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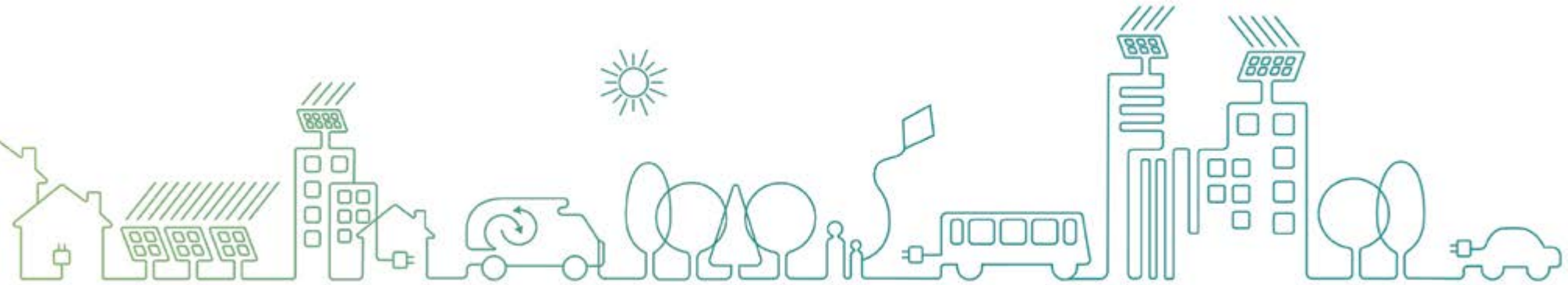
ONTARIO'S CLIMATE CHANGE STRATEGY



Ontario

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Message from the Minister

Glen Murray
Minister of the Environment and Climate Change

Climate change is not a distant threat: it is already costing the people of Ontario. It has devastated communities, damaged homes, businesses and crops, and increased insurance rates. It is crucial that we take steps today to fight climate change, protect the environment, build a low-carbon, high-productivity economy and ensure strong communities for the future.

Ontario has demonstrated leadership and commitment to fighting climate change through a series of bold measures. We have ended coal-fired power — the largest greenhouse gas reduction initiative in North America to date. We are improving the province's transit network. We have announced a cap and trade program to limit greenhouse gas pollution and fight climate change. These actions, and others, have already taken us a long way down the road. But there is still much more to do.

This strategy sets out Ontario's vision for combating climate change and achieving our greenhouse gas emissions reduction target of 80 per cent below 1990 levels by 2050. It is our plan for a province and a future where greenhouse gas reduction goes hand-in-hand with a growing, efficient, competitive and productive economy. A separate five-year action plan to be released in 2016 will include specific commitments for meeting our 2020 emissions reduction target and establish the necessary framework to meet our 2030 and 2050 targets.

By 2050, we envision Ontarians will be using less energy and the energy we do use will be from low-carbon sources. Communities will be climate-resilient, complete and compact. More people will choose electric or other zero-emission vehicles and transit to get swiftly and efficiently where they need to go. Agricultural lands, natural areas and ecosystems will be better protected for the benefit and enjoyment of all, including First Nations and Métis peoples who rely on our shared natural environment for sustainment and spiritual benefit.

By 2050, we see an Ontario that will be employing new ways to reduce waste while ensuring that more of the waste produced is reintroduced to the economy. Industries will be thriving while generating fewer or zero emissions. Businesses and innovators will be creating world-leading clean technologies and products that drive new economic growth, productivity, and job creation.

The solution to climate change is here. It is in the individuals, cities and towns, businesses, and First Nations and Métis communities of Ontario. The cost of doing nothing to fight climate change far outweighs the cost of solving the problem. Ontario is prepared to change and move forward because our future depends on the choices we make today.

We have the ideas, the determination and the energy to lead the global drive to reduce emissions, and to make the transformational changes that must be made if we are to prevent a 2 to 4°C rise in average global temperatures and ensure a better future for our children, and our grandchildren.

We must do it. We can do it. And we will do it, together.

Introduction

Climate change is a matter of concern to Ontarians — individuals, environmentalists, scientists, organizations, industry, governments and so many others have taken small and large steps over many years to help reduce Ontario's impact.

Ontario's climate change conversation is an ongoing one. In February 2015, Ontario released a Climate Change Discussion Paper to engage Ontarians in a more in-depth conversation on this issue, and on the continuing leadership role the province should play.

The discussion paper set out a clear vision as well as near and long-term goals for fighting climate change. It asked a wide range of questions to inform the development of a climate change strategy and action plan for Ontario, including putting a price on carbon, how key sectors could best fight climate change, and how Ontario could best support the research and commercialization of technologies that would provide economic benefits and create jobs, while helping to reduce emissions.

Ontarians responded. More than 1,200 individuals and over 200 businesses and organizations attended in-person consultations in locations across the province. First Nations and Métis communities and organizations provided input. The online consultation attracted more than 300 ideas and 31,000 votes. More than 500 comments were received through Ontario's Environmental Registry. On Twitter, the climate conversation hashtag #ONclimate was used 6,900 times.

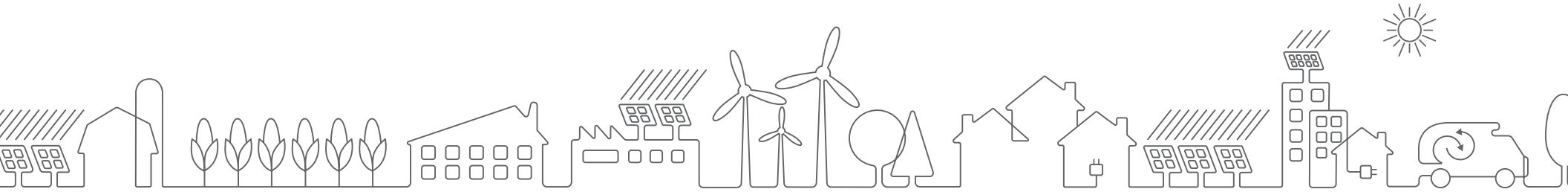
All feedback was welcomed and carefully considered. It was incorporated into this comprehensive strategy to help Ontarians adapt to climate change, meet Ontario's emissions reduction targets, and achieve our goal of a healthy, productive, prosperous province recognized as a world leader in climate change solutions.

Understanding Climate Change

Climate change is defined as any significant change in long-term weather patterns. It can apply to any major variation in temperature, wind patterns or precipitation that occurs over time.

Global warming describes the recent rise in the average global temperature. Since this rise is caused by increased concentrations of greenhouse gases trapped in the atmosphere, and since greenhouse gases are largely caused by burning fossil fuels to produce energy, scientists have concluded that human activity is largely responsible for recently observed changes to our climate.

Today, all across the planet, we are living with the consequences.



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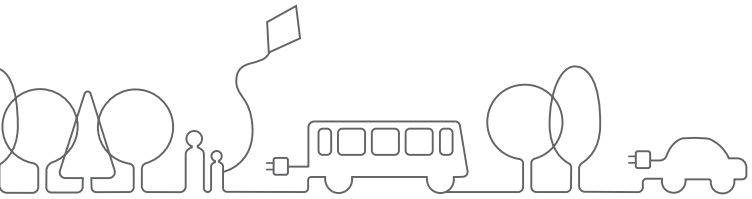
The rate of global warming over the last 50 years is almost double the rate of warming over the last 100 years. Worldwide, 14 of the last 15 years have been the warmest on record.

The National Oceanic and Atmospheric Administration predicts that 2015 will be the hottest year on record. Global warming is affecting agriculture, ecological systems, biodiversity, economies, species migration and more. Extreme weather events such as storms and droughts are becoming more frequent around the world. Melting ice at the poles has caused global sea levels to rise.

