footprints such as investing in new clean technologies.

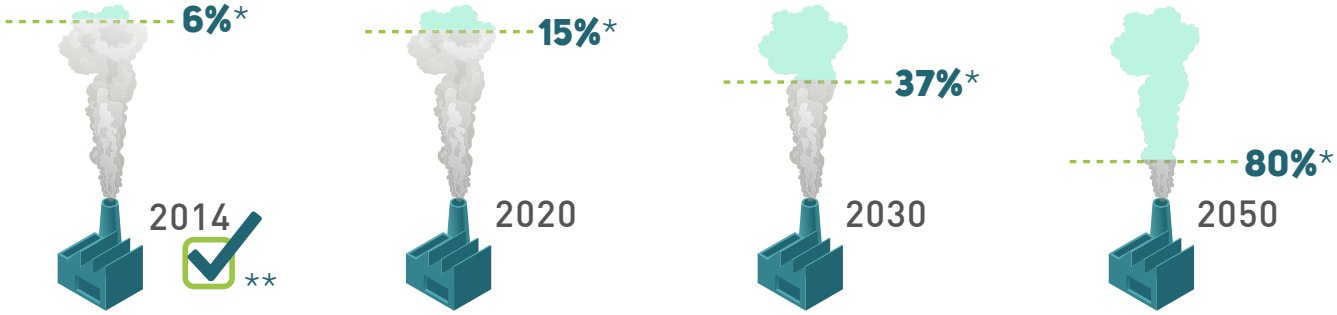
Cap and trade lets the market decide where emissions can be reduced across linked jurisdictions with the least cost while guaranteeing the environmental outcome required, which is to cut the pollution that is causing climate change. Putting a price on carbon provides incentive to businesses to achieve greenhouse gas reductions at the lowest possible cost.

- The "cap" sets a maximum limit on the amount of greenhouse gas pollution that regulated emitters collectively can produce. Each year, the cap is lowered, requiring industry and other greenhouse gas polluters, such as natural gas distributors and other fuel suppliers, to reduce their emissions.
- The "trade" refers to a market where companies can buy or sell "allowances," or pay others to reduce emissions on their behalf, in order to comply with the cap in the cheapest and most efficient way.

Ontario is on track to achieve its emissions reduction target for 2020 by taking the actions described in this plan and gradually lowering the economy-wide cap for emissions.

The government has heard from Ontario businesses that they want additional clarity for the post-2020 compliance periods. The province will begin consultations later in 2016 to define post-2020 program guidelines. Ontario's Western Climate Initiative partners – Quebec and California – just recently began their own consultations.

Ontario's greenhouse gas reduction targets



*below 1990 greenhouse gas emission levels

**based on the 2016 National Inventory Report

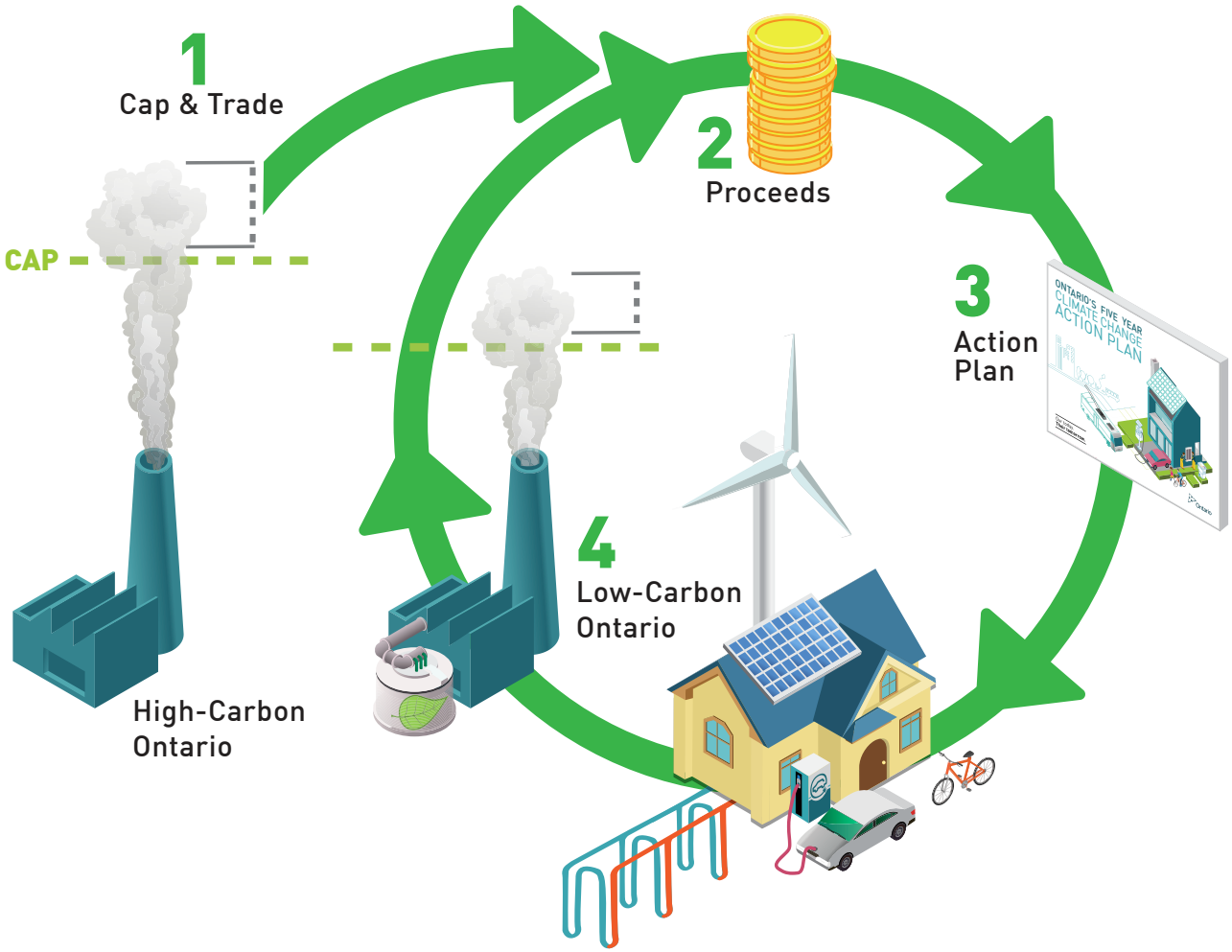
Key to these discussions will be the need to maintain a competitive economy while achieving environmental results. Ontario recognizes that capital investments require a predictable investment climate. Industry and trade associations have supported climate actions and a carbon price.

Finally, the Western Climate Initiative cap and trade model is flexible enough to allow more partnerships from sub-national jurisdictions across North America and around the world. Ontario will continue to work with its partners to look for opportunities to expand the carbon market throughout the Americas. The larger the reach of the Western Climate Initiative's carbon market, the more effective and better positioned the organization will be to contribute to the global effort to fight climate change.

Ontario's cap and trade program is expected to generate proceeds of approximately $1.8 to $1.9 billion each year.

THE VIRTUOUS CYCLE

How Cap & Trade and the Climate Change Action Plan Work Together



Dollars from proceeds, estimated greenhouse gas pollution reductions, and cost per tonne

All figures in the action plan are based on estimated proceeds from the cap and trade program and will be refined as program details are evaluated and approved in each year of the five year plan. They may be adjusted downwards or upwards relative to proceeds collected.

Greenhouse gas impacts in 2020 are estimated based on results of similar programs in Ontario and other jurisdictions, where data are available.

As detailed program design is finalized, greenhouse gas estimates and costs per tonne will be updated accordingly. Where possible, a conservative approach to estimates has been taken to avoid overestimating reductions.

Estimates of cost per tonne are based on the amount of proceeds directed to the action divided by an estimate of the cumulative emissions reductions over the anticipated period of impact of that action. In most cases, the calculation assumes that the period of impact is to 2030. It is important to note that the market should drive the lowest cost reductions with cap and trade proceeds and actions in this plan – which will help address costs associated with more costly reductions typically associated with deep, long-term energy transitions.

Why cap and trade is the best tool for Ontario

A cap and trade system has been chosen over other carbon pricing schemes because cap and trade provides companies with the flexibility – such as multi-year compliance periods – to choose the compliance path that aligns with their business plans and investment decisions.

This flexibility is further enhanced in Ontario through the use of offsets and linkages with other programs.

Summary of Impacts Across Policy Alternatives in 2020

In 2020	**C&T WCI linked, Proposed Program:** Transitional Assistance, Mixed use of Proceeds	**Ontario Alone C&T, Unlinked:** Transitional Assistance, Mixed use of Proceeds	**Ontario Alone, Carbon Tax or C&T Full Auction:** Mixed use of Proceeds	**Ontario Alone, Carbon Tax or C&T Full Auction:** Tax Reductions
GHG reductions (Mt)	18.7	18.7	18.7	18.7
Leakage (Mt)	-0.28	-1.75	-5.84	-6.03
Net GHG Reductions (Mt)	18.42	16.95	12.9	12.7
Carbon price ($2016)	$18	$157	$69	$72
Household energy ($/ month; $2016)	$13	$107	$49	$50

Source: EnviroEconomics, Impact Modelling and Analysis of Ontario's Proposed Cap and Trade Program

As part of the cap and trade program, Ontario is developing a regulatory proposal to allow the creation of emissions offsets in uncapped sectors such as agriculture and forestry.

New approach to technology deployment: a low-carbon service provider and financing entity

Ontario intends to establish a green bank to deploy and finance readily available low-carbon energy technologies to reduce carbon pollution from Ontario buildings. The green bank will help source the most cost-effective low-carbon technologies to reduce emissions in homes and businesses.

Currently, natural gas combustion and carbon-based electricity emissions from buildings represent 24 per cent of Ontario's climate change-causing air pollution. Because of Ontario's growing population and economy, greenhouse gas pollution from its buildings sector continues to rise each year – with no end in sight. Without action in this sector, we will lose the fight to reduce carbon emissions across the economy.

Energy conservation programs have benefited many consumers in Ontario, but this ongoing trend of emissions growth calls for bolder action.

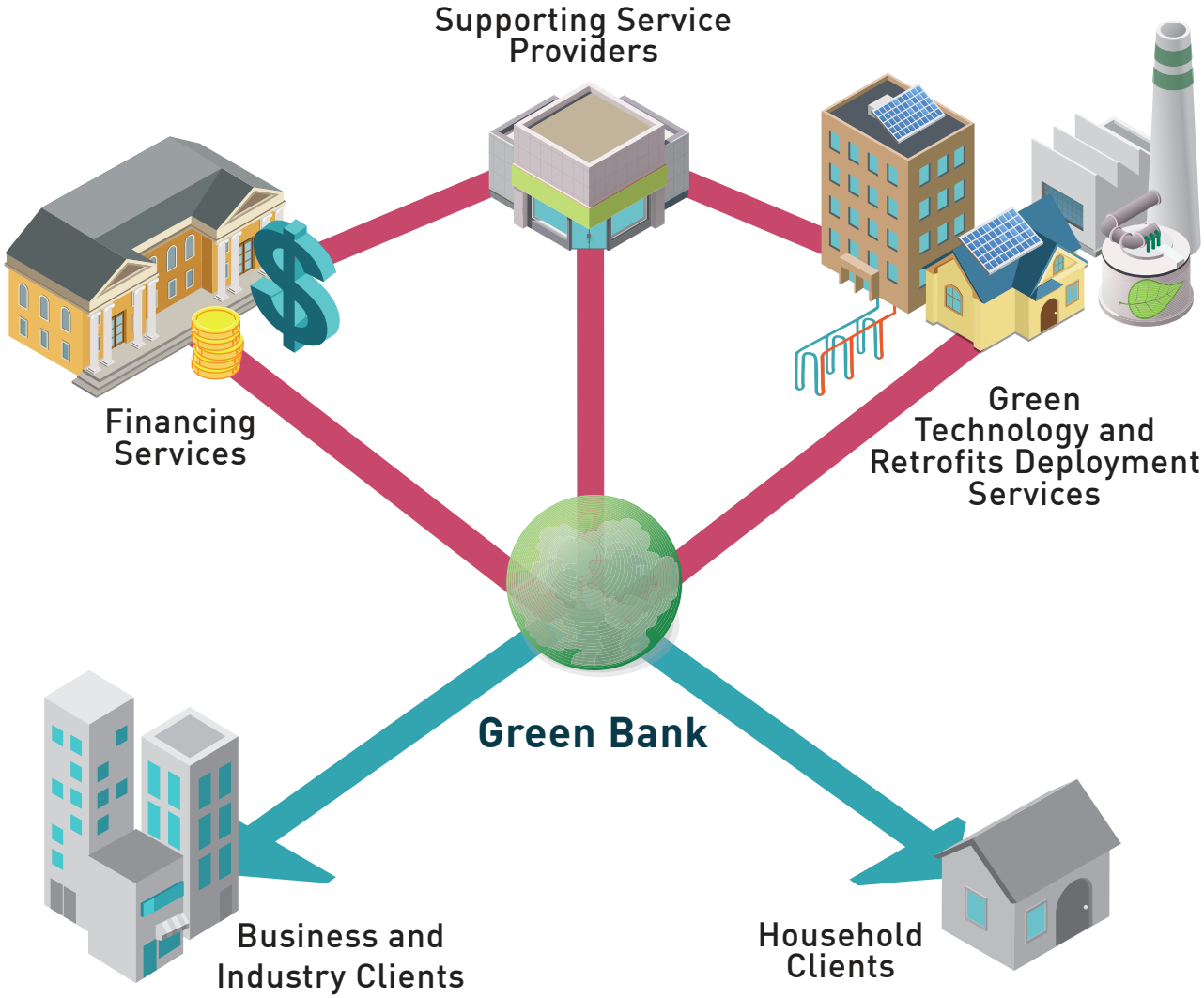
Ontario intends to draw on the best practices of two existing models: Efficiency Vermont, the first statewide energy-efficiency utility in the United States, and the New York Green Bank, a state-run financing agency. Both of these initiatives are funded in part from cap and trade proceeds collected in their jurisdictions.

The green bank will work to significantly reduce greenhouse gas from energy intensive heat and cooling sources like old gas boilers, inefficient electric baseboard heaters, and oil furnaces – while significantly increasing the use of available technologies like solar, air-source heat pumps, geothermal systems, vehicle-to-grid energy systems, and energy storage systems.

The green bank is intended to:

- help households understand and determine what government grants and other incentives are available for each prospective project, and help people calculate payback periods and returns on investments.
- provide households with assistance to secure flexible low-interest financing to help pay for greenhouse gas-reducing energy improvements in their homes – with special provisions to support low- and modest-income households.
- support large commercial and industrial projects, or projects that require scale to be financed privately, by working with commercial banks to help aggregate projects to reduce risk.

The Ministry of the Environment and Climate Change will ensure the new organization applies a rational and evidence-based approach to program delivery, with carbon emission reductions its priority.



ACTION AREA: TRANSPORTATION

Becoming a North American leader in low-carbon and zero-emission transportation

ACTIONS

- Increase the availability and use of lower-carbon fuel
- Increase the use of electric vehicles
- Support cycling and walking
- Increase the use of low-carbon trucks and buses
- Support the Accelerated Construction of GO Regional Express Rail

TRANSPORTATION

Becoming a North American leader in deployment of low-carbon and zero-emission transportation

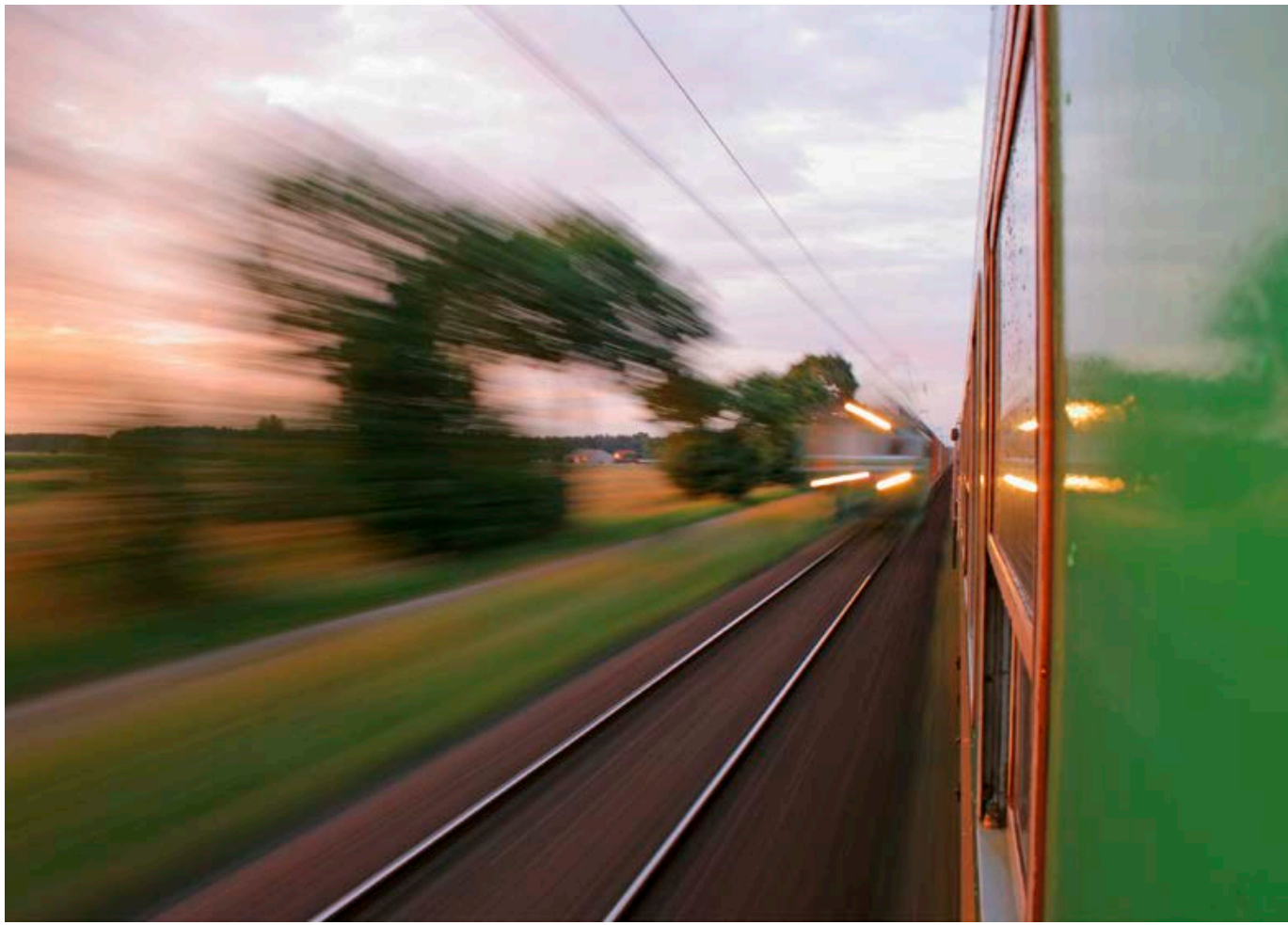
Transportation represents one of the largest challenges Ontario faces in achieving its emission reduction targets.

More than one-third of Ontario's greenhouse gas pollution is caused by the transportation sector, with cars and trucks responsible for more than 70 per cent of the total. Domestic aviation, rail, marine, and other off-road forms of transportation, such as mining and construction vehicles, make up the other 30 per cent.

Since 1990, vehicle emissions in this province have been rising steadily due to increased vehicle ownership, commuting distance and population growth. It's important that this be reduced. Today, about 11 million passenger and commercial vehicles regularly travel Ontario roads. The auto sector has made great strides in reducing per vehicle emissions. Working together, there are opportunities to do much more.

Federal emission standards, in addition to new fuel policies established under this plan, will help begin to address the annual increases in greenhouse gas pollution from passenger vehicles. But, in the long term, and given Ontario's clean electricity system and supported by Ontario's innovative auto sector, accelerating the shift to electric, plug-in and hydrogen vehicles will be crucial if Ontario is to achieve its climate change targets.

The action plan establishes a provincewide electric and hydrogen passenger vehicle sales target of five per cent in 2020. This target will be reviewed and increased appropriately every five years thereafter. For context, about 284,000 passenger cars were sold in Ontario in 2015. Five per cent of annual sales on that number represent about 14,000 cars.



TRANSPORTATION

Becoming a North American leader in deployment of low-carbon and zero-emission transportation

Ontario opted not to proceed with establishing a ZEV (Zero-Emissions Vehicle) mandate – an approach developed in the United States that imposes penalties on automakers that do not sell enough electric vehicles. Instead, Ontario believes that a collaborative approach, with a provincewide sales target that represents a collective goal, will be the most effective approach. Government will work closely with automakers, unions, the not-for-profit sector and with academia to ensure that all parties are taking the most effective steps to get electric and hydrogen vehicles on our province's roads.

This provincewide sales target will help the auto industry remain competitive while reducing the number of polluting vehicles on Ontario roads. It also dovetails with Ontario's leadership on automated vehicles, lightweight materials and other advanced automotive technology.

To help implement the provincewide sales target, the government will encourage each multi-car household to consider switching at least one vehicle to electric or hydrogen when they make their next purchase. Ontario will encourage all new drivers to choose a zero emission vehicle when buying or leasing their first car.

Actions in this section of the plan are designed to meet the challenges of reducing transportation emissions. They include actions that reduce emissions from the existing vehicle fleet on Ontario's roads today, actions to promote adoption of the non-polluting vehicles now and in the future, actions that support cycling and transit; and actions that address the movement of goods, including by truck and rail. This comprehensive approach will put Ontario on track to reduce transportation-related emissions while also helping to reduce the fuel costs of moving people and goods.

1) Increase the availability and use of lower-carbon fuel

A lower-carbon fuel emits less carbon pollution than conventional fossil fuels such as gasoline. Ontario aims to increase its availability and use. Examples of lower-carbon fuel include propane and liquefied gas, and gasoline that has been mixed with renewable fuel content such as ethanol. This action intends to:

1.1 Boost renewable content: Ontario intends to set a Renewable Fuels Standard to increase the percentage of renewable content required in transportation fuels sold in the province. It will focus on gasoline, since Ontario has already set a Green Diesel Standard. Ontario plans to implement a new regulation that will lead to a five per cent reduction in greenhouse gas pollution from gasoline by 2020.

1.2 Assist fuel distributors: Ontario intends to provide funding to fuel distributors for high-blend sustainable biofuels and infrastructure upgrades – to help them help consumers lower their greenhouse gas pollution.

1.3 Pilot waste and agricultural methane as a fuel source: The province intends to pilot a program that uses methane obtained from agricultural materials or food wastes for transportation purposes, with funding for commercial-scale demonstration projects.

2) Increase the use of electric vehicles

Greenhouse gas pollution from cars account for more emissions than from industries like iron, steel, cement and chemicals combined. This action will help get more people into electric vehicles and lower greenhouse gases. It will:

2.1 Maintain incentives for electric vehicles: Ontario intends to extend the rebate program to 2020 for leasing or buying an eligible electric vehicle (up to $14,000 per

vehicle), including rebates for purchase and installation of home charging stations (up to $1,000 per station).

2.2 Eliminate HST on zero emission vehicles: Ontario will work with the federal government to explore ways to provide full-HST relief to purchasers of new battery electric vehicles, with the objective of introducing this relief by 2018.

Battery Electric Vehicles (BEV) run on a large battery that can be charged from home or public charging stations.

2.3 Free overnight electric vehicle charging: The province intends to establish a four-year free overnight electric vehicle-charging program for residential and multi-unit residential customers starting in 2017. Charging electric cars at night can help balance electricity system demands and potentially reduce costs associated with exporting excess electricity overnight. Ontario intends to work with utilities to transition this program to an optional enhanced time-of-day charging program. The goal would be to lower overall electricity bills for homes that charge vehicles.

2.4 Replace older vehicles: The province intends to help get older and less fuel-efficient vehicles off the roads by offering a rebate to low- and moderate-income households that will help them replace old cars with new or used electric vehicles or a plug-in hybrid.

2.5 Ensure charging infrastructure is widely available: Ontario intends to increase access to the infrastructure required to charge electric vehicles by ensuring the following:

2.5.1 More charging stations: The province intends to invest in the rapid deployment of charging in workplaces, multi-unit residential buildings, downtowns and town centres. Ontario will encourage ONroute locations to equip themselves with high-speed chargers. It will further encourage the federal government to invest in high-speed, fast-charging infrastructure on inter-provincial highways and highways that connect Ontario to the United States.

2.5.2 Electric-vehicle-ready homes: Ontario intends to require all new homes and townhomes with garages to be constructed with a 50-amp, 240-volt receptacle (plug) in the garage for the purpose of charging an electric vehicle. These receptacles can be used with home charging stations and readily available at retail locations and are compatible with all plug-in hybrid and electric cars.

2.5.3 Electric-vehicle-ready workplaces: Ontario intends to establish a requirement that, as of 2018, all newly built commercial office buildings and appropriate workplaces must provide charging infrastructure. The workplace is the second most common place to charge electric vehicles after the home. Workplace charging is particularly critical to people living in multi-residential buildings who may not have access to a home-based plug.

Plug-in Hybrid Electric Vehicles combine an internal combustion engine with an electric motor and battery.

2.6 Electric and Hydrogen Advancement Program: Starting in 2017, vehicle manufacturers that offer their customers access to Ontario's Electric Vehicle Incentive Program will need to participate in an Electric and Hydrogen Vehicle Advancement Program. This program will recognize

manufacturers that exhibit performance in advance zero-emission vehicle sales, marketing, infrastructure and public awareness.

2.7 Increase public awareness: Ontario will work with Plug'n Drive, a non-profit electric vehicle advocacy organization, to establish and operate a facility to showcase electric vehicles and related technology to Ontarians across the province.

3) Support cycling and walking

Good cycling infrastructure gets people out of their cars and onto bikes and transit for their daily commute, effectively reducing greenhouse gas pollution while also improving public health. This action will:

3.1 Improve commuter cycling network: The government intends to accelerate and enhance implementation of Ontario's Cycling Strategy and Action Plan and promote cycling. It will do this through:

3.1.1 Better cycling network: Commuter cycling networks will be established across Ontario, targeting routes with high-commuting volume such as between residential communities, major transit stations and employment areas.

3.1.2 Safe cycling: There will be more cycling facilities in urban areas, including grade-separated routes and cycling signals.

3.1.3 Convenient cycling: There will be more bike parking at transit stations and provincially owned, publicly accessible facilities.

3.1.4 Commuter cycling: Ontario will revise provincial road and highway standards to require commuter cycling infrastructure be considered for all road and highway construction projects where it is safe and feasible. Ontario will do the same for major transit corridors.

4) Increase the use of low-carbon trucks and buses

The movement of goods is an area that is vital to Ontario's economy. But it's also the second largest source of transportation emissions. Opportunities to reduce emissions focus on improved efficiency and switching to lower-carbon fuels. This action will:

4.1 Provide incentives for business: A new Green Commercial Vehicle Program would be set up to provide incentives to eligible businesses that want to buy low-carbon commercial vehicles and technologies to reduce emissions, including electric and natural gas-powered trucks, aerodynamic devices, anti-idling devices, and electric trailer refrigeration.

4.2 Build a network of low-emission fuelling stations: The province intends to work with the Ontario Trucking Association, Union Gas, Enbridge and others to establish a network of natural gas and low- or zero carbon fuelling stations. It will work with utilities to ensure the recovered biogas content of the fuel provided is increased over time to further lower the carbon footprint of this alternative fuel. Natural gas has a lower carbon content than diesel and also burns cleaner, producing less local air pollution.

4.3 Improve competitiveness of short-line railways: A study would be conducted and action taken to improve the competitiveness of Ontario's short-line railways. According to the Railway Association of Canada, short-lines can be three to four times more efficient per tonne-kilometre than transporting the same freight by truck. There are currently five

provincially licensed freight short-lines in operation that carry goods over distances up to 300 kilometres.

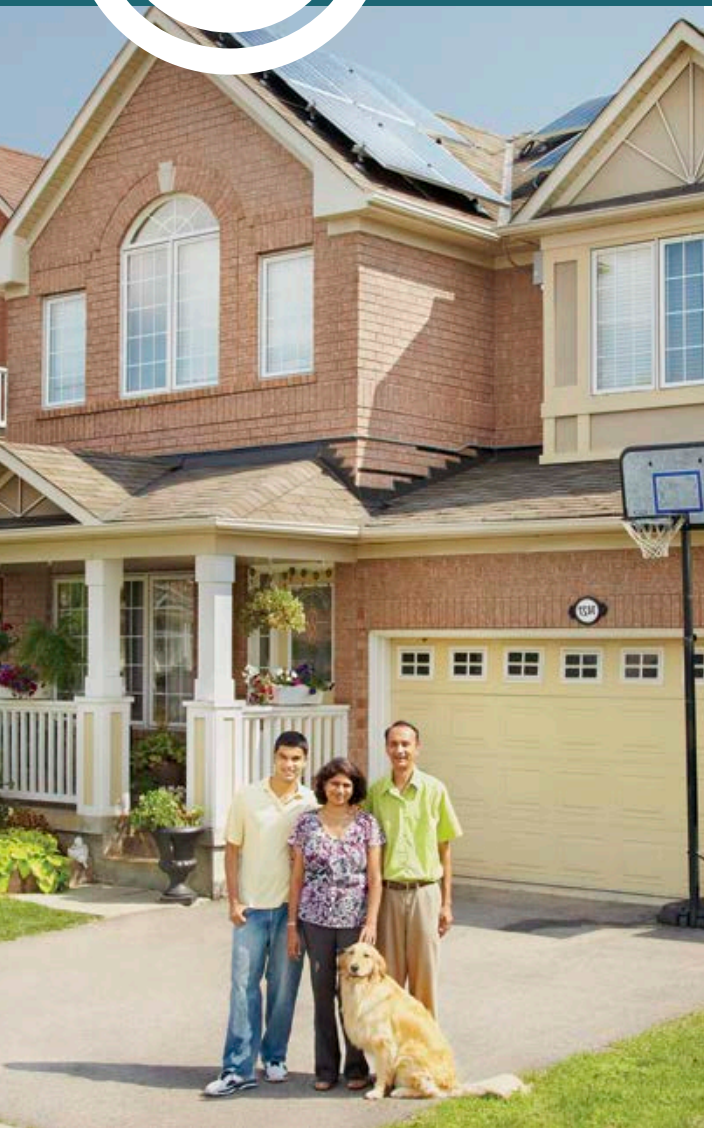
Fuel switching is a term for the replacement of fossil fuels with lower carbon alternatives.