We've seen the effects in Ontario. In July 2013, a monumental rainstorm dropped 125 mm of rain in just a few hours over some parts of Ontario, leading to flooding and property damage estimated at $940 million in Toronto alone — the most expensive natural disaster in Ontario history. In December of that same year, a severe ice storm resulted in $200 million of property damage. In 2012, we experienced a March so warm it led to early blooming of apple trees, followed by a severe frost in May that caused the loss of 80 per cent of the apple crop.



The effects on infrastructure are equally apparent and costly: roads that buckle in severe heat, water mains that overflow in severe rain, hydro lines coated with heavy ice that snap and leave tens of thousands of Ontario families and businesses without power.

Climate change also affects Indigenous communities, jeopardizing First Nations and Métis ways of life, health, territories and resources. These communities depend on natural ecosystems for food supplies, and on activities such as fishing, hunting, harvesting and trapping for economic opportunities that are now being threatened by a changing climate.

Climate change is a major issue. But as a problem that humans are causing, it is also one that humans are increasingly stepping up to help resolve.

Global Priority

In 2015 — amid increasing evidence of climate change impacts — the global community has concluded that we've reached a critical point. Science tells us that greenhouse gas emissions must be drastically reduced to avoid a 2°C rise in average global temperatures. If the world does not take strong action within the next decade, we are on track to see a 4°C rise, at which point the damage from climate change would be irreversible.

There is no room for denial: we either act now to reduce carbon emissions and manage the risks posed by the impacts of climate change, or we all lose. It is with this understanding, and in recognition of our moral and ethical responsibility to this planet and to future generations, that the global community is approaching international climate talks with renewed focus and clarity.

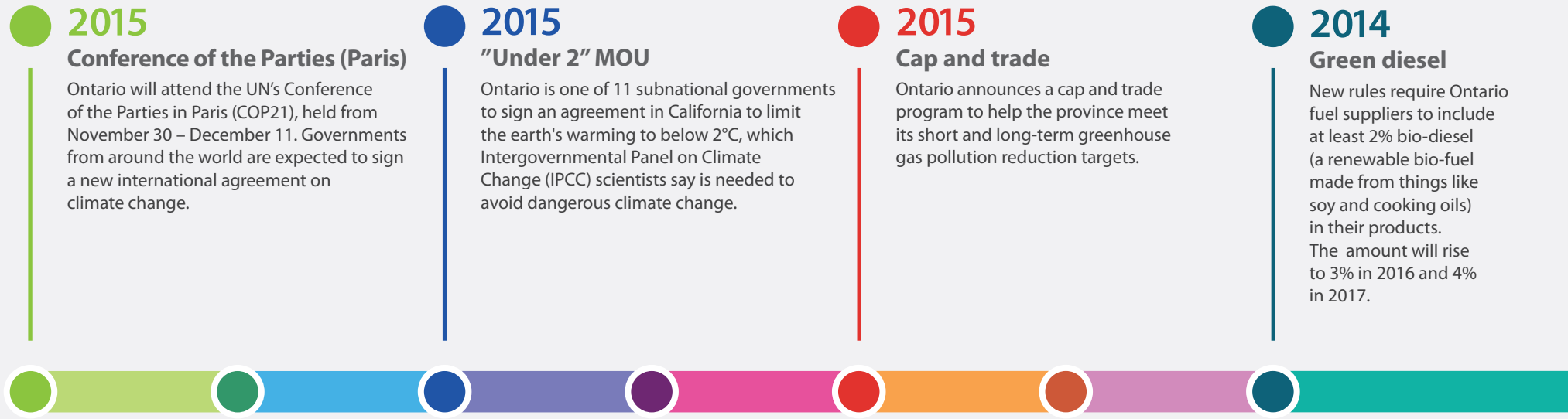
The world's biggest and highest emitting countries have submitted greenhouse gas targets that propose significant emissions reductions and, in many cases, are working bi- and multi-laterally to pledge action and to find better low-carbon solutions.

Many provinces, states, cities, municipalities and other sub-nationals are also taking strong action on climate change and have successfully implemented solutions to reduce emissions, adapt to climate impacts, and green their economies. Many tools and technologies to reduce emissions are in existence or in development as countries and businesses invest in clean technology and innovation.

As a responsible global citizen, Ontario has already taken major steps to reduce its greenhouse gas emissions and is a leader in North America in the fight against climate change.

> "Climate change has happened because of human behaviour, therefore, it's only natural that it should be us, human beings, to address this issue. It may not be too late if we take decisive action today."
>
> **Ban Ki-Moon**
> Secretary-General, United Nations, Davos, 2015

Ontario's Leadership in Action



2015
Conference of the Parties (Paris)

Ontario will attend the UN's Conference of the Parties in Paris (COP21), held from November 30 – December 11. Governments from around the world are expected to sign a new international agreement on climate change.

2015
"Under 2" MOU

Ontario is one of 11 subnational governments to sign an agreement in California to limit the earth's warming to below 2°C, which Intergovernmental Panel on Climate Change (IPCC) scientists say is needed to avoid dangerous climate change.

2015
Cap and trade

Ontario announces a cap and trade program to help the province meet its short and long-term greenhouse gas pollution reduction targets.

2014
Green diesel

New rules require Ontario fuel suppliers to include at least 2% bio-diesel (a renewable bio-fuel made from things like soy and cooking oils) in their products. The amount will rise to 3% in 2016 and 4% in 2017.

2015
Climate Summit of the Americas

Ontario hosts more than 300 delegates at the Climate Summit of the Americas, a forum to advance subnational leadership on climate change ahead of the United Nations' Conference of the Parties (COP 21) in Paris in December 2015.

2015
Quebec/Ontario Joint MOU

An agreement between Ontario and Quebec to link Quebec's cap and trade program with the one under development in Ontario.

2014
An integrated transportation network

A $29-billion commitment is unveiled to improve and modernize transportation and public transit across Ontario (increased to $31.5-billion in 2015).