5) Support the Accelerated Construction of GO Regional Express Rail

5.1 Accelerate Regional Express Rail Deployment: The province intends to work to accelerate deployment of the Regional Express Rail system. The expansion of GO infrastructure will create a stronger network across the region and encourage more people to choose public transit. Improved transit infrastructure means faster, more frequent, transit options for users, and less traffic congestion for people who drive.

ACTION AREA: BUILDINGS AND HOMES

Reduce emissions from fossil-fuel use in buildings



ACTIONS

- Improve energy efficiency in multi-tenant residential buildings
- Improve energy efficiency in schools and hospitals
- Reduce emissions from heritage buildings
- Help homeowners reduce their carbon footprints by supporting additional choice
- Set lower-carbon standards for new buildings
- Promote low-carbon energy supply and products
- Help individuals and businesses manage their energy use and save money
- Training, workforce and technical capacity

BUILDINGS AND HOMES

Reduce emissions from fossil-fuel use in buildings

Buildings, and the energy they consume, account for almost one quarter of Ontario's total greenhouse gas pollution. Between 1990 and 2012, buildings sector emissions per square metre improved significantly. However, its total emissions still rose due to population, economic and building floor space growth.

Ontario's buildings sector presents a particular challenge because many existing buildings were built at a time when energy efficiency was less of a priority and climate change was not considered. These buildings rely primarily on fossil fuels for heating.

To date, Ontario has reduced energy use in buildings through conservation programs, stricter requirements in the Building Code, product efficiency regulations, greening electricity, and improved access to energy information for consumers.

Ontario will build upon progress made. The province will continue to reduce greenhouse gas pollution in existing housing and other buildings, and ensure new buildings do not contribute to increased net greenhouse gas pollution. For existing homes, technologies such as geothermal and other home heating solutions in new, highly efficient buildings can also be complemented with natural gas.

To achieve the 2016 budget commitment, Ontario intends to invest in initiatives that both reduce greenhouse gas pollution and ensure that the net impact of cap and trade would not result in an overall increase in electricity costs for commercial and industrial consumers, and that there would be a modest benefit of up to $2 per month, on average, to residential consumers.

BUILDINGS AND HOMES

Reduce emissions from fossil-fuel use in buildings

Actions in this part of the plan are designed to help the buildings sector continue to reduce greenhouse gas pollution and to support homeowners. They include actions to improve efficiency in multi-residential buildings and public institutions; to widen low-carbon energy choices for homeowners and help consumers manage their energy use; to establish long-term greenhouse gas reduction targets in the Building Code and introduce low-carbon content requirements for natural gas; and to support workforce training.

1) Improve energy efficiency in multi-tenant residential buildings

Better energy efficiency in social housing and other multi-tenant residential buildings will improve comfort for residents and free up funds for owners to make other capital improvements. This action will:

1.1 Retrofit social housing apartments: Most of Ontario's social housing towers were constructed in the 1960s and 1970s and can use up to 25 per cent more energy per square metre than a house. The installation of energy efficient and renewable energy technologies such as energy-efficient windows, lighting, boilers, chillers, and thermal insulation on piping and other mechanical systems will be a low-cost, high-benefit improvement to the province's social housing. In addition to reducing emissions, these retrofits will improve comfort for residents and save money for social housing providers to make other improvements. Social housing for First Nations and Métis will be eligible for retrofits under this program.

1.2 Protecting tenants from the price of carbon: Ontario will consider options for legislative and/or regulatory change that lessen the impact on residential tenants of increased energy costs from cap and trade. The government wants to make sure that carbon pricing does not get passed on to tenants who are unable to make changes to reduce energy use, and that private building owners are able to take advantage of retrofit programs, including boiler replacements and geothermal technology.

1.3 Provide incentives for apartment building retrofits: Ontario intends to offer incentives to install energy efficient technologies, like boiler replacements, adaptive thermostats and lighting retrofits in multi-tenant buildings, such as apartments.

2) Improve energy efficiency in schools and hospitals

Investing in energy efficiency in Ontario's public institutions will not only help reduce emissions, but it will help reduce energy costs and provide a healthier environment for students and patients. This action will:

2.1 Support schools: Ontario intends to provide funding for existing schools to improve energy efficiency and install renewable energy technologies. Technologies could include building automation systems, energy-efficient windows, solar energy and geothermal systems.

2.2 Support hospitals, universities and colleges: The government would establish a fund to help hospitals, universities and colleges retrofit their facilities with energy efficient and renewable energy technologies, including building automation systems, energy-efficient windows, solar thermal and geothermal systems.

3) Reduce emissions from heritage buildings

3.1 Showcase low-carbon technologies: Ontario's heritage properties are excellent platforms to showcase low-carbon technology to the public and are among the most challenging structures to retrofit. Retrofitting heritage buildings with low-carbon energy systems and high-efficiency materials provides the double benefit of showcasing to the public the uses and advantages of this technology, and preserving these important buildings for the enjoyment of future generations.

4) Help homeowners reduce their carbon footprints by supporting additional choice

Technologies that are readily available and being used today can significantly reduce energy demands and greenhouse gas pollution. Homeowners will be given the tools and resources to help make the right choice for them. This action will:

4.1 Boost low-carbon technology in homes: Ontario intends to help homeowners purchase and install low-carbon energy technologies such as geothermal heat pumps and air-source heat pumps, solar thermal and solar energy generation systems that reduce reliance on fossil fuels for space and water heating. This will include an increased benefit for low-income households and vulnerable communities.

Heat Pumps warm and cool buildings by using outside heat from the air, ground or water.

4.2 Help retire older wood stoves: A new program targeting northern and rural communities, including Indigenous communities, would encourage households to switch out older polluting wood stoves for new high-efficiency wood stoves.

4.3 Near Net Zero Carbon Home Incentive: Rebates will go to individuals who purchase or build their own near net zero carbon emission homes, with energy efficiency performance that sufficiently exceeds the requirements of the Building Code. In addition to reducing the higher up-front costs for homebuyers, this program will encourage construction of high-efficiency homes that pollute less.

4.4 Keep Electricity Rates Affordable: Use cap and trade proceeds to offset the cost of greenhouse gas pollution reduction initiatives that are currently funded by residential and industrial consumers through their bills.

5) Set lower-carbon standards for new buildings

5.1 Update the Building Code: The government intends to update the Building Code with long-term energy efficiency targets for new net zero carbon emission small buildings that will come into effect by 2030 at the latest, and consult on initial changes that will be effective by 2020. Ontario will consult on how to best achieve these targets through Building Code improvements.

6) Promote low-carbon energy supply and products

6.1 Establish low-carbon content for natural gas: Ontario intends to introduce a renewable content requirement for natural gas and provide supports to encourage the use of cleaner, renewable natural gas in the industrial, transportation and buildings sectors. The government will consult with industry on the implementation of this requirement. The goal is to ensure the lowest possible carbon content to help reduce building and transportation emissions. Methane released from sources like landfills, municipal green bin collection, agricultural residues, livestock manure, food and beverage manufacturing waste, sewage treatment plants and forestry waste can be renewed and directly substituted for conventional natural gas. Renewable natural gas is a low-carbon fuel that does not add new carbon to the atmosphere. It is fully interchangeable with conventional natural gas and uses the same infrastructure.

7) Help individuals and businesses manage their energy use and save money

By better understanding how people use energy, Ontarians can make informed choices on how to change their behaviours to help lower greenhouse gas pollution and fight climate change – as well as how to save money through reduced energy use. This action will:

7.1 Provide free energy audits for pre-sale homes: Energy audits would be required before a new or existing single-family home can be listed for sale, and the energy rating will be included in the real estate listing. These audits are intended to be provided free of charge under this plan. The Home Energy Rating and Disclosure program will improve consumer awareness by allowing homebuyers to compare homes by energy rating. It will also encourage uptake of retrofit incentive programs. To meet the expected demand for home energy auditors, Ontario will support development of energy audit training programs and will further consult before launching this program in 2019.

7.2 Expand Green Button provincewide: Ontario's Green Button program lets Ontarians access and share their data on electricity, natural gas and water consumption in a secure, standardized electronic format. Expanding this tool provincewide will help more households and businesses manage and conserve their energy and water use.

7.3 Boost public access to climate change tools: Ontarians would have access to a wide range of climate change tools to help them reduce carbon emissions. Publicly accessible tools will include carbon calculators, solar potential mapping, municipal level emissions data, climate change training materials, and guidance documents for businesses, municipalities and homes. These will be available starting in 2017.

8) Training, workforce and technical capacity

Reducing greenhouse gas pollution will require a workforce that is skilled in building retrofits and operations and energy management. Moving to a low-carbon economy will build on all the significant strengths of the existing workforce, and create new opportunities and new jobs for Ontarians. This action will:

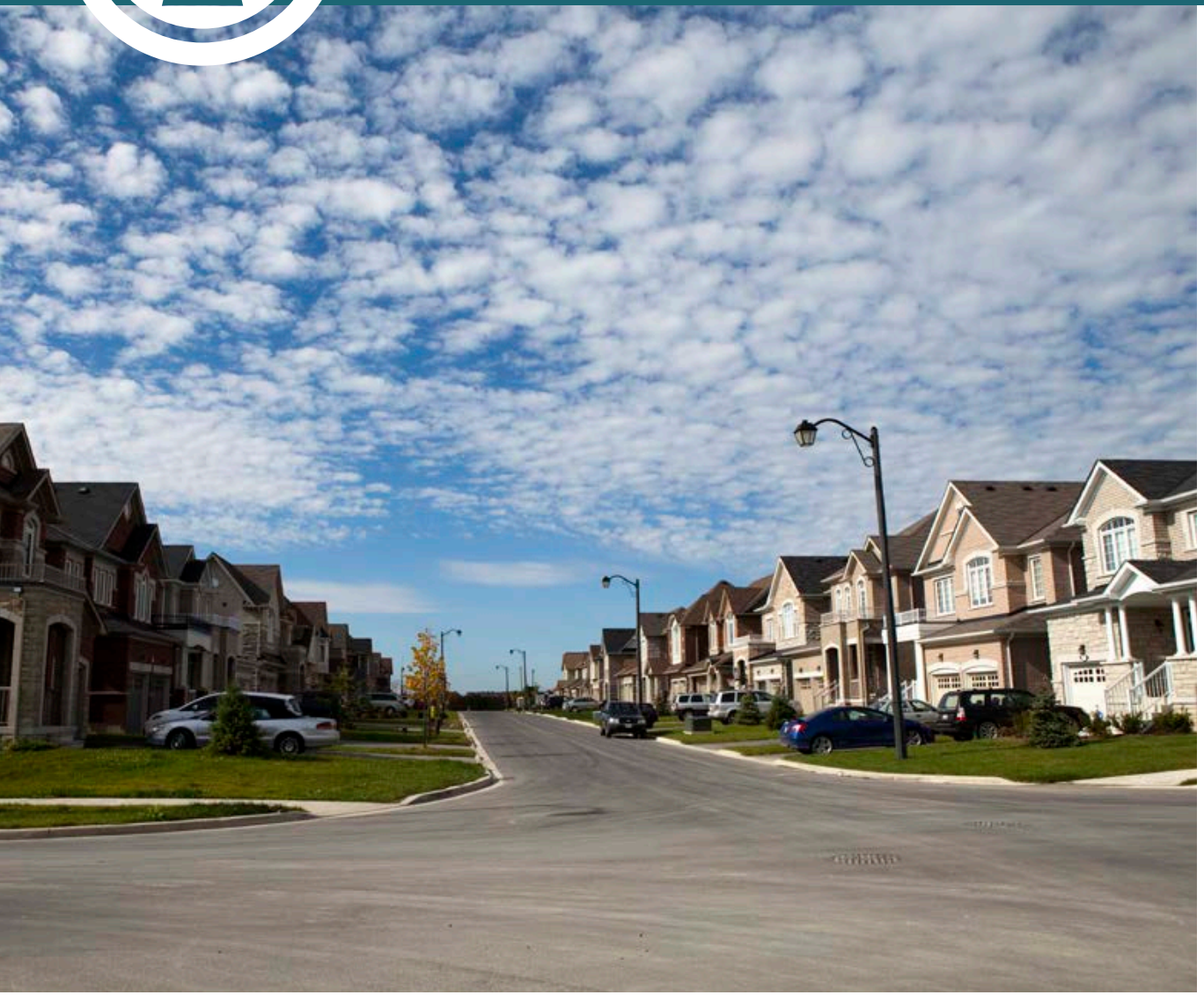
8.1 Grow the workforce for a low-carbon buildings sector: New and expanded training programs would be developed to ensure Ontario's buildings sector has the skilled workers it needs to compete in a low-carbon economy, and to help reduce the carbon footprint of Ontario homes and buildings.

8.2 Support post-secondary training and innovation: Training will be developed and delivered through post-secondary institutions and other training partners to be sure Ontario has the capacity to build, maintain and repair low-carbon buildings. This will include training for First Nation and Métis peoples. The province will support initiatives that advance low-carbon building science, technologies, materials and designs. Focus will be on stimulating product development and promotion, which includes support for research and pilot programs for innovations. A research program will be established for the design and engineering of tall wood-frame buildings.

Smart Thermostats help homeowners control and adjust their home heating and cooling from their smartphones.

ACTION AREA: LAND-USE PLANNING

Support low-carbon communities



ACTIONS

Strengthen climate change policies in the municipal land-use planning process

Support municipal and other stakeholder climate action

Reduce congestion and improve economic productivity

LAND-USE PLANNING
Support low-carbon communities

Good community planning can substantially reduce greenhouse gas pollution from transportation, buildings, business and industry – and help deliver a cleaner, healthier environment for residents.

As an example, studies show that compact, mixed-use and pedestrian-oriented city designs can decrease transportation emissions per household by 24 to 50 per cent, compared to conventional suburban neighbourhoods. Stemming the ability of urban sprawl to extend through rural lands not only reduces emissions – it protects valuable agricultural lands, natural resources, and ecosystems for the future.

Ontario is fully committed to complete, compact communities. Ontario is currently acting on recommendations that outline how to build more complete communities in the Greater Golden Horseshoe area – Canada's fastest-growing urban region.

Provincial policies and laws already guide transportation, land-use planning and urban design in this regard. Establishing emissions reduction as a priority will embed low-carbon design in long-term decision-making, and help in the fight against climate change.

Actions in this section support the planning and development of low-carbon communities. They include actions to help municipalities strengthen

LAND-USE PLANNING
Support low-carbon communities

local land-use policies to help fight climate change; to strengthen local energy planning and mapping; and to reduce traffic congestion and transportation emissions generally.

1) Strengthen climate change policies in the municipal land-use planning process

Municipalities need the tools to ensure land-use planning proposals can support greenhouse gas pollution reductions. This action focuses on helping municipalities implement local policies that contribute to provincial targets. It will:

1.1 Empower municipalities: The government intends to consult on and propose amendments to the Municipal Act and the City of Toronto Act (currently being reviewed) that, [if passed], would:

- **1.1.1 Require electric vehicle charging in surface lots:** Municipalities would be able to require installation of electric vehicle charging stations in surface parking areas.
- **1.1.2 Set green development standards:** Municipalities would be able to pass bylaws related to green standards in areas other than building construction. This would include, for example, sustainable transportation management.