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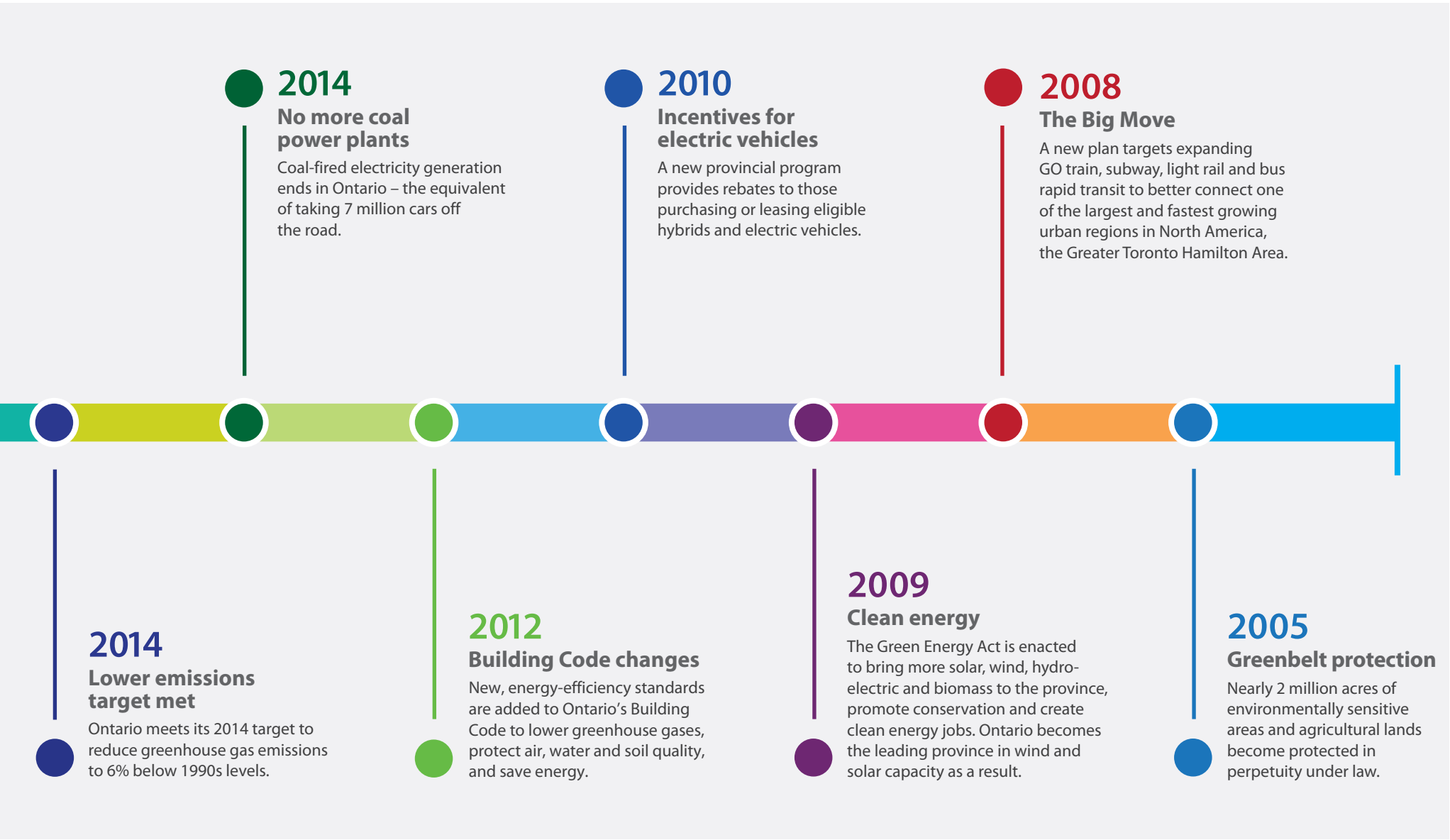

2014
No more coal power plants
Coal-fired electricity generation ends in Ontario – the equivalent of taking 7 million cars off the road.
2010
Incentives for electric vehicles
A new provincial program provides rebates to those purchasing or leasing eligible hybrids and electric vehicles.
2008
The Big Move
A new plan targets expanding GO train, subway, light rail and bus rapid transit to better connect one of the largest and fastest growing urban regions in North America, the Greater Toronto Hamilton Area.
2014
Lower emissions target met
Ontario meets its 2014 target to reduce greenhouse gas emissions to 6% below 1990s levels.
2012
Building Code changes
New, energy-efficiency standards are added to Ontario's Building Code to lower greenhouse gases, protect air, water and soil quality, and save energy.
2009
Clean energy
The Green Energy Act is enacted to bring more solar, wind, hydro-electric and biomass to the province, promote conservation and create clean energy jobs. Ontario becomes the leading province in wind and solar capacity as a result.
2005
Greenbelt protection
Nearly 2 million acres of environmentally sensitive areas and agricultural lands become protected in perpetuity under law.

An Ontario Priority

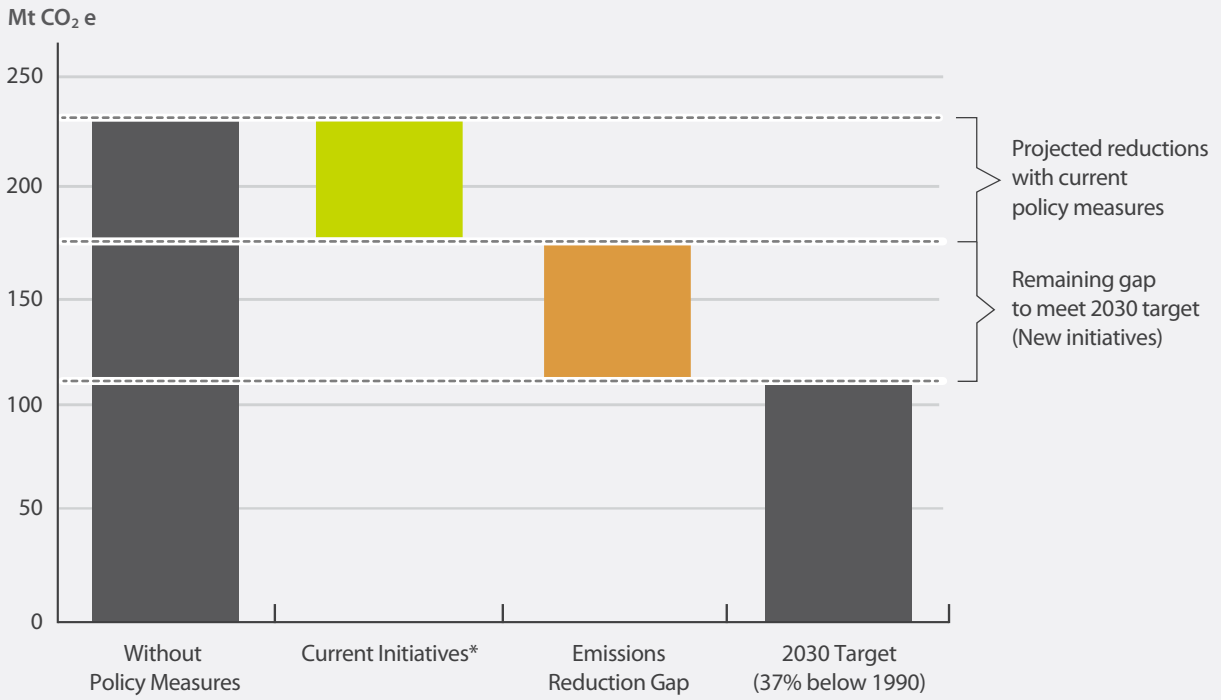
In 2007, the Ontario government released its Climate Change Action Plan that set out a series of actions that helped us meet an ambitious goal: reduce Ontario's greenhouse gas emissions by six per cent below 1990 levels by 2014.

We succeeded. We met this goal by taking bold steps, including increasing emission-free renewable energy, smart growth planning, and supporting electric and plug-in hybrid vehicles. Most critically, we closed 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.

> "Climate change is a problem that is critically important and urgent. It needs to be fought around the globe, and it needs to be fought here in Ontario. Our actions on climate change are helping to secure a healthier environment, a more competitive economy, and a better future for our children and grandchildren."

Kathleen Wynne
Premier of Ontario

2030 Ontario GHG Emission Reductions with Current Initiatives*



Source: MOECC based on 2014 Ontario Climate Change Update modelling.
*Current initiatives do not include Ontario's proposed cap and trade program

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Since 2003, Ontario's coal closure plan and renewable energy policies have put us on track to eliminate 30 megatonnes of greenhouse gas emissions in 2020, compared to the business-as-usual trajectory, equivalent to taking up to seven million cars off the roads.

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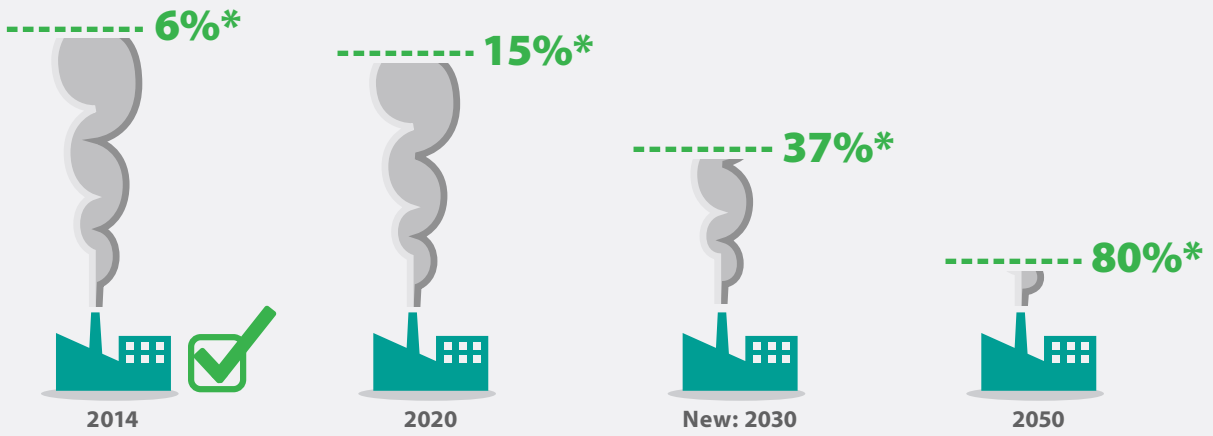
We must continue on this path. If we don't, experts predict Ontario will be a very different place over the coming decades. For example, the average temperature is likely to rise substantially. By 2050, it is estimated that some locations in southern Ontario could experience a 3.5°C rise in mean summer temperature, but it's in winter that temperature increases would be the greatest: parts of southern Ontario could see a 4°C rise and in the province's most northern reaches, winter temperatures could rise by up to 9°C.

Here's what these climate projections could mean for Ontario:

- more days above 30°C in southern Ontario, affecting sensitive populations including seniors
- extreme heat, worsening air quality, new and migrating disease vectors, as well as water and food contamination issues impacting human health
- significantly more variability in weather, including severe wind, ice and rain with potential effects that include flooding, soil erosion, infrastructure damage and power system outages
- winter ice road seasons may shorten, reducing access for remote First Nations communities, and further affecting the cost and availability of foods and other goods
- permafrost in the Hudson Bay Lowlands may melt, altering the unique ecosystems and habitat in the area, and resulting in the release of carbon stored in Far North peatlands

Ontario's greenhouse gas reduction targets



- changed growing seasons and species migration patterns, affecting rural and northern communities and First Nations and Métis communities' livelihoods
- disruption of food production, access and price stability
- changed recreational and tourism opportunities, including a shortened ski season
- plant and animal species ranges are already shifting, and could shift northward by hundreds of kilometres over the next century
- loss of cold water fish species in warming lakes and streams, and the potential arrival in Ontario of invasive species, such as the mountain pine beetle and ticks carrying Lyme disease.

Our government is committed to minimizing these impacts and ensuring our province, people and environment are prepared for and can cope with global climate change.

To achieve this, Ontario has set a long-term goal: reduce greenhouse gas emissions by 80 per cent below 1990 levels by 2050. To help mark progress and keep on track, we have set two mid-term targets: 15 per cent below 1990 levels by 2020 and 37 per cent below 1990 levels by 2030.

Meeting these goals requires a fresh approach to climate change — one that accounts for the shifting global context, recognizes the opportunities in a low-carbon, high-productivity economy, and enlists the support of all Ontarians to find new solutions.

Ontario uses 1990 as a baseline for its targets, which is common in the international community and aligns with the United Nations Framework Convention on Climate Change.

Ontario is already more than two-thirds of the way towards achieving its 2020 target.

First Nations and Métis Communities

Climate change has significant impacts on First Nations and Métis communities that depend on natural ecosystems for food supplies and economic opportunities. We want to work in partnership to address the challenges, and to develop a greater understanding of how traditional knowledge and expertise can be leveraged in efforts to address climate change. Ontario seeks to support the First Nations and Métis communities' unique relationship with the land, to help ensure the survival of Indigenous cultures, values and languages. Through Ontario's Climate Change Strategy, we are committed to an ongoing conversation with First Nations and Métis communities to inform the development of specific actions.

Carbon Pricing: A Cornerstone of Emissions Reduction in Ontario

Globally, there is broad consensus that carbon pricing, such as cap and trade, is the best tool for reducing greenhouse gas emissions and driving a prosperous low-carbon, high-productivity economy.

Billions of tonnes of greenhouse gas pollution are currently being pumped into the atmosphere at almost no cost to emitters. Putting a price on carbon assigns economic value to our atmosphere, our health and our environment.

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

Ontario will join the cap and trade system under the Western Climate Initiative, Inc.

With Ontario's introduction of a cap and trade system, more than 75 per cent of Canadians will live in a province with some form of carbon pricing.

Carbon pricing has many advantages. It reduces greenhouse gas emissions as businesses and households incorporate the cost of emitting carbon into their decisions, encouraging companies and consumers to move away from fossil fuels and towards cleaner and more efficient ways of doing business. Emitters will actively choose to reduce emissions when doing so is cheaper than paying the carbon price.

This improves economic efficiency and inspires economic benefits. As emitters are motivated to lower their carbon footprint, carbon pricing can spur clean technology research and development, as well as growth in the clean technology sector.

Carbon pricing also gives companies the flexibility to reduce emissions in a way that best suits their manufacturing processes and business plans, helping them find the lowest-cost reductions first instead of more traditional approaches that dictate how facilities should reduce their emissions.

Ontario's cap and trade system will set a hard ceiling on the amount of pollution allowed by most sources in the province, and this ceiling will be

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lowered over time to ensure emissions continue to fall. Ontario's program will cover a wide variety of sectors, including gasoline and natural gas distributors. The initial cap in 2017 would be set to align with the best estimate of emissions in that year, declining at a rate to help ensure the province achieves its 2020 emissions reduction target. This will encourage companies to find new ways to reduce their carbon footprint. It will foster innovation as clean technology becomes more in demand, and as researchers, entrepreneurs and start-ups rise to the challenge.

As of August 2015, 39 national and 23 subnational jurisdictions around the world will have implemented or are scheduled to put a price on carbon.

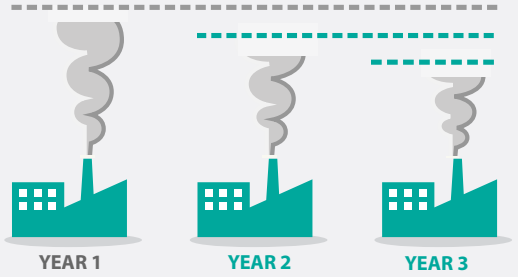
Over time, a cap and trade system can accumulate proceeds as emitters purchase allowances from the government through, for example, auctions. Specifics on how Ontario's cap and trade proceeds will be used are still being worked out. Proceeds will be reinvested in a transparent way back into projects that reduce greenhouse gas pollution and help businesses transition to a low-carbon economy. Projects may include helping families consume less energy through more energy-efficient appliances or housing, building more public

How Does Cap and Trade Work?

Cap and Trade: Reducing Greenhouse Gas Pollution

The "cap" sets a maximum limit on the amount of greenhouse gas pollution industry can produce.

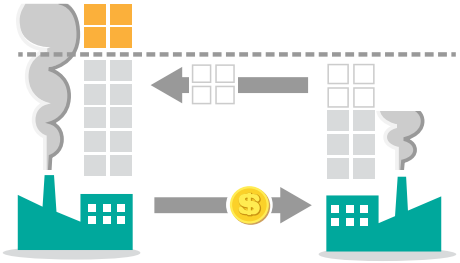
Over time, the cap is lowered, which means less greenhouse gas pollution and improved air quality.