1.2 Make climate change planning a priority: The government intends to consult and propose amendments to Ontario's Planning Act to make climate change a provincial interest, which would ensure climate change is taken into consideration when planning decisions are made. Greenhouse gas pollution reduction and climate change adaptation could be specifically noted as provincial interests.

1.3 Put climate change in official plans: The government intends to consult and propose amendments to the Planning Act to make climate change mitigation and adaptation mandatory in municipal official plans.

1.4 Eliminate minimum parking requirements: Minimum parking requirements would be eliminated over the next five years for municipal zoning bylaws, especially in transit corridors and other high-density, highly walkable communities. Minimum parking requirements are a barrier to creating complete, compact and mixed-use communities. Instead, bylaws will encourage bike lanes, larger sidewalks, and enhanced tree canopies.

2) Support municipal and other stakeholder climate action

Ontario works with many partners to support climate change action. In the 2016 Ontario Budget, a $17-million endowment was announced for the Toronto Atmospheric Fund to innovate, promote and invest in ways to reduce greenhouse gas pollution and improve air quality in the Greater Toronto and Hamilton Areas. Ontario will continue to work with partners across the province to fight climate change. This action will:

2.1 Establish a Challenge Fund or Program: The government intends to establish a greenhouse gas pollution reduction challenge fund or program. This fund or program will support emissions reduction projects proposed by municipalities that already have municipal/community energy plans or climate change policies with greenhouse gas pollution inventories in place. Green projects will get matching

provincial funding, with a focus on demonstrating the best cost-per-tonne reduction.

2.2 Support community energy planning: Ontario intends to fund the development of Community Energy Plans and Climate Action Plans (and their supporting data) with greenhouse gas pollution inventories for municipalities and First Nation and Métis communities that currently do not have these plans. These programs would include training and guidance to help communities access energy use data for their community energy planning and mapping.

2.3 Support community energy mapping and platforms: The government would support collaborative, community-based and data-driven approaches to carbon reduction. This would include district-wide mapping that integrates gas, electricity, heating and cooling, water, transportation, waste consumption and building data into a single platform to enable district-wide decisions. Applications would include distributed generation opportunities, detailed emissions analysis, targeted conservation spending and improved benchmarking.

3) Reduce congestion and improve economic productivity

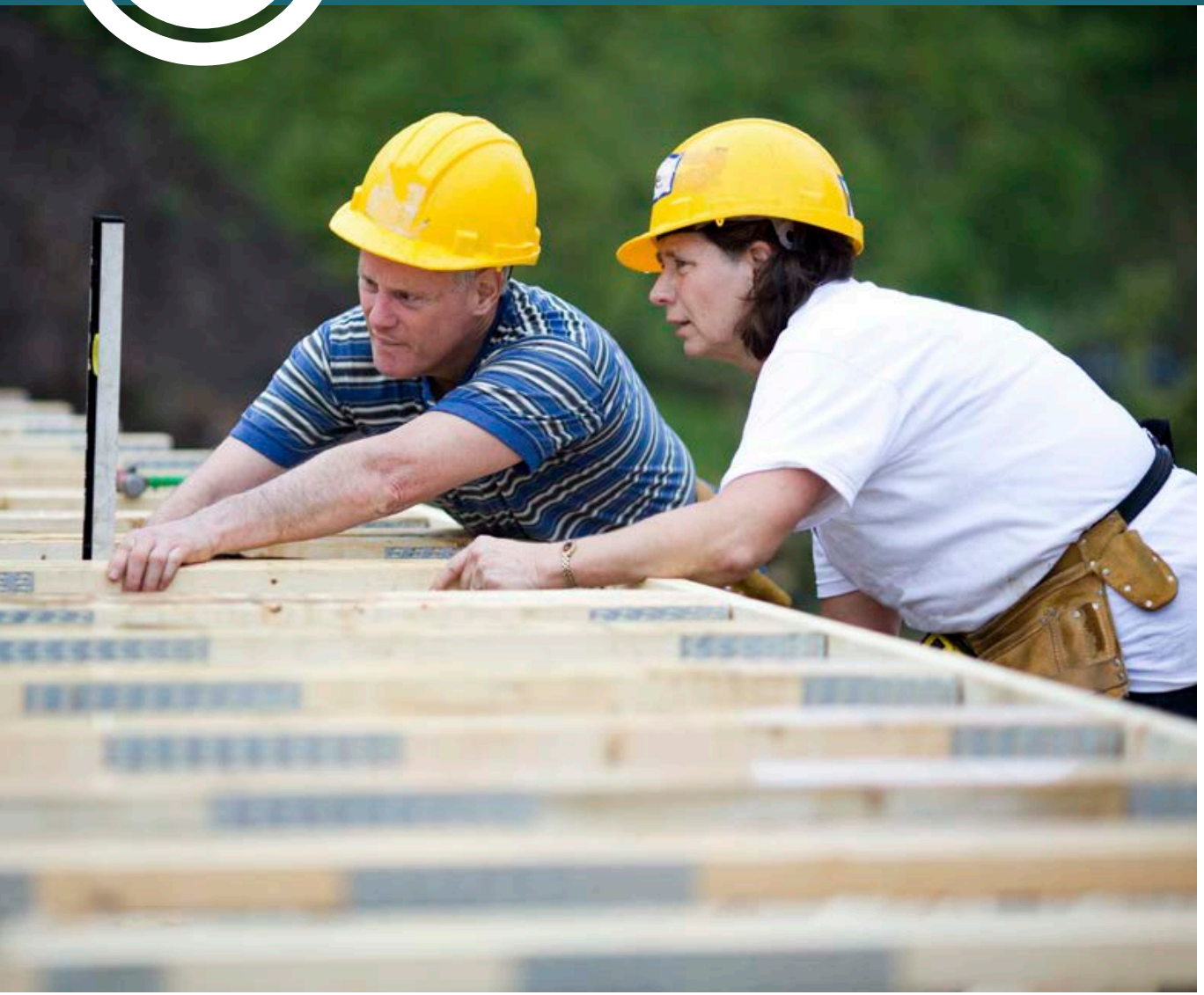
Congestion costs Ontario billions of dollars annually, increases greenhouse gas pollution, reduces our productivity and competitiveness, and impacts quality of life. This action will:

3.1 Help manage congestion: Ontario intends to ensure municipalities have the tools they need to pilot congestion management plans and "low emission zones."

3.2 Reduce single-passenger vehicle trips: Ontario would provide grants to municipalities and large private employers to implement Transportation Demand Management Plans. The plans will be designed to help increase walking, cycling, carpooling, telecommuting and flex-work schedules, thereby reducing overall fossil fuel consumption, traffic congestion and transportation emissions.

ACTION AREA: INDUSTRY AND BUSINESS

Keeping Ontario competitive: A strong centre of modern, clean manufacturing and jobs



ACTIONS

Help industries adopt low-carbon technologies

Help the agri-food sector adopt low-carbon technologies

INDUSTRY AND BUSINESS

Keeping Ontario competitive: A strong centre of modern, clean manufacturing and jobs

Industrial activity in Ontario accounts for more than one quarter of the province's annual greenhouse gas pollution. It is crucial for the long-term success of Ontario's low-carbon economy that industrial emissions reduction is balanced with continuing economic competitiveness.

The province has already taken steps to support business and industry through its climate change policies. The cap and trade program provides numerous incentives, including transitional allowances, to help business and industry cut emissions. Cap and trade offers them flexibility and choice in reducing their carbon footprints. The government intends to dedicate, from those proceeds that are intended to be invested back into industry, between $40 million and $60 million for the specific purpose of helping coal-intensive industries move to less carbon intensive fuels.

The action plan fully supports a competitive low-carbon economy. Companies will benefit from improved productivity, business certainty and a stable investment climate. The plan promotes innovation to develop more of the clean-technology processes and products that are increasingly in demand in this province and around the world, and will maintain and create jobs for Ontarians.

Actions in this section focus on establishing a green bank that will help companies across the province adopt low-carbon technologies, and actions targeted specifically to Ontario's agri-food sector.

1) Help industries adopt low-carbon technologies

1.1 Help companies transition to low-carbon: The government intends to help Ontario businesses and industries increase their use of low-carbon technologies. Programs and services will be designed and delivered by the green bank to help reduce greenhouse gas pollution while also reducing costs. Technologies deployed would not only improve energy productivity but also help industrial plants modernize to thrive in a competitive low-carbon economy. The green bank would support both large and smaller emitters.

These actions would be complemented by a modern and efficient approval process that would reduce time and costs involved in implementing low-carbon technologies. For example, the government will work with cement, steel, lime and other high-emitting sectors that can use alternative fuels, to establish a service standard for decisions on alternative fuel applications. The green bank will help businesses and industries identify available government programs and

financial supports, achieve economies of scale through project aggregation, calculate returns on investment, and secure financing. The delivery model for the green bank will be finalized in consultation with existing utilities.

2) Help the agri-food sector adopt low-carbon technologies

The agricultural sector is vital to Ontario – both by ensuring a secure food supply for Ontarians and as a significant contributor to the economy. This action focuses on helping the agri-food sector reduce its greenhouse gas pollution. It will:

2.1 **Reduce emissions:** Ontario intends to help its food and beverage-processing sector expand the use of innovative technologies and practices to reduce emissions.

2.2 **Retrofit agricultural facilities:** Ontario intends to support the transition to low-carbon, indoor agricultural facilities, such as greenhouses and grain dryers, through retrofits to existing structures.

ACTION AREA: COLLABORATION WITH INDIGENOUS COMMUNITIES

Partner to reduce emissions and transition to a low-carbon economy

ACTIONS

Collaborate with Indigenous communities

COLLABORATION WITH INDIGENOUS COMMUNITIES

Partner to reduce emissions and transition to a low-carbon economy

Climate change poses challenges on Ontario's Indigenous communities that depend on natural ecosystems for food supplies, traditional cultural practices, and their livelihood.

Ontario will work together with First Nation and Métis communities to address the challenges. The government is committed to developing a greater understanding of how Traditional Ecological Knowledge and expertise can be considered to address climate change. Ontario recognizes Indigenous communities' unique relationship with the land and is committed to supporting the survival of cultures, values and languages.

First Nation and Métis communities will benefit from the economic opportunities presented by Ontario's transition to a low-carbon economy. Reduced greenhouse gas pollution presents opportunities for job creation and economic development across the province, as well as opportunities to enhance the efficiency and sustainability of energy use in Indigenous communities. The Ontario Aboriginal Loan Guarantee Program is already working to support Indigenous participation in new transmission and renewable energy generation projects, such as wind, solar and hydroelectric.

The ideas included in this section are potential areas of collaboration with Indigenous communities and organizations. They are a

COLLABORATION WITH INDIGENOUS COMMUNITIES

Partner to reduce emissions and transition to a low-carbon economy

starting point, setting out Ontario's commitment to an ongoing dialogue. Working in partnership, we would refine all potential actions to ensure they address community needs and interests.

1) Collaborate with Indigenous communities

- Ontario and First Nation communities would work in partnership to ensure a transition to non-fossil fuel energy in a way that minimizes impact on the communities. This could be through investments in energy efficiency, micro-grids and renewable energy where feasible, and other forms of transition assistance, especially in remote and northern First Nations communities.
- Ontario will work with First Nations and the federal government to connect remote communities to the provincial electricity grid. This would reduce greenhouse gas pollution by moving communities from diesel generators to low-carbon electricity.
- Where community support exists, Ontario would work with First Nation organizations to develop advanced microgrid solutions in First Nation communities. These projects would support economic growth by reducing reliance on diesel fuel and enabling stable, predictable sources of power. Projects would focus on renewable energy such as biomass, solar, and waterpower. In the future, these projects could be connected to the provincial grid to enhance the reliability of the new transmission line and to diversify clean sources of energy for communities.
- Ontario will establish a fund for community-level greenhouse gas pollution reduction projects and for community energy and climate action planning in First Nation communities, particularly to reduce emissions from buildings and infrastructure, and for the development of carbon sequestration projects.
- First Nation and Métis Climate Change Tables will be created to ensure ongoing, regular discussion on shared priorities between Ontario and First Nations, and between Ontario and Métis communities. These tables would coordinate climate action and the implementation of Ontario's Climate Change Strategy and this action plan, and identify new actions that communities would like to see move forward.

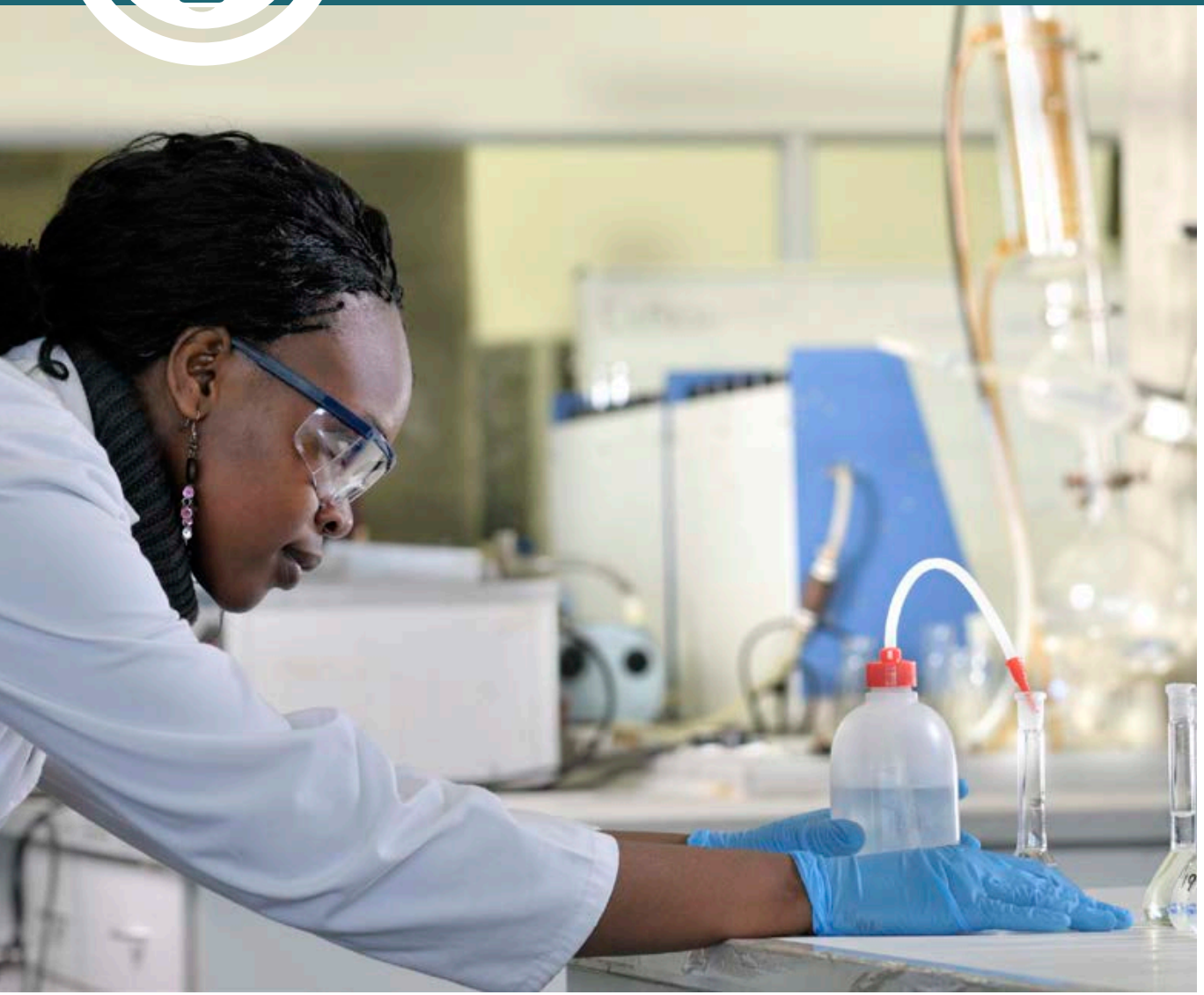
COLLABORATION WITH INDIGENOUS COMMUNITIES

Partner to reduce emissions and transition to a low-carbon economy

- Low-carbon jobs and training partnerships will be established among post-secondary institutions and Indigenous communities. These would deliver programs that would support skills training related to renewable energy, energy efficiency, and the green buildings sector.
- Ontario would connect with First Nation and Métis communities by partnering on regular symposiums to be held in different communities across Ontario, focusing on sharing knowledge on climate change, including Traditional Ecological Knowledge. These symposiums would engage youth leaders and elders to share knowledge related to climate change mitigation.

ACTION AREA: RESEARCH AND DEVELOPMENT

Focus on climate science and zero-carbon breakthroughs



ACTIONS

Support innovation and commercialization of new low-carbon technologies

Set Tax and Regulatory Policies that Encourage Innovations

Support research and development through a Global Centre for Low-Carbon Mobility

RESEARCH AND DEVELOPMENT

Focus on climate science and potential zero-carbon breakthroughs

Fighting climate change presents an extraordinary opportunity for innovation. As governments around the world work to achieve their greenhouse gas targets, the demand for low-carbon products and technologies will only increase. By fostering innovation in these areas, Ontario can gain significant long-term benefits across its economy that will include high-quality jobs, technology spill-overs, reduced production costs and greater productivity – and competitiveness on a global scale.

Ontario has already experienced the impact. In 2009, the government kick-started a clean tech and renewable energy sector through its Green Energy Act. This has led to new manufacturing jobs across the province and more renewable sources of power online. Other initiatives, including the Water Opportunities Act and Greener Diesel and Ethanol in Gasoline Regulations, have spurred innovation that has led to new products and services, new choice for consumers and businesses, and new high-paying jobs.

Today, Ontario is well-placed to excel in low-carbon innovation, science and technology. It has already repositioned its role in North American manufacturing towards the low-carbon economy. And many opportunities lie ahead.

This action plan supports research, development and innovation in climate change science and technologies. It encourages Ontario's researchers, entrepreneurs and businesses to make the discoveries that will lead to breakthroughs in zero-carbon technology. It supports scaling-up of pioneering Ontario companies.

Actions in this section will help strengthen and grow Ontario's clean-tech sector; set tax and regulatory policies to encourage innovation; and create a new Centre dedicated to supporting research and development that has great potential for emissions reduction and for high consumer demand.

RESEARCH AND DEVELOPMENT

Focus on climate science and potential zero-carbon breakthroughs

1) Support innovation and commercialization of new low-carbon technologies

Fighting climate change requires both maximizing use of existing technologies and developing new technologies. In the 2016 Ontario Budget, the government announced a $55 million commitment to support the clean-tech sector. The government intends to add to this amount – and will dedicate the new funds specifically to research and development and proof-of-concept low-carbon technologies.

Ontario has the fastest-growing cleantech sector in Canada — with $8 billion in revenue, 3,000 companies and 65,000 employees.

1.1 Strengthen the low-carbon clean-tech sector: Ontario will encourage the development and growth of its clean-tech sector by supporting research in low-carbon technologies; developing low-carbon clean technology accelerators and clusters in sectors where Ontario has a competitive edge; supporting proof-of-concept projects for low-carbon technologies; and helping emerging low-carbon companies increase scale.

2) Set Tax and Regulatory Policies that Encourage Innovations

Tax and regulatory policies can play an important role in supporting low-carbon investment decisions. This action will:

2.1 Explore R&D tax credits: Ontario intends to explore opportunities to create tax credits for research and development in order to encourage investment in Ontario companies focused on low-carbon technologies.

2.2 Consider accelerated capital cost allowance: The province will work with the federal government to explore possible opportunities for accelerated capital cost allowance for technologies that reduce greenhouse gas pollution.

2.3 Regulatory requirements: Regulatory requirements will be updated to support the adoption of innovative industrial technologies and the reduction of greenhouse gas pollution.

Biomass heating systems burn organic fuels like wood pellets to provide heat, steam or hot water.

3) Support research and development through a Global Centre for Low-Carbon Mobility

3.1 Create a Global Centre for Low Carbon Mobility: Based at a post-secondary institution in Ontario, a Global Centre for Low Carbon Mobility will be set up to advise the government on low-carbon transportation, and to direct funding for research, development and low-carbon manufacturing. The Centre will focus on industry research and development needs and support development of low- and no-carbon transportation technology such as electric automated vehicles. Priority will be given to technology that has both high emissions reduction and consumer-demand potential. The Centre will also support research and development in low-carbon technology for off-road vehicles. It will build on the strong foundation that exists between Ontario and the auto industry. It will create new jobs, new technologies and help preserve existing manufacturing jobs in the province.

ACTION AREA: GOVERNMENT

Move toward a carbon neutral public service

ACTIONS

Reduce emissions and energy costs across government

The Ontario Public Service (OPS) has more than 63,000 employees, billions of dollars in annual purchases of goods and services (including energy), more than 6,000 vehicles, and over 3.25-million square metres of building space.

This presents considerable opportunities for the province to lead by example, by becoming carbon neutral by 2018.

Ontario has already made progress. Since 2006, greenhouse gas pollution from the province's vehicle fleet has been reduced by 18 per cent, from business-related employee air travel by 18 per cent, and from government-owned buildings by 30 per cent.

Further, the government is able to drive emissions reduction through policies, decision-making and investments. For example, Ontario will spend $160 billion over 12 years on public infrastructure, including $31.5 billion through the Moving Ontario Forward plan that invests in, for example, transit projects.

Over the next five years, the OPS will lay the foundation to reach its new target of reducing emissions by 50 per cent below 2006 levels by 2030. These reductions will have the added benefit of reducing the cost to Ontarians of government operations.

The actions in this section focus on reducing emissions and energy costs across government, including through healthier government buildings, increased electric vehicles in the OPS fleet, low-carbon procurement, and public-sector climate change tools, information and training.

GOVERNMENT

Move toward a carbon neutral public service

1) Reduce emissions and energy costs across government

By investing to reduce greenhouse gas pollution in Ontario's own facilities and operations, the province will reduce the cost of government operations, provide healthier workplaces for provincial employees, and inspire other employers and individuals to reduce emissions to fight climate change. This action will:

1.1 Deliver healthier buildings: Ontario will reduce emissions in provincial government buildings through measures that include energy-efficiency and low-carbon energy retrofits, and by strengthening the performance of existing buildings. Aging government buildings currently emit more than 120,000 tonnes of carbon annually. The province will also explore opportunities to conduct major building renovations, restorations and redevelopment to reduce its carbon footprint.

1.2 Increase the reduction target: The new government greenhouse gas pollution reduction target will be 50 per cent below 2006 levels by 2030. Ontario will develop a

long-term strategy to move all government operations towards carbon neutrality.

1.3 Increase telecommuting: Providing more opportunities for telecommuting by OPS staff will help reduce emissions from transportation and buildings.

1.4 Green-up government vehicles: Ontario will buy or lease green-plate-eligible passenger vehicles for the OPS fleet wherever possible. Government and corporate fleets present an important opportunity to showcase the viability and practicality of electric vehicles.

1.5 Emphasize energy reductions: To help drive energy conservation and emissions reductions, the government will enable the use of energy performance contracts across the OPS.

1.6 Showcase Ontario's clean-tech expertise: Public properties and buildings will be used to help demonstrate low-carbon technologies, and to showcase made-in-Ontario innovations and the expertise of Ontario's clean-tech companies.

1.7 Ensure low-carbon procurement: Ontario spends billions of dollars each year in procurement. This spending can be directed to encourage the use of low-carbon materials and construction techniques in projects across the province. The OPS Procurement Directive will be reviewed to enable low-carbon procurement, considering the full lifecycle of products.

1.8 Reform fossil fuel policies: Ontario will reform existing policies and programs that support fossil fuel use and fossil fuel-intensive technologies.

ACTION AREA: AGRICULTURE, FORESTS AND LANDS

Productive, sustainable, and a pathway to creating offsets

ACTIONS

- Reduce emissions from waste and move Ontario towards a circular economy
- Increase our understanding of how agricultural and natural lands emit and store carbon
- Maximize carbon storage from agriculture
- Understand and enhance carbon storage in natural systems
- Update Environmental Assessments to Account for Climate Change

AGRICULTURE, FORESTS AND LANDS

Productive, sustainable, and a pathway to creating offsets

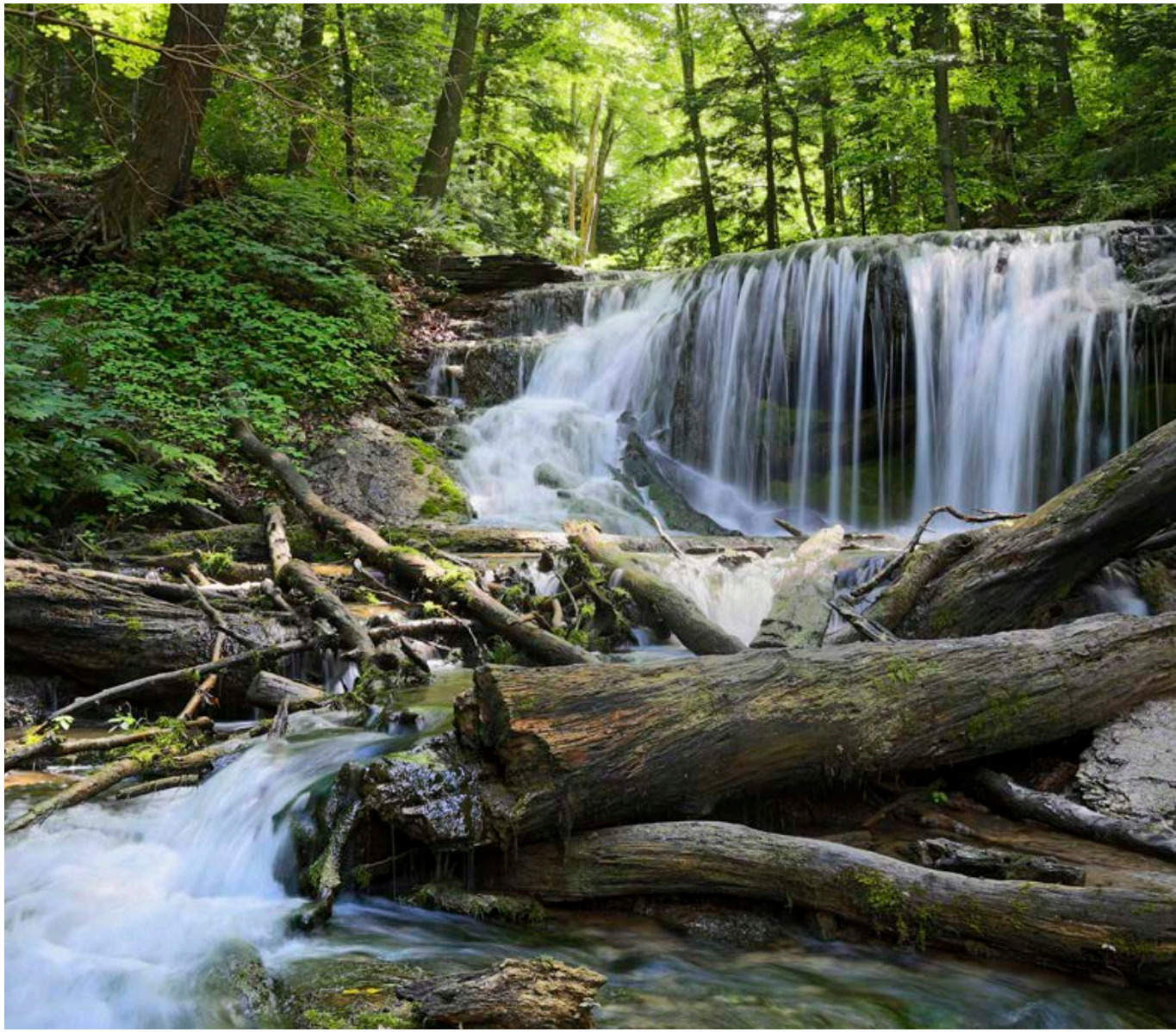
Ontario is committed to preserving and protecting the natural environment for today and tomorrow. Making effective use of our natural environment while reducing emissions, requires careful study and a targeted response.

Agriculture, for example, has a complex relationship with emissions. Some farming activities, such as raising livestock or using tractors, add emissions. Plants and vegetation, on the other hand, absorb carbon dioxide, a key greenhouse gas, and store it in plant material, thereby reducing atmospheric carbon.

Ontario's goal is to ensure natural, agricultural, and forested lands are used in ways that are efficient and sustainable and enhance the removal and storage of carbon from the atmosphere. Also important is Ontario's waste sector, where different practices and technologies can capture greenhouse gas pollution that would otherwise be released into the air.

Due to their ability to remove carbon from the atmosphere, Ontario's agriculture, forestry, lands, and resource recovery sectors will be able to supply carbon offsets to the cap and trade market, providing made-in-Ontario compliance options for emitters.

Actions in this section focus on moving Ontario further towards a circular economy that diverts all waste; ensuring a better understanding of how



to measure the flow of carbon and the role of natural systems in climate change mitigation and adaptation; and improving soil health to protect food security and maximize carbon storage.

1) Reduce emissions from waste and move Ontario towards a circular economy

1.1 On track to zero waste: The government will implement the Waste-Free Ontario: Building the Circular Economy strategy, which calls for zero waste in the province and zero greenhouse gas pollution from the waste sector. The draft strategy was released in November 2015. Once finalized, it will be implemented over five years. The government's Waste-Free Ontario Act will help recover resources and divert more waste from landfills while supporting the province's efforts to tackle climate change. Together, the legislation and the strategy would:

- boost recycling in the industrial, commercial and institutional sector, which would reduce waste and lower greenhouse gas pollution, and
- reduce the amount of organic materials going into landfills, which would reduce emissions. Potential targets are 40 per cent of organics diverted by 2025 and 60 per cent by 2035.

2) Increase our understanding of how agricultural and natural lands emit and store carbon

Agricultural land and natural systems sequester carbon. Protecting and enhancing Ontario's agricultural land and natural systems improves our resilience to climate change. Wetlands, for example, sequester and store carbon, but also help prevent floods and reduce the impacts of extreme weather on storm sewers and other infrastructure. This action will:

2.1 Develop a Land Use Carbon Inventory: This will allow Ontario to assess the potential of agriculture, forestry and other land uses, such as wetlands and grasslands, to emit, remove and store carbon.

2.2 Develop a Forest Carbon Policy Framework: This will help clarify the role of managed Crown forests in storing carbon. Ontario will develop policy on forest carbon management and/or carbon offset projects for the forestry sector while exploring the potential benefits with Indigenous peoples.