Cap and Trade: Rewarding Innovation

If a company does not emit as much as their cap, they are rewarded with a credit.

If a company emits too much, they need to invest in credits from other companies.



Cap and Trade: Protecting Ontario for Future Generations

The money raised will be reinvested back into projects that reduce greenhouse gas pollution like public transit, and energy retrofits.

Reducing Greenhouse Gas pollution will help to protect the air we breathe, the water we drink and the health of our children and grandchildren

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transit to give people more transportation options, and supporting renewable energy, energy conservation, and building retrofits.

Ontario has been engaging the public, business and environmental leaders on options for its cap and trade program design. We will continue to work with our partners to refine the program before posting a draft cap and trade regulatory proposal on the Regulatory and Environmental Registries for public comment in early 2016.

In most cap and trade systems, emitters are allowed to purchase offset credits to use to fulfill part of their compliance obligation (i.e., to offset their emissions). Forestry and agriculture are sectors from which emitters will be able to purchase offsets to comply with program rules.

Ontario's Climate Change Strategy

Ontario's government recognizes climate change as a problem, one with solutions and opportunities.

Ontario's Climate Change Strategy sets out the transformative change required to reduce greenhouse gas emissions by 80 per cent below 1990 levels by 2050.

This strategy builds on the foundation already established in Ontario to innovate and invest in a high-productivity economy that values our natural capital.

It shifts Ontario to an economy that will better protect our air, land and water and support growth and prosperity, while leaving a legacy of a healthy world for future generations.

Following consultation and input from Ontarians, our Climate Change Strategy highlights five areas of transformation:

1. A prosperous low-carbon economy with world-leading innovation, science and technology
2. Government collaboration and leadership
3. A resource-efficient, high-productivity society
4. Reducing greenhouse gas emissions across sectors
5. Adapting and thriving in a changing climate

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Ontario's Climate Change Strategy

The following pages provide an overview of each of these five sections. We are just five years away from reaching our 2020 target of 15 per cent below 1990 levels. This strategy offers a snapshot of where we expect to be in 2030 upon reaching our next target of 37 per cent below 1990 levels. Each section discusses the practical short and long-term actions we will take to get there.

This strategy will be supported by a series of five-year action plans, the first of which will be released in 2016.

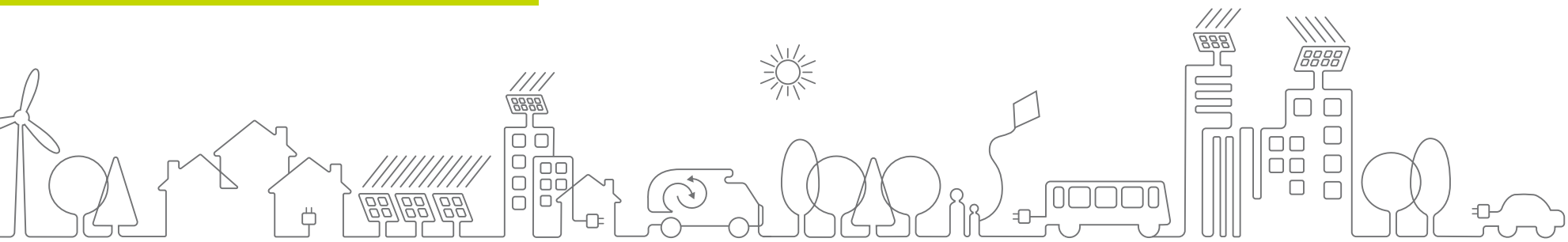
A Prosperous Low-Carbon Economy with World-Leading Innovation, Science and Technology

As governments across the world begin to tackle climate change and work to achieve their greenhouse gas targets, there will be immense global demand for cleaner technologies, energy, infrastructure and low-carbon solutions.

Ontario has already recognized the opportunity. Our Green Energy Act created a stable market for clean energy innovation to thrive. Today, Ontario has the fastest growing clean-tech sector in Canada and is home to 36 per cent of all the nation's clean-tech companies with proprietary technologies. More than 30 wind and solar manufacturing companies, as well as hundreds of global-leading water and wastewater technology firms, are growing and creating jobs in Ontario. Businesses, innovators and researchers are putting their knowledge and talents towards building a greener economy here, and around the world.

In just 10 years, Ontario has become a North American leader in developing, using and manufacturing clean energy. With our highly skilled and diverse workforce, abundance of natural resources, globally competitive tax system, diverse economy, and the world's soundest banking system, Ontario is well-placed to be a leader in the next generation of clean technology solutions that will help the world mitigate and adapt to climate change.

The Toronto Stock Exchange and TSX Venture Exchange are currently home to 116 clean technology and renewable energy companies, with a total market capitalization of $27 billion.



Ontario Clean-Tech Firms: At the Leading Edge

- **Truly Green Farms** of Dresden, Ontario runs a 9-hectare carbon neutral greenhouse using the carbon dioxide emitted by neighbouring ethanol producer Greenfield Ethanol, ensuring 15,000 metric tonnes of planet-warming gases stays out of the atmosphere each year. They are also a leader in North America by utilizing waste heat in production.
- **Pond Biofuels** of St. Marys has developed a technology that captures carbon dioxide from raw stack emissions, and produces algae that can subsequently be converted into biofuels. Investments from the Ontario government ($2.4 million) and federal government ($2.3 million) assisted Pond Biofuels in demonstrating and validating its high-tech CO_2 sequestering process, providing a solid foundation for launching marketing and commercialization efforts.
- **Hydrogenics Corporation** of Mississauga is a leading provider of clean hydrogen generation infrastructure and fuel cell solutions. In 2015, it signed a 10-year exclusive agreement, valued at over $71 million, to supply Alstom Transport with hydrogen fuel cell systems for regional commuter trains in Europe. The Ontario government provided support to the Hydrogenics Corporation through the Innovation Demonstration Fund and the Strategic Jobs and Investment Fund.
- **Ecobee** is a Toronto-based tech company that makes smart thermostats to help people increase home comfort and save energy. The company introduced the world's first Wi-Fi connected thermostat in 2009 and has continued to innovate and invest in energy-saving technologies. An early investment from the Ontario Emerging Technology Fund helped ecobee build its team and the technologies it needed to grow.