3) Maximize carbon storage from agriculture

3.1 Long-term soil health: Ontario will work with stakeholders to develop and implement an Agricultural Soil Health and Conservation Strategy that will maximize long-term carbon storage in soils while protecting their long-term productivity. This strategy will identify ways to increase the use of soils management practices that reduce greenhouse gas pollution and improve the long-term capacity for soil carbon sequestration. Improved soil health will also help the agricultural sector adapt to a changing climate, find more opportunities to reduce greenhouse gas pollution, and lay the groundwork for potential participation in Ontario's carbon offset market. Investments in soil mapping will help gather data and information needed to assess soil health, carbon sequestration and accounting.

4) Understand and enhance carbon storage in natural systems

By taking actions to protect, plan for and enhance natural areas, Ontario's natural systems can play an important role in climate change mitigation. This action will:

4.1 Benefit from an expanded Greenbelt: Ontario's Greenbelt is being expanded. This will enable more green spaces to be protected and enable the carbon sequestration potential of the area to be maintained.

4.2 Protect grasslands: The government will develop and implement the Ontario Grasslands Stewardship Initiative to promote and support grasslands that help store carbon. The program will focus on conserving, restoring, and managing 22,500 hectares of grassland conservation.

4.3 Support Far North land-use planning: The Far North Land Use Strategy, when completed and implemented, will help support First Nation-Ontario planning teams in preparing community-based land-use plans. This includes considering potential climate change impacts when designing land-use areas and designations.

4.4 Increase tree planting: Ontario will continue to support tree-planting programs, including its commitment to plant 50 million trees across the province by 2025. The number of trees to be planted within the boundaries of urban municipalities will be doubled from one million to two million, with funding for irrigation where appropriate.

4.5 Improve understanding of the flow of carbon: Together with First Nation and Métis communities, Ontario will work to better understand and monitor natural systems that play an important role in carbon storage.

Biodiesel is a clean-burning renewable fuel made from vegetable oils, recycled frying oils, and residual animal fats.

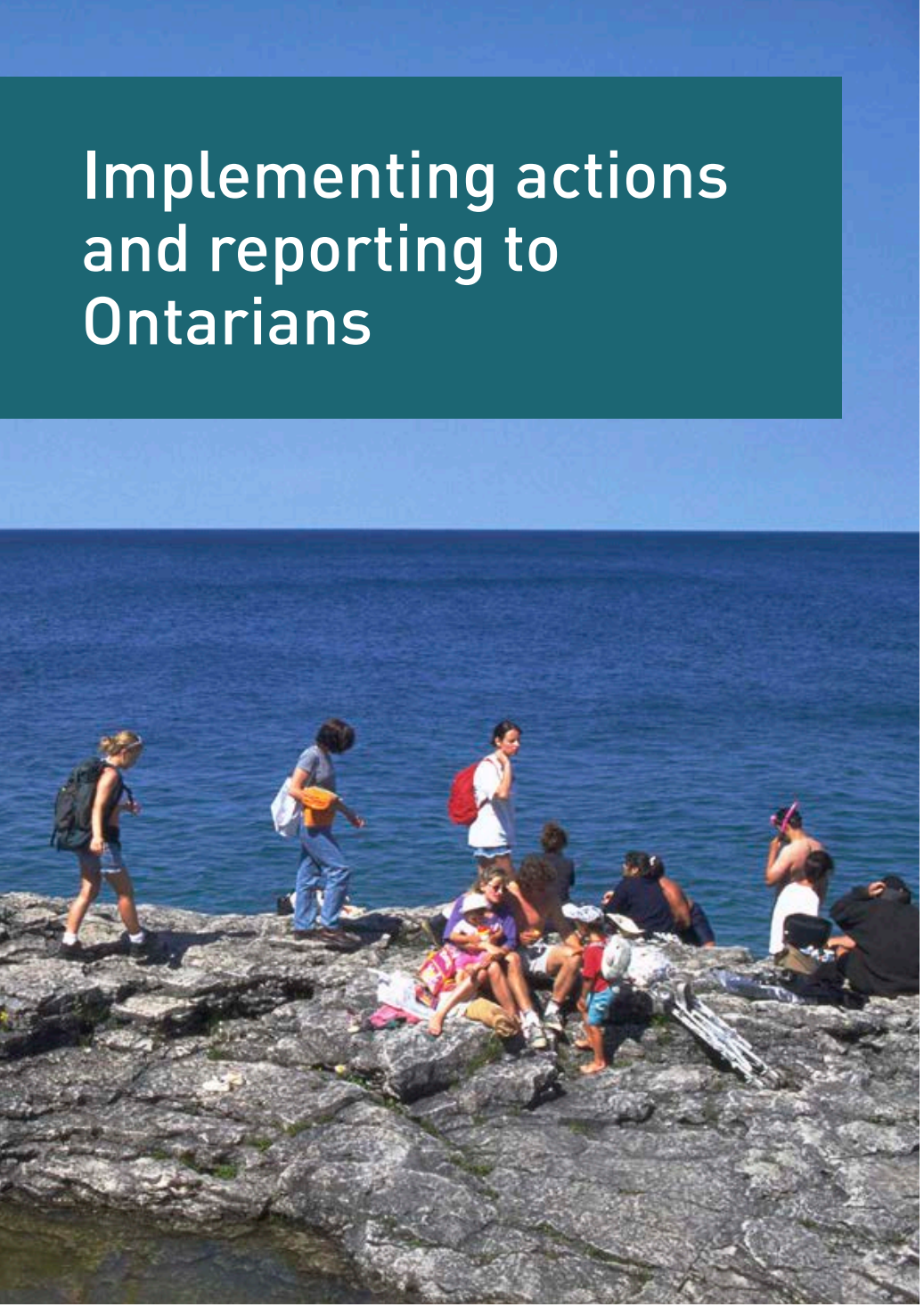
5) Update Environmental Assessments to Account for Climate Change

5.1 Address climate change in environmental assessments: The province has prepared a draft guide entitled Consideration of Climate Change in Environmental Assessment in Ontario for projects and undertakings under the Environmental Assessment Act. This guide describes various approaches to the treatment of climate change in environmental assessment processes and studies, including:

- consideration of climate change mitigation, i.e. reducing the likelihood that climate change will occur or its severity, and
- consideration of climate change adaptation, i.e. ensuring that projects, when built, are prepared for future changes to climate.

When finalized, this guide will support the province's Climate Change Action Plan and Adaptation Strategy and will become part of the Environmental Assessment program's Guides and Codes of Practice.

Implementing actions and reporting to Ontarians



This action plan sets out the steps Ontario will take to fight climate change. It is a five-year plan, with actions being launched throughout that period. Each year, Ontario will prepare an annual report that describes the status of the actions set out in the action plan. The report must be put before the Legislature and made available to the public.

All actions will be implemented after thorough collaboration with business, industry, municipalities, First Nations and Métis communities and organizations, and other partners – with additional consultation, where appropriate.

Ontario will advise both public and stakeholders whenever specific actions – such as home energy retrofits for homeowners or research and development grants for clean-tech companies – become available.

All actions taken to fight climate change, and the way in which cap and trade proceeds are used, will be transparent and accountable. Ontario's Climate Change Mitigation and Low-carbon Economy Act requires:

- that Ontario renew this action plan at least every five years,
- an annual public reporting on action plan progress as well as funds tracked in and out of the Greenhouse Gas Reduction Account,
- establishment of a Greenhouse Gas Reduction Account to track cap and trade proceeds and ensure they are invested in green projects and programs that reduce or support the reduction of greenhouse gas pollution.

Working with the federal government

Ontario recognizes the federal government's leadership on fighting climate change, as well as its commitment to targeted federal funding for provinces and territories. Ontario supports the creation of a pan-Canadian approach to carbon pricing that recognizes existing and planned provincial initiatives and is driven by the delivery of real greenhouse gas reductions.

As this province and country moves to carbon pricing, it is important to consider what might be collectively done to keep businesses competitive, including through tools such as border carbon measures that can help level the playing field with goods entering Ontario from jurisdictions without a carbon price. This would support our businesses while also encouraging broader reduction of carbon. The province will consult with industry regarding trade exports over the next few months.

Ontario looks forward to working collaboratively with the federal government to reduce greenhouse gas pollution, build resiliency, and ensure federal infrastructure support aligns with provincial climate change objectives. The federal government is urged to contribute funds that will enhance and build on the actions outlined in this plan.

Ontario has been an early leader in Canada regarding emissions reductions. It made hard, far-reaching decisions to ensure a cleaner electricity supply by closing coal and supporting the growth of the renewable energy sector. Federal support will be crucial to Ontario's success in achieving its emissions reduction targets which will, in turn, help Canada meet and exceed its commitments to the international community.

Ontario will continue to work with the federal government to develop intergovernmental climate change initiatives in collaboration with Ontario's municipalities, First Nation and Métis communities.

Adapting to become climate resilient

Ontario's Climate Change Strategy recognizes the need to plan, prepare and adapt to a changing climate. This Climate Change Action Plan focuses on greenhouse gas reductions. Ontario's plan for adapting to climate change and becoming more resilient will be released in 2017.

This upcoming plan will build on Climate Ready: Ontario's Adaptation Strategy and Action Plan, which was released in 2011, and was Ontario's first public commitment to address climate impacts across government.

The updated plan will provide details of a new climate modelling collaborative, a commitment under Ontario's Climate Change Strategy. This modelling collaborative will help decision-makers understand potential climate impacts so they can make effective, climate-resilient decisions. It will provide:

- a one-window repository for information about current impacts and projections for the future, and
- access to expertise to understand how climate change may affect different activities or lines of business, and help plan for and manage risks in areas such as farming, infrastructure, and public health.

This work will be useful to provincial and municipal governments, Crown agencies, utilities, conservation authorities, the private sector, First Nations and Métis communities, and others.

The updated adaptation plan will address pollinator health and food security, as well as expand on the importance of healthy Ontario soil. It will also address the unique challenges Indigenous communities face in adapting to climate change.

Conclusion: taking action together

The fight against climate change is crucial. At its core, it's about respecting this province and this planet whose care has been entrusted to us all.

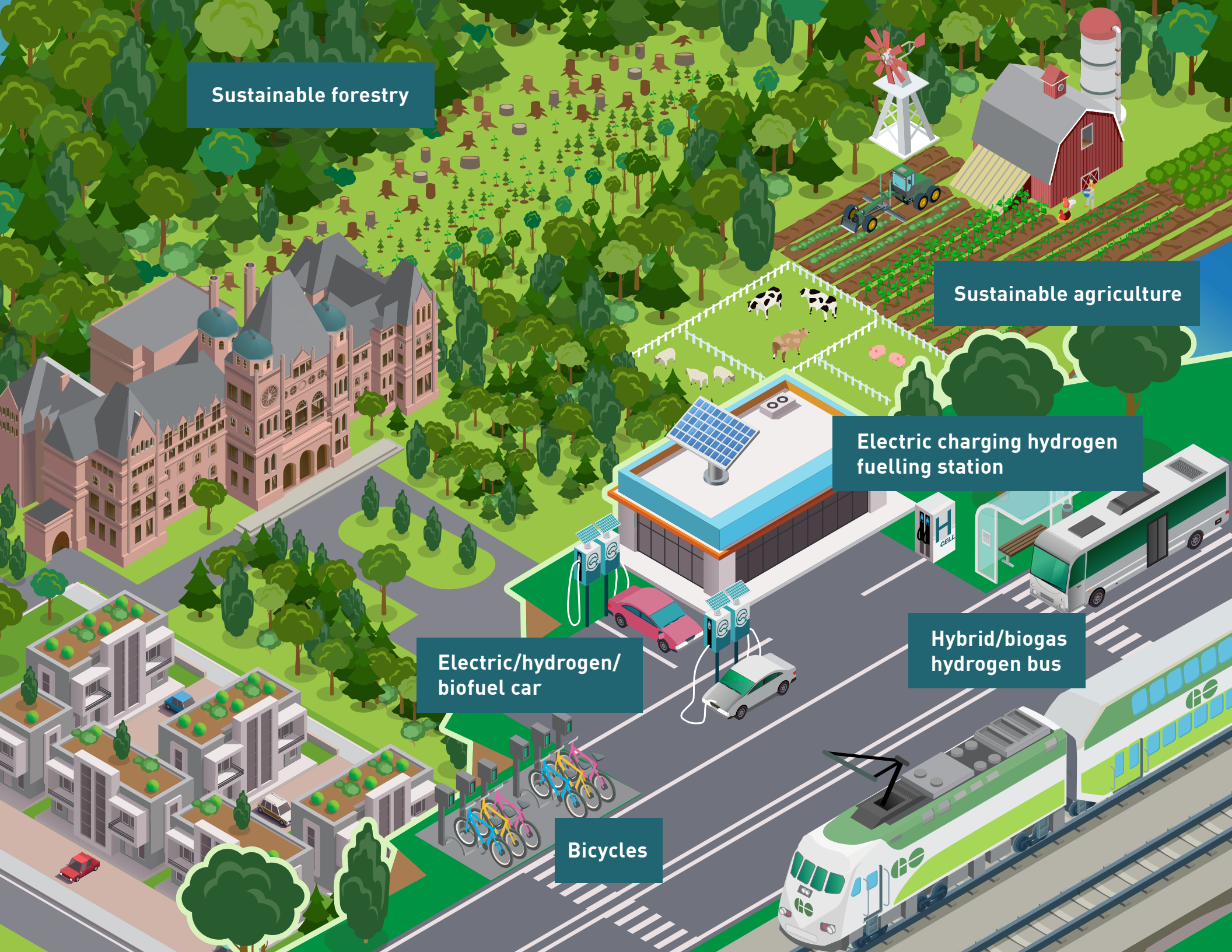
Ontario's Climate Change Action Plan is a springboard to progress. It's a five-year plan that builds on work already done and achievements already made in reducing Ontario's greenhouse gas pollution. It introduces key actions that will move the province further towards its emissions reduction targets of 2020, 2030 and 2050, and to ultimately realize the goals of Ontario's Climate Change Strategy.

This plan addresses the full scope of what needs to be done. Over time, fighting climate change requires a shift in how we live, work and move. The plan provides choice: it gives consumers and businesses the tools to change their behaviours and reduce their carbon footprints. It provides businesses with certainty and stability. It promotes the innovation that will propel Ontario's transition to a low-carbon economy and create good jobs for Ontarians. And it will preserve and protect our natural environment for future generations to enjoy.

We all have a role to play. Fighting climate change will require the involvement of everyone – individuals, businesses, diverse communities, governments – separately and collectively, both short and long term.

Ontario's Climate Change Action Plan sets us on the path forward. Together, we have an opportunity to lead a climate change movement that will transform our province – and ensure a healthy, prosperous and greener future.