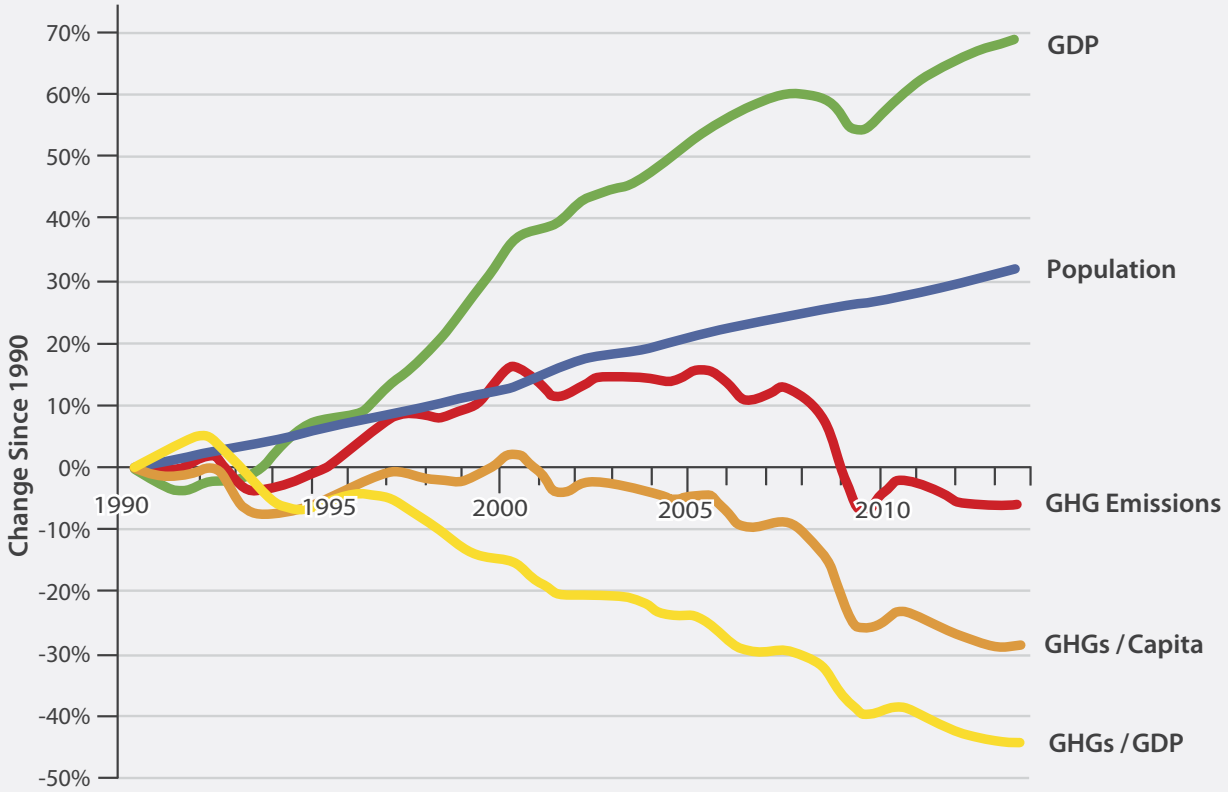
Economic Opportunity

Worldwide, it is estimated that $6 trillion dollars per year will be spent to meet infrastructure needs over 15 years. Making these investments both low-carbon and climate-resilient will require a massive scaling-up of new green technologies, goods and services.

The growing population presents another opportunity. The Organization for Economic Co-operation and Development (OECD) projects that, if current trends continue, per capita consumption will more than triple and the global gross domestic product will almost quadruple as the global population grows, requiring 80 per cent more energy by 2050. Supporting this growth while reducing emissions will only be possible by developing new methods, innovative new products, and a low-carbon, high-productivity global economy.

Ontario is working with the business and science communities to develop and bring to market unique, made-in-Ontario ideas, technologies and solutions.

Change in Ontario GDP, Population and GHG Emissions since 1990



Source:
GHGs: Environment Canada, National Inventory Report 2015
GDP: StatsCan (Table 384-0038, Gross domestic product, expenditure-based, provincial and territorial, annual.) - chained 2007 dollars
Population: StatsCan (Table 051-0001, Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual)

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The Bottom Line

Citibank estimates the world will need to invest $192 trillion over the next 25 years to meet global energy demands through conventional, carbon-intensive means. To meet these demands in a low-carbon way will cost an estimated $190.2 trillion.

Ontarians are already paying the price for climate change impacts in terms of damaged homes, businesses, crops and increased insurance costs. The 2013 ice storm in Southern Ontario resulted in $200 million in insurance payments, and severe floods across the Greater Toronto Area caused nearly $1 billion in damages. The National Round Table on the Environment and the Economy estimated that the economic costs of climate change in Canada will rise from about $5 billion annually in 2020 to between $21 and $43 billion by 2050. Since investing in a low-carbon economy would reduce the risk of incurring these costs, mitigate the effects and benefit us all, we have to ask the question: why would we not?

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Reaching 37 Per Cent by 2030

By 2030, we envision that Ontario will be building on existing networks and programs to enhance scientific knowledge, supporting the development and deployment of new low-carbon technologies and solutions, and encouraging the growth of clean-tech companies.

The Toronto Stock Exchange and S&P Dow Jones have launched three new climate change indices for Canada designed to measure the performance of companies relative to their carbon footprint.

We will have put in place financial mechanisms to help innovative start-ups and commercialize products that reduce emissions.

We will have taken key steps towards being a global hub for climate science, low-carbon innovation and technology, and will have captured a significant share of the global clean-technology market. Ontario will focus on the following actions to achieve these goals.

1. **Attract and retain investment and risk capital for low-carbon innovation.** Our strategy supports the growth and strength of Ontario's low-carbon and clean-tech industries. We will provide local entrepreneurs access to capital to help start-ups grow and thrive. We will help bridge the gap between development and commercialization of new technology, nurturing local innovation through all stages of development.

According to the Conference Board of Canada, each $100 million invested in Ontario in climate-related technologies is estimated to generate a gain of $107 million in gross domestic product, and 1,400 new jobs.

Risk capital is a vital component of the innovation economy, especially in the context of helping companies scale up. Ontario's government has introduced several programs to help early stage companies grow. Examples of capital support programs include the Ontario Venture Capital Fund, the Northleaf Venture Catalyst Fund, the Investment Accelerator Fund, and the Scale Up Ventures Fund.

2. **Develop actions and strategies to support innovation, research and development of technologies that can reduce greenhouse gas emissions.** Our strategy recognizes the economic benefits and opportunities in the new global low-carbon economy. We will support innovation, research and development in technologies that reduce greenhouse gas emissions and boost Ontario's global competitiveness.
3. **Develop new ways to reduce greenhouse gas emissions through fuel switching, energy reduction and other measures that foster innovation.** A shift to a low-carbon, high-productivity economy will require greater conservation and efficiency. Our strategy will support new energy and emissions management approaches to help Ontario firms of all sizes be more competitive and efficient.
4. **Build green infrastructure** to restore ecosystems, reduce atmospheric carbon and protect and expand carbon sinks. Green infrastructure is inter-connected networks of green open spaces that provide a wide range of ecosystem services. Benefits of green infrastructure include cooling communities, reducing the urban heat island effect which, in turn, improves air quality and reduces the impacts of heat stress on our health, preserving biodiversity and pollinator health, capturing and filtering rainwater to reduce flood risk and improve water quality, and promoting carbon sequestration to reduce emissions.

The *Cora Building* in Waterloo is a large commercial office building that integrates green infrastructure through bioswales and rainwater collection. Rain water is collected and used to flush toilets and irrigate the grounds. Parking lots are lined with bioswales to hold and clean storm water runoff, bringing nature and vegetation into the space and reducing the impact on municipal storm water infrastructure.

SECTION 2

Government Collaboration and Leadership

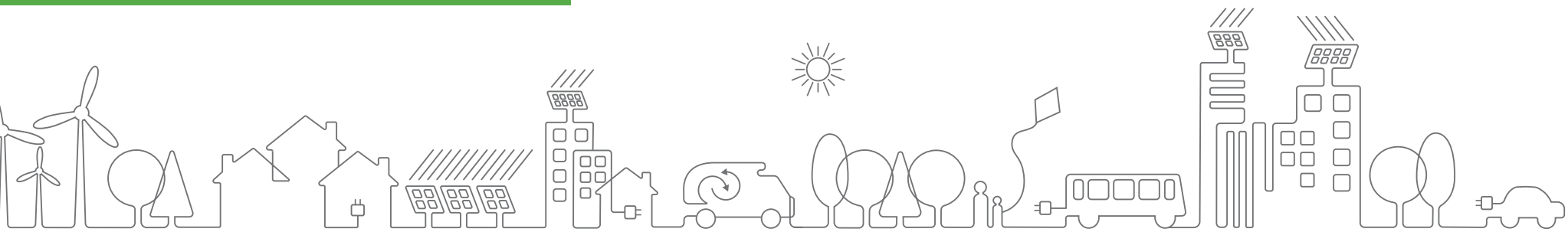
No one nation, group or government can win the fight against climate change on its own. The good news is we won't have to. With scientific evidence and rising awareness comes recognition that taking action is the right thing to do. People are taking a stand and working together.

We could not have met our 2014 emissions reduction target without the collaboration and hard work of municipalities, individuals, organizations, business and industry across the province.

In 2007, the City of Guelph endorsed its Community Energy Initiative with ambitious goals that included using less energy in 25 years, consuming less energy and water per capita than comparable Canadian cities, and producing less greenhouse gas per capita than the global average.

We are equally confident Canada's new federal government recognizes the urgency of the climate change challenge as well as the importance of collaboration with provinces, territories and international partners. Ontario has already made great strides. With a willing partner in Ottawa, we can do so much more and help make Canada a world leader on climate action. Ontario looks forward to working with the new federal government in developing an ambitious, Canada-wide approach to climate change that is regionally equitable and provides meaningful support for provincial actions.

A Canada 2020 poll shows that 84 per cent of Canadians believe that prosperous countries such as Canada have an obligation to show international leadership in reducing greenhouse gas emissions.



Collaboration Beyond Borders

Ontario is actively building alliances with leading jurisdictions beyond our borders to improve global and regional action on climate change through greater numbers, and to fortify our efforts at home.

We have signed a Memorandum of Understanding with Quebec on concerted climate change action. We have also signed California's Under 2 MOU which supports the principle of limiting global warming to 2°C to protect the planet from irreparable damage, and sets emission reduction targets for all signatories.

In July 2015, Ontario's Climate Summit of the Americas brought together climate change leaders and delegates from across the Americas. A key achievement was the first-ever Pan-American Climate Action Statement, signed by Ontario and 22 states, regions and municipalities. This signing recognized a growing consensus on the urgency of fighting climate change, and the need to work together to continue to reduce greenhouse gas emissions — including support for carbon pricing.

Leading Change in Ontario

The Ontario government has more than 63,000 employees, more than 3.25 million square metres of owned building space and more than 6,000 vehicles. We have a responsibility to reduce emissions in our own workplaces and operations, and we have taken up that challenge.

The Ontario Public Service Green Transformation Strategy and other initiatives are helping to address climate change issues in government policies, operations and decision-making practices. To date, we've reduced greenhouse gas emissions from the province's vehicle fleet by 18 per cent, from business-related employee air travel by 18 per cent, and from government-owned buildings by 30 per cent, as compared to 2006.

In 2014, Ontario successfully launched a Green Bond program, with an inaugural global Canadian dollar bond of $500 million. As the first Canadian province to issue a green bond, Ontario demonstrated green economy leadership. Market demand for the bond was strong, and the province invested the funds raised in Toronto's Eglinton Crosstown Light Rail Transit Line.

Since 2007, the Ontario government has relied on Enwave's Deep Lake Water Cooling system to cool its Queen's Park complex in downtown Toronto. Deep lake water cooling technology uses water from Lake Ontario to provide a reliable, efficient and sustainable source of cooling for offices, reducing electricity use by 75 per cent compared to traditional air conditioning.

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Reaching 37 Per Cent by 2030

As Ontario moves towards its second mid-term target of 37 per cent below 1990 levels by 2030, and ultimately to 2050, the government will continue to lead and collaborate, in the province and globally, in the fight against climate change.

By 2030, Ontario will have enhanced emissions reductions in government facilities and operations. The public sector — including municipalities, hospitals, schools and universities — will have started to significantly reduce their carbon emissions.

Ontario will have established collaborative partnerships with First Nations, Métis, business, academic and other non-governmental partners to facilitate sharing, learning and collective action towards a low-carbon, high-productivity economy.

Partnerships with other jurisdictions will help reduce emissions globally, and will boost innovation and competitiveness at home.

Ontario will take the following actions to achieve these goals:

1. **Introduce climate legislation that, if passed, would establish a long-term framework for action.** Legislation provides structure and direction for future policy delivery, and would establish a commitment to act. It will also enshrine in law Ontario's cap and trade program.

2. **Integrate climate change mitigation and adaptation considerations into government decision-making and infrastructure planning.** The fight against climate change crosses many sectors and falls under the purview of all ministries. Our climate change strategy will ensure an all-of-government approach so decisions made will take climate change considerations, including adaptation, into account. For example, upon proclamation of the Infrastructure for Jobs and Prosperity Act, the province and the broader public sector would be required to consider environmental impacts and climate change resiliency in making infrastructure decisions. This will also guide the province's next long-term infrastructure plan and support Ontario's historic investment of $130 billion in public infrastructure over 10 years.

3. **Introduce changes to government operations, procurement, employee training, building retrofits and in other areas to help government move towards carbon neutrality.** As a major employer, energy user and purchaser of goods and services, the Ontario government has the responsibility and opportunity to lead by example in making provincial operations carbon neutral. Further, the government can utilize procurement, policy and regulatory measures to help drive the transformative change needed across the economy.

4. **Work with First Nations and Métis communities to help implement the climate change strategy and to inform development of the action plan.** Our strategy recognizes that impacts of climate change are keenly felt in First Nations and Métis communities. We will work in partnership to address the challenges, and to develop a greater understanding of the key role First Nations and Métis communities can play in advancing our broader climate change approach using traditional knowledge, while recognizing the sovereignty and autonomy of First Nations and Métis communities.

A Resource-Efficient, High-Productivity Society

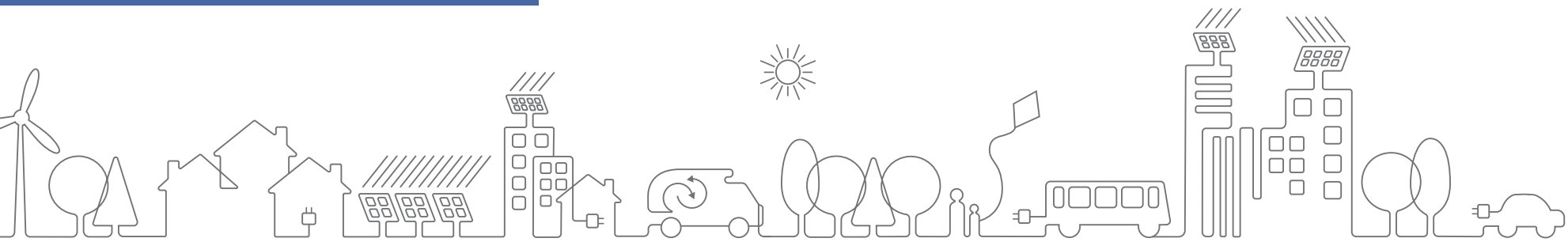
Making better and more productive use of all natural resources, including energy, water and land, is crucial to addressing climate change.

Ontario has already come a long way in this regard. In 2014, about 90 per cent of Ontario's electricity generation came from low-carbon sources, including nuclear, hydro, wind, biomass and solar.

The province has some of the most advanced energy conservation programs in North America. Smart meters and consumer demand response programs let Ontarians control and understand their electricity consumption better, while smart grid technologies are helping utilities operate more advanced, more efficient, modern grids. Improvements in residential, commercial and industrial electricity intensity mean that while economic activity is increasing, demand for electricity remains relatively flat.

Further, individuals and businesses increasingly understand the benefits of a circular economy: one that effectively manages and recycles products and materials, runs on renewable energy, and grows and creates jobs with the least possible negative effects on human life or the ecosystem.

By 2025, 20,000 megawatts of renewable energy is expected to be online, representing about half of Ontario's installed capacity.



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The Challenge

While we've made significant progress in the electricity sector to make our energy cleaner, energy use in other parts of Ontario's economy — including for buildings, heating, transportation and powering our industries — continues to be an issue.

That's because energy in these areas is primarily derived from combustion of fossil fuels, which accounts for 80 per cent of all energy consumption in Ontario. Our greatest challenge to reaching our greenhouse gas emission targets lies in reducing our dependence on fossil fuels.

Geothermal heating and cooling systems, often called geoexchange or ground source heat pumps (GSHPs), are an efficient way to heat buildings. When paired with low-carbon electricity, this technology can be virtually emissions free. Switzerland, for example, has more than 25,000 GSHP systems in operation, and is estimated to have the highest installed density in the world. Swiss public utilities have used a system called energy contracting to effectively provide an incentive for the adoption of GSHPs, which involves planning, installing, operating, and maintaining GSHP systems at their own cost and selling the heat (or cold) to the property owner at a contracted price in cents per kilowatt hour.

Reaching 37 Per Cent by 2030

Improved resource efficiency must include conservation, awareness and ensuring the right signals get into the marketplace.

By 2030, we envision that Ontario's cap and trade program will have helped to adjust the economic signals that favour fossil-fuel based energy. We will have moved further towards a low-carbon, high-productivity economy where economic growth is separated from greenhouse gas emissions.

We will have a reliable, cost-effective, low-emissions electricity system that can accommodate new demand as the economy shifts from fossil-fuel energy to low-carbon electricity. Industry and consumers will be using energy more efficiently, with increasing access to a variety of low-carbon energy sources. Energy conservations measures will have expanded across sectors.

Ontario will take the following actions to achieve these goals:

1. **Establish greenhouse gas reductions as a priority in the next Long-Term Energy Plan.** Ontario's 2013 Long-Term Energy Plan is the roadmap for our electricity system and other sources, establishing renewable energy targets to 2025 and conservation targets to 2032. Our climate change strategy will ensure a continuation of the positive trends of the electricity sector, as well as continued improvement in conservation, efficiency and clean energy use to achieve deeper, long-term greenhouse gas emissions/reductions.
2. **Review and make recommendations regarding existing policies and programs that support fossil fuel use and fossil fuel intensive technologies.** Our strategy recognizes the negative impact of fossil fuels on the climate. We will look at removing existing initiatives that support fossil fuel use, which could free up funds to better support sustainable development and clean technologies and energy. We will communicate to users that moving away from fossil fuels makes financial sense since the cost of renewable energies such as solar and wind is dropping significantly.
3. **Implement a resource recovery and waste reduction framework to assist Ontario's shift to a circular economy.** The spinoff effects of a circular economy cross all sectors of Ontario's economy. Our strategy's goal of increasing waste prevention and recovery of resources will help to reduce the greenhouse gas emissions that result from landfilling, as well as from various stages of production, including extraction and processing of resources, and transport and packaging of products.
4. **Develop data and metrics to measure GHG impacts of projects and programs including progress towards GHG reduction targets.** Develop tools to assess climate change risk to food production, human health, vital infrastructure, and the economy.

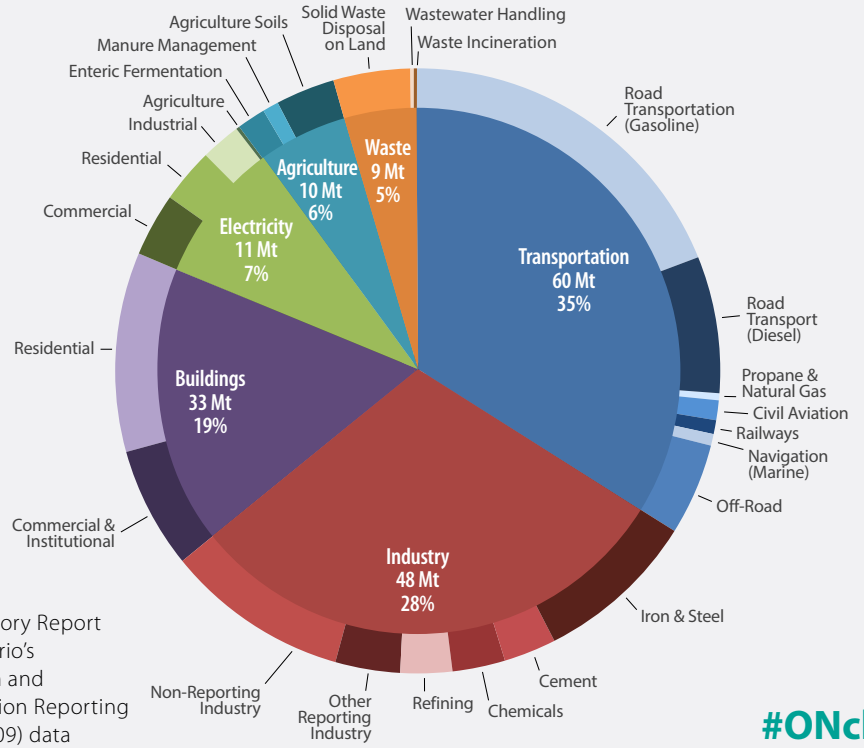
Every year in Canada, approximately $1 billion worth of recoverable materials are lost to landfill. Recovering just 60 per cent of waste materials could create almost 13,000 jobs and contribute $1.5 billion to Ontario's GDP.

The International Energy Agency highlights fossil fuel subsidy reform as a key component of meeting the global target to keep global temperatures from rising above 2°C.

SECTION 4

Reducing Greenhouse Gas Emissions Across Key Sectors

Ontario's 2013 GHG Emissions by Sector



Source: National Inventory Report 2015 (2013 data), Ontario's Long-Term Energy Plan and Greenhouse Gas Emission Reporting regulation (O.Reg 452.09) data

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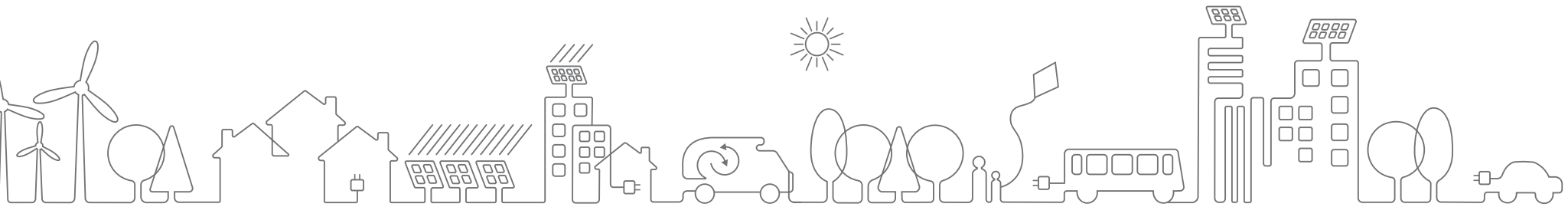

Most of Ontario's greenhouse gas emissions come from the transportation, industry and buildings sectors. A low-carbon, high-productivity economy must be one that pollutes less, wastes less, and makes more efficient use of energy, waste and resources.

Complementary, sector-specific actions and technology innovation are critical to achieving greenhouse gas targets. Ontario's cap and trade system will be a foundation of all efforts through 2030 and beyond.

Transportation: At 35 per cent, transportation emissions are the single-largest source of emissions in the province. In fact, emissions from passenger car trips alone