What will Ontario look like in 2050?
Renewable Energy
KLEEN TECH
Low carbon businesses and industries
Low carbon homes
Ground source heat pump


Sustainable forestry
Sustainable agriculture
Electric charging hydrogen fuelling station
Electric/hydrogen/ biofuel car
Hybrid/biogas hydrogen bus
Bicycles

Actions and investments in the plan*

Action Area: Transportation

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
1	**Increase The Availability And Use Of Lower-Carbon Fuel**				
1.1	Boost renewable content: Ontario will set a Renewable Fuels Standard to increase the percentage of renewable content required in transportation fuels sold in the province.	—			2017/18
1.2	Assist fuel distributors: Ontario will provide funding to fuel distributors for high-blend sustainable biofuels and infrastructure upgrades – to help them help consumers lower their greenhouse gas pollution.	$100,000,000 to $155,000,000			2017/18
1.3	Pilot waste and agricultural methane as a fuel source: The province will pilot a program that uses methane obtained from agricultural materials or food wastes for transportation purposes, with funding for commercial-scale demonstration projects.	$15,000,000 to $20,000,000			2017
	Intended GGRA Funding (Total)	**$115,000,000 to $175,000,000**	**2,000,000 Tonnes**	**$20**	
2	**Increase The Use Of Electric Vehicles**				
2.1	Maintain incentives for electric vehicles: Ontario will extend the rebate program to 2020 for leasing or buying an eligible electric vehicle (up to $14,000 per vehicle), including rebates for purchase and installation of home charging stations (up to $1,000 per station).	$140,000,000 to $160,000,000			2017

Action Area: Transportation

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
2.2	Eliminate HST on zero emission vehicles: Ontario will work with the federal government to explore ways to provide full HST relief to purchasers of new battery electric vehicles, with the objective of introducing this relief by 2018.	—			2017/18
2.3	Free overnight electric vehicle charging: The province intends to establish a four-year free overnight electric vehicle-charging program for residential and multi-unit residential customers starting in 2017.	$15,000,000			2016
2.4	Replace older vehicles: The province will help get older and less fuel-efficient vehicles off the roads by offering a rebate to low- and moderate-income households that will help them replace old cars with new or used electric vehicles or a plug-in hybrid.	$10,000,000 to $20,000,000			2017/18
2.5	Ensure availability of charging infrastructure is widely available: Ontario will increase access to the infrastructure required to charge electric vehicles by ensuring the following:	See Below			See Below
2.5.1	More charging stations: The province will invest in the rapid deployment of charging in workplaces, multi-unit residential buildings, downtowns and town centres.	$80,000,000			Ongoing
2.5.2	Electric-vehicle-ready homes: Ontario will require all new homes and townhomes with garages to be constructed with a 50-amp, 240-volt receptacle (plug) in the garage for the purpose of charging an electric vehicle.	—			January 2018

Action Area: Transportation

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
2.5.3	Electric-vehicle-ready workplaces: Ontario will establish a requirement that, as of 2018, all newly built commercial office buildings and appropriate workplaces must provide charging infrastructure.	—			2018
2.6	Electric and Hydrogen Advancement Program: Starting in 2017, vehicle manufacturers that offer their customers access to Ontario's Electric Vehicle Incentive Program will need to participate in an Electric and Hydrogen Vehicle Advancement Program.	—			2017
2.7	Increase public awareness: Ontario will work with Plug'n Drive, a non-profit electric vehicle advocacy organization, to establish and operate a facility to showcase electric vehicles and related technology to Ontarians across the province.	$1,750,000 to $2,000,000			2017/18
	Intended GGRA Funding (Total)	**$246,750,000 to $277,000,000**	**50,000 Tonnes**	**$75**	

Action Area: Transportation

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
3	**Support Cycling And Walking**				
3.1	Improve commuter cycling network: The government will accelerate and enhance implementation of Ontario's Cycling Strategy and Action Plan and promote cycling.				See Below
3.1.1	A better cycling network: Commuter cycling networks will be established across Ontario, targeting routes with high-commuting volume such as between residential communities, major transit stations and employment areas.				Ongoing
3.1.2	Safe cycling: There will be more cycling facilities in urban areas, including grade-separated routes and cycling signals.	$150,000,000 to $225,000,000			Ongoing
3.1.3	Convenient cycling: There will be more bike parking at transit stations and provincially owned, publicly accessible facilities.				Ongoing
3.1.4	Commuter cycling: Ontario will revise provincial road and highway standards to require commuter cycling infrastructure be considered for all road and highway construction projects where it is safe and feasible. Ontario will do the same for major transit corridors.				Ongoing
	Intended GGRA Funding (Total)	**$150,000,000 to $225,000,000**	**Enables Reductions Post-2020**	**$500**	

Action Area: Transportation

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
4	**Increase The Use Of Low-Carbon Trucks And Buses**				
4.1	Provide incentives for business: A new Green Commercial Vehicle Program will be set up to provide incentives to eligible businesses that want to buy low-carbon commercial vehicles and technologies to reduce emissions, including electric and natural gas-powered trucks, aerodynamic devices, anti-idling devices, and electric trailer refrigeration.	$125,000,000 to $170,000,000			2017/18
4.2	Build a network of low-emission fuelling stations: The province will work with the Ontario Trucking Association, Union Gas, Enbridge and others to establish a network of natural gas and low- or zero carbon fuelling stations.	$75,000,000 to $100,000,000			2017/18
4.3	Improve competitiveness of short-line railways: A study will be conducted and action taken to improve the competitiveness of Ontario's short-line railways.	$15,000,000 to $20,000,000			2017
	Intended GGRA Funding (Total)	**$215,000,000 to $290,000,000**	**400,000 Tonnes**	**$100**	

Action Area: Transportation

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
5	**Support the accelerated construction of GO Regional Express rail**				
5.1	Accelerate Regional Express Rail Deployment: The province will work to accelerate deployment of the Regional Express Rail system. Improved transit infrastructure means faster, more frequent, transit options for users, and less traffic congestion for people who drive.	$355,000,000 to $675,000,000			
	Intended GGRA Funding (Total)	**$355,000,000 to $675,000,000**	**Enables Reductions Post-2020**	**$525**	**Ongoing**

Action Area: Buildings and Homes

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
1	**Improve energy efficiency in multi-tenant residential buildings**				
1.1	Retrofit social housing apartments: Most of Ontario's social housing towers were constructed in the 1960s and 1970s and can use up to 25 per cent more energy per square metre than a house.	$380,000,000 to $500,000,000			2017/18
1.2	Protecting tenants from the price of carbon: Ontario will consider options for legislative and/or regulatory change that lessen the impact on residential tenants of increased energy costs from cap and trade.	—			2017/18

Action Area: Buildings and Homes

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
1.3	Provide incentives for apartment building retrofits: Ontario will offer incentives to install energy efficient technologies, like boiler replacements, adaptive thermostats and lighting retrofits in multi-tenant buildings, such as apartments.	$300,000,000 to $400,000,000			2017
	Intended GGRA Funding (Total)	**$680,000,000 to $900,000,000**	**99,000 Tonnes**	**$425**	
2	**Improve energy efficiency in schools and hospitals**				
2.1	Support schools: Ontario will provide funding for existing schools to improve energy efficiency and install renewable energy technologies.	$400,000,000 to $800,000,000			2017/18
2.2	Support hospitals, universities and colleges: The government will establish a fund to help hospitals, universities and colleges retrofit their facilities with energy efficient and renewable energy technologies, including building automation systems, energy-efficient windows, solar thermal and geothermal systems.				2017/18
	Intended GGRA Funding (Total)	**$400,000,000 to $800,000,000**	**113,000 Tonnes**	**$270**	
3	**Reduce emissions from heritage buildings**				
3.1	Showcase low-carbon technologies: Ontario's heritage properties are excellent platforms to showcase low-carbon technology to the public.	$40,000,000 to $80,000,000			2017
	Intended GGRA Funding (Total)	**$40,000,000 to $80,000,000**	**Enables Reductions Post-2020**	**N/A**	

Action Area: Buildings and Homes

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
4	**Help homeowners reduce their carbon footprints by supporting additional choice**				
4.1	Boost low-carbon technology in homes: Ontario will help homeowners purchase and install low-carbon energy technologies such as geothermal heat pumps and air-source heat pumps, solar thermal and solar energy generation systems that reduce reliance on fossil fuels for space and water heating.	$500,000,000 to $600,000,000			2017/18
4.2	Help retire older wood stoves: A new program targeting northern and rural communities, including Indigenous communities, will encourage households to switch out older polluting wood stoves for new high-efficiency wood stoves.	$1,000,000 to $4,000,000			2017/18
4.3	Near Net Zero Carbon Home Incentive: Rebates will go to individuals who purchase or build their own near net zero carbon emission homes, with energy efficiency performance that sufficiently exceeds the requirements of the Building Code.	$180,000,000 to $220,000,000			2017/18
4.4	Keep Electricity Rates Affordable: Use cap and trade proceeds to offset the cost of greenhouse gas pollution reduction initiatives that are currently funded by residential and industrial consumers through their bills.	$1,000,000,000 to $1,320,000,000	3,000,000 Tonnes from energy related activities, beyond LTEP 2013	N/A	2017
	Intended GGRA Funding (Total excluding 4.4)	**$681,000,000 to $824,000,000**	**180,000 Tonnes**	**$225**	

Action Area: Buildings and Homes

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
5	**Set lower-carbon standards for new buildings**				
5.1	Update the Building Code: The government will update the Building Code with long-term energy efficiency targets for new net zero carbon emission small buildings that will come into effect by 2030 at the latest, and consult on initial changes that will be effective by 2020.	—			2017/18
	Intended GGRA Funding (Total)	**—**	**TBD; Enables Reductions Post-2020**	**N/A**	
6	**Promote low-carbon energy supply and products**				
6.1	Establish low-carbon content for natural gas: Ontario will introduce a renewable content requirement for natural gas and provide supports to achieve encourage the use of cleaner, renewable natural gas in industrial, transportation and buildings sectors.	$60,000,000 to $100,000,000			2017
	Intended GGRA Funding (Total)	**$60,000,000 to $100,000,000**	**1,000,000 Tonnes**	**$5**	
7	**Help individuals and businesses manage their energy use and save money**				
7.1	Provide free energy audits for pre-sale homes: Energy audits will be required before a new or existing single-family home can be listed for sale, and the energy rating will be included in the real estate listing.	$200,000,000 to $250,000,000			2019

Action Area: Buildings and Homes

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
7.2	Expand Green Button provincewide: Ontario's Green Button program lets Ontarians access and share their data on electricity, natural gas and water consumption in a secure, standardized electronic format.	—			2017
7.3	Boost public access to climate change tools: Ontarians will have access to a wide range of climate change tools to help them reduce carbon emissions.	—			2017
	Intended GGRA Funding (Total)	**$200,000,000 to $250,000,000**	**Supports Reductions In The Buildings Sector**	**N/A**	
8	**Training, workforce and technical capacity**				
8.1	Grow the workforce for a low-carbon buildings sector: New and expanded training programs will be developed to ensure Ontario's buildings sector has the skilled workers it needs to compete in a low-carbon economy, and to help reduce the carbon footprint of Ontario homes and buildings.	—			2017/18
8.2	Support post-secondary training and innovation: Targeted training will be developed and delivered through post-secondary institutions and other training partners to be sure Ontario has the capacity to build, maintain and repair low-carbon buildings.	$45,000,000 to $70,000,000			2017/18
	Intended GGRA Funding (Total)	**$45,000,000 to $70,000,000**	**Supports Reductions In The Buildings Sector**	**N/A**	

Action Area: Land-use Planning

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
1	**Strengthen climate change policies in the municipal land-use planning process**				
1.1	Empower municipalities: The government will consult on and propose amendments to the Municipal Act and the City of Toronto Act	—			2017/18
1.1.1	Require electric vehicle charging in surface lots: Municipalities would be able to require installation of electric vehicle charging stations in surface parking areas.	—			2017/18
1.1.2	Set green development standards: Municipalities would be able to pass bylaws related to green standards in areas other than building construction.	—			2017/18
1.2	Make climate change a planning priority: The government will consult and propose amendments to Ontario's Planning Act to make climate change a provincial interest, which would ensure climate change is taken into consideration when planning decisions are made.	—			2017/18
1.3	Put climate change in official plans: The government will consult and propose amendments to the Planning Act to make climate change mitigation and adaptation mandatory in municipal official plans.	—			2017/18
1.4	Eliminate minimum parking requirements: Minimum parking requirements will be eliminated over the next five years for municipal zoning bylaws, especially in transit corridors and other high-density, highly walkable communities.	—			2017/18

Action Area: Land-use Planning

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
	Intended GGRA Funding (Total)	**—**	**Supports Reductions Across Sectors**	**N/A**	
2	**Support municipal and other stakeholder climate action**				
2.1	Establish a Challenge Fund: The government will establish a greenhouse gas pollution reduction challenge fund or program.	$250,000,000 to $300,000,000			2017
2.2	Support community energy planning: Ontario will fund the development of Community Energy Plans and Climate Action Plans (and their supporting data) with greenhouse gas pollution inventories for municipalities and First Nation and Métis communities that currently do not have these plans.	$20,000,000 to $25,000,000			2017
2.3	Support community energy mapping and platforms: The government will support collaborative, community-based and data-driven approaches to carbon reduction.	—			2017/18
	Intended GGRA Funding (Total)	**$270,000,000 to $325,000,000**	**100,000 Tonnes**	**$165**	
3	**Reduce congestion and improve economic productivity**				
3.1	Help manage congestion: Ontario will ensure municipalities have the tools they need to pilot congestion management plans and "low emission zones."	—			2017

Action Area: Land-use Planning

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
3.2	Reduce single-passenger vehicle trips: Ontario will provide grants to municipalities and large private employers to implement Transportation Demand Management Plans.	$10,000,000 to $20,000,000			2017/18
	Intended GGRA Funding (Total)	**$10,000,000 to $20,000,000**	**TBD**	**N/A**	

Action Area: Industry and Business

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
1	**Help industries adopt low-carbon technologies**				
1.1	Help companies transition to low-carbon: The government will help Ontario businesses and industries increase their use of low-carbon technologies. Programs and services will be designed and delivered by the green bank to help reduce greenhouse gas pollution while also reducing costs.	$875,000,000 to $1,100,000,000			2018
	Intended GGRA Funding (Total)	**$875,000,000 to $1,100,000,000**	**2,500,000 Tonnes**	**$30**	

Action Area: Industry and Business

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
2	**Help the agri-food sector adopt low-carbon technologies**				
2.1	Reduce emissions: Ontario will help its food and beverage-processing sector expand the use of innovative technologies and practices to reduce emissions.	$50,000,000 to $115,000,000			2017
2.2	Retrofit agricultural facilities: Ontario will support the transition to low-carbon, indoor agricultural facilities, such as greenhouses and grain dryers, through retrofits to existing structures.				2017
	Intended GGRA Funding (Total)	**$50,000,000 to $115,000,000**	**150,000 Tonnes**	**$60**	

Action Area: Collaboration With Indigenous Communities

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
1	**Collaborate with Indigenous communities**				
	Intended GGRA Funding (Total)	**$85,000,000 to $96,000,000**	**TBD**	**TBD**	**2017/18**

Action Area: Research and Development

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
1	**Support innovation and commercialization of new low-carbon technologies**				
1.1	Strengthen the low-carbon clean-tech sector: Ontario will encourage the development and growth of its clean-tech sector by supporting research in low-carbon technologies; developing low-carbon clean technology accelerators and clusters in sectors where Ontario has a competitive edge; supporting proof-of-concept projects for low-carbon technologies; and helping emerging low-carbon companies increase scale.	$140,000,000 to $235,000,000			2017
	Intended GGRA Funding (Total)	**$140,000,000 to $235,000,000**	**Enables Reductions Post-2020**	**$75**	
2	**Set Tax and Regulatory Policies that Encourage Innovations**				
2.1	Explore R&D tax credits: Ontario will explore opportunities to create tax credits for research and development in order to encourage investment in Ontario companies focused on low-carbon technologies.	—			2017/18
2.2	Consider accelerated capital cost allowance: The province will work with the federal government to explore possible opportunities for accelerated capital cost allowance for technologies that reduce greenhouse gas pollution.	$0 to $1,000,000			2017/18
2.3	Regulatory requirements: Regulatory requirements will be updated to support the adoption of innovative industrial technologies and the reduction of greenhouse gas pollution.	—			2017

Action Area: Research and Development

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
	Intended GGRA Funding (Total)	**$0 to $1,000,000**	**Supports Reductions In All Sectors**	**N/A**	
3	**Support research and development through a Global Centre for Low-Carbon Mobility**				
3.1	Create a Global Centre for Low Carbon Mobility: Based at a post-secondary institution in Ontario, a Global Centre for Low Carbon Mobility will be set up to advise the government on low-carbon transportation, and to direct funding for research, development and low-carbon manufacturing.	$100,000,000 to $140,000,000			2017
	Intended GGRA Funding (Total)	**$100,000,000 to $140,000,000**	**Supports Reductions In Transportation**	**N/A**	

Action Area: Government

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
1	**Reduce emissions and energy costs across government**				
1.1	Deliver healthier buildings: Ontario will reduce emissions in provincial government buildings through measures that include energy-efficiency and low-carbon energy retrofits, and by strengthening the performance of existing buildings.	$90,000,000 to $100,000,000			2017/18
1.2	Increase the reduction target: The new government greenhouse gas pollution reduction target will be 50 per cent below 2006 levels by 2030. Ontario will develop a long-term strategy to move all government operations towards carbon neutrality.	—			2017/18

Action Area: Government

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
1.3	Increase telecommuting: Providing more opportunities for telecommuting by OPS staff will help reduce emissions from transportation and buildings.	—			2017/18
1.4	Green-up government vehicles: Ontario will buy or lease green-plate-eligible passenger vehicles for the OPS fleet wherever possible. Government and corporate fleets present an important opportunity to showcase the viability and practicality of electric vehicles.	—			2017/18
1.5	Emphasize energy reductions: To help drive energy conservation and emissions reductions, the government will enable the use of energy performance contracts across the OPS.	—			2017/18
1.6	Showcase Ontario's clean-tech expertise: Public properties and buildings will be used to help demonstrate low-carbon technologies, and to showcase made-in-Ontario innovations and the expertise of Ontario's clean-tech companies.	$75,000,000			2017
1.7	Ensure low-carbon procurement: Ontario spends billions of dollars each year in procurement. This spending can be directed to encourage the use of low-carbon materials and construction techniques in projects across the province. The OPS Procurement Directive will be reviewed to enable low-carbon procurement, considering the full lifecycle of products.	—			2017

Action Area: Government

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
1.8	Reform fossil fuel policies: Ontario will reform existing policies and programs that support fossil fuel use and fossil fuel-intensive technologies.	—			2017
	Intended GGRA Funding (Total)	**$165,000,000 to $175,000,000**	**200,000 Tonnes**	**$70**	

Action Area: Agriculture, Forests and Lands

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
1	**Reduce emissions from waste and move Ontario towards a circular economy**				
1.1	On track to zero waste: The government will implement the Waste-Free Ontario: Building the Circular Economy strategy, which calls for zero waste in the province and zero greenhouse gas pollution from the waste sector.	$20,000,000 to $30,000,000			2017
	Intended GGRA Funding (Total)	**$20,000,000 to $30,000,000**	**40,000 Tonnes**	**$50**	
2	**Increase our understanding of how agricultural and natural lands emit and store carbon**				
2.1	Develop a Land Use Carbon Inventory: This will allow Ontario to assess the potential of agriculture, forestry and other land uses, such as wetlands and grasslands, to emit, remove and store carbon.	$2,000,000 to $3,000,000			2018

Action Area: Agriculture, Forests and Lands

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
2.2	Develop a Forest Carbon Policy Framework: This will help clarify the role of managed Crown forests in storing carbon. Ontario will develop policy on forest carbon management and/or carbon offset projects for the forestry sector while exploring the potential benefits with Indigenous peoples.	—			2017/18
	Intended GGRA Funding (Total)	**$2,000,000 to $3,000,000**	**Supports Sequestration**	**N/A**	
3	**Maximize carbon storage from agriculture**				
3.1	Long-term soil health: Ontario will work with stakeholders to develop and implement an Agricultural Soil Health and Conservation Strategy that will maximize long-term carbon storage in soils while protecting their long-term productivity.	$30,000,000			2017
	Intended GGRA Funding (Total)	**$30,000,000**	**Supports Sequestration**	**N/A**	
4	**Understand and enhance carbon storage in natural systems**				
4.1	Benefit from an expanded Greenbelt: Ontario's Greenbelt is being expanded. This will enable more green spaces to be protected and enable the carbon sequestration potential of the area to be maintained.	—			2017/18
4.2	Protect grasslands: The government will develop and implement the Ontario Grasslands Stewardship Initiative to promote and support grasslands that help store carbon.	—			Ongoing

Action Area: Agriculture, Forests and Lands

	Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
4.3	Support Far North land-use planning: The Far North Land Use Strategy, when completed and implemented, will help support First Nation-Ontario planning teams in preparing community-based land-use plans.	—			Ongoing
4.4	Increase tree planting: Ontario will continue to support tree-planting programs, including its commitment to plant 50 million trees across the province by 2025.	$500,000 to $1,500,000			Ongoing
4.5	Improve understanding of the flow of carbon: Together with First Nation and Métis communities, Ontario will work to better understand and monitor natural systems that play an important role in carbon storage.	—			2017/18
	Intended GGRA Funding (Total)	**$500,000 to $1,500,000**	**Supports Sequestration**	**N/A**	
5	**Update Environmental Assessments to Account for Climate Change**				
5.1	Address climate change in environmental assessments: The province has prepared a draft guide entitled Consideration of Climate Change in Environmental Assessment in Ontario for projects and undertakings under the Environmental Assessment Act.	—			2017/18
	Intended GGRA Funding (Total)	**—**	**Supports reductions across sectors where EA applies**	**N/A**	

Actions not featured in the plan

Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
Increase The Use Of Electric Vehicles				
Electric Vehicle Charging Stations In Government Locations: Electric charging stations will be installed for workforce and public charging at all government locations, including government offices, GO Transit stations, ServiceOntario offices, driver license offices, Ontario Parks and LCBOs. Charging station installation will begin in 2017 and is to be completed at the majority of locations in 2018. In addition to its own properties, Ontario will request all new government lease agreements and lease renewals include the provision of charging infrastructure, unless the property is not in a location appropriate to support or promote the use of electric vehicles.	$500,000 to $2,000,000			2017
Establish EV Requirements For Existing Condominiums And Apartment Buildings: Establish requirements as soon as possible for existing condominiums and apartment buildings to make it easier to install charging stations for residents.	—			2017/18
Permanent Green Licence Plate Program: The Green Licence Plate Program will continue until 25 per cent of passenger vehicles have green plates. Green licence plates identify electric vehicle drivers' commitment to a cleaner Ontario. The program also provides electric vehicles with free access to high-occupancy vehicle lanes, no matter how many people are in the vehicle. The program would be reviewed after 10 years. Green plate vehicles will have free access to the high-occupancy toll lanes that are currently being rolled out in Ontario.	—			Ongoing

Actions not featured in the plan

Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
EV Educational Campaigns: Continue to collaborate with local partners and jurisdictions such as California and Quebec on educational campaigns to promote awareness of the benefits of electric vehicles, with a focus on first-time car buyers and multi-car households.	—			2017/18
Partner And Dealership Programs: Provide support to dealerships to increase engagements to increase sales through dealer training and awareness programs.	$10,000,000 to $20,000,000			2017
Private Fleet Awareness Campaign: Initiate an awareness campaign for private fleet owners and managers to communicate their eligibility for electric vehicle incentives and promote the potential savings from greening their fleets.	—			2017/18
Support Cycling And Walking				
Walking And Walkable Communities: Provide information and guidance to all municipalities on the benefits of walking and creating walkable communities; encourage municipalities to build cycling infrastructure and larger sidewalks to promote cycling and walking; and collaborate with real estate associations and builders to highlight the desirability of walkable communities.	—			2017/18
Increase The Use Of Low-Carbon Trucks And Buses				
Electric School Buses: Work with school bus companies and school boards on a pilot program in five communities that provides incentives to make it more affordable to switch school buses from diesel to electricity. This pilot is intended to determine if these buses can operate reliably and cost-effectively in Ontario. The results of the pilot will inform the development of future action plans.	$10,000,000			2017

Actions not featured in the plan

Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
Research New Low-Carbon Commercial Vehicle Technology: Research and find ways to remove regulatory barriers to the adoption of alternative-fuel vehicles such as trucks powered by hydrogen fuel cells, and new technologies that improve fuel efficiency, such as aerodynamic devices, through the proposed Global Centre for Low-Carbon Mobility.	—			2017/18
Set lower-carbon standards for new buildings				
Legislative Amendments For Municipalities To Require Green Standards: Consider amendment to the Municipal Act and City of Toronto Act to enable municipalities across the province to require green standards or technologies to reduce building emissions where relevant technical standards exist in the Building Code but are not mandatory.	—			2017/18
Promote low-carbon energy supply and products				
Plan for increased electricity demand: Plan for any increased demand on the electricity grid as a result of greenhouse gas emissions reduction from measures such as the greater use of electric vehicles, and increased use of electricity for residential and commercial space and water heating.	—			2017/18

Actions not featured in the plan

Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
Continue To Implement Product Efficiency Standards: Ontario is already a leader in regulating the energy efficiency of appliances and products. We will continue to implement product efficiency standards to reduce energy use. Update energy efficiency standards for key energy-using products and equipment found in drinking water and waste water treatment plants, based on the volume of water processed by the facility. Municipal water and waste-water services are typically one-third to one-half of a municipality's total electrical use, so there is potential for reductions in both costs and emissions.	—			Ongoing
Energy Reporting For Large Buildings: Require energy reporting and benchmarking for multi-unit residential buildings, large commercial, and some industrial buildings to help owners make informed decisions about energy management and conservation.	—			2017/18
Strengthen climate change policies in the municipal land-use planning process				
Climate Change Planning Standards: Set out specific climate change standards that need to be met in land-use planning.	—			2017/18
Growth Plan Policies To Enhance Climate Change Consideration: Consult on the proposed Growth Plan for the Greater Golden Horseshoe and the Regional Transportation Plan to enhance climate change considerations.	—			Ongoing
Employment And Institutional Lands And Transportation Planning: Link the development of employment and institutional lands with transportation planning to ensure that the places people want to go are accessible by transit.	—			2017/18

Actions not featured in the plan

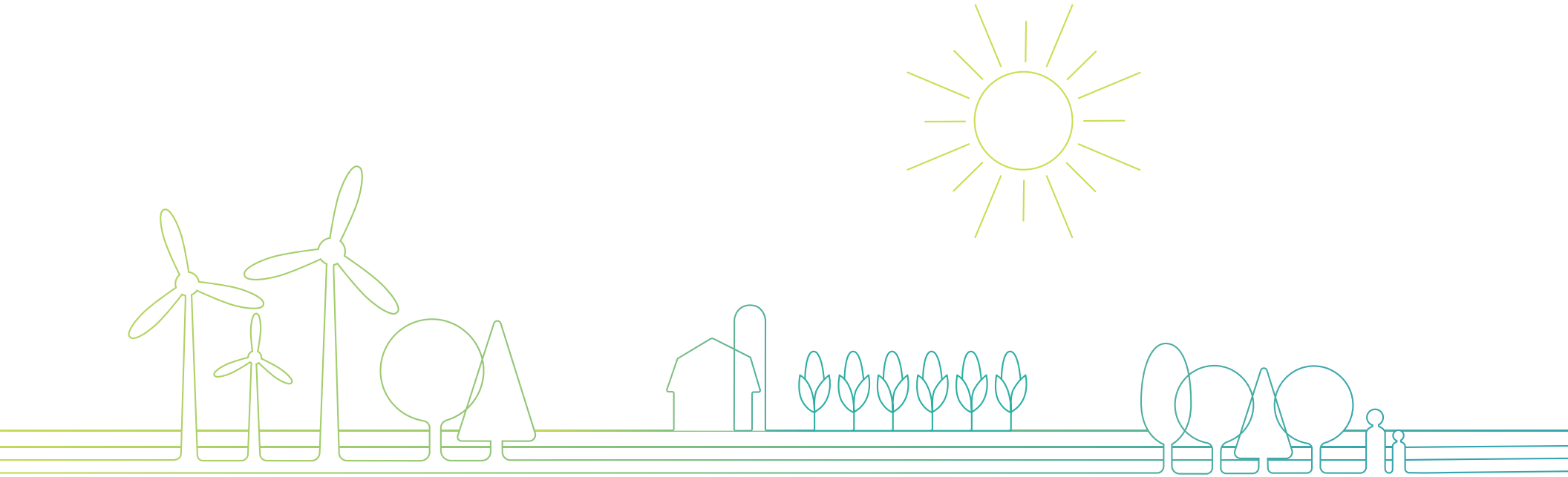
Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
Develop Guidance For Municipal Consideration Of Climate Change: Work with municipalities to support the implementation of climate change policies. The province will develop and provide guidance materials on how to consider climate change in municipal programs and policies and on best practices for developing greenhouse gas emissions inventories and targets.	—			2017/18
Compliance, Or Planned Compliance, With Provincial Planning Direction To Access Infrastructure Or Climate Change Funding, Where Appropriate: Improve implementation of provincial planning direction, including the Provincial Policy Statement and the Growth Plan, require municipalities to demonstrate compliance or planned compliance with policies such as intensification and density targets along transit corridors in order to access funding for infrastructure or actions in this plan.	—			2017/18
Support municipal and other stakeholder climate action				
Climate Change Partnerships: Partner with community organizations, institutions and the private sector to find new and innovative ideas to help reduce greenhouse gas emissions and to offer Ontarians more opportunities to adopt low-carbon everyday behaviours. This action recognizes the capabilities that partners such as schools, non-profits and businesses offer in designing and delivering low-carbon initiatives.	$7,000,000			2017/18
Reduce emissions and energy costs across government				
OPS Carbon Challenge: Challenge OPS employees to develop ideas on how to reduce greenhouse gas emissions from government.	$250,000 to $1,000,000			2017

Actions not featured in the plan

Action	Intended GGRA Funding	Est. GHG Reduction In 2020*	Est. Cost Per Tonne	Timetable: Action Start
OPS Climate Change Information: Create an OPS Climate Change Information Centre, a centralized location for all public service greenhouse gas tools, guidelines and other resources. Develop tools, including greenhouse gas emissions lifecycle analysis tools for infrastructure planning and construction.	$1,000,000 to $2,000,000			2017/18
Climate Change Training: Provide regular training for all OPS employees on matters related to their work and climate change.	$250,000 to $1,000,000			2017
Understand and enhance carbon storage in natural systems				
Wetlands Conservation: Finalize a Wetlands Conservation Strategy for Ontario that will help identify opportunities for greenhouse gas emissions reductions through wetlands conservation.	$500,000 to $1,000,000			Ongoing

Totals	$5,964,750,000 to $8,301,500,000	**9,832,000 Tonnes**		

* Greenhouse gas pollution reductions from these initiatives would continue to provide emissions reductions after 2020. Much of the investment in infrastructure and innovation, and regulatory measures will continue to bring about GHG reductions past 2020. It is estimated that the impact of this action plan will be in the order of 20 MT in 2030. Subsequent action plans and associated investments and regulatory actions have the potential to achieve further reductions by 2030 and beyond.



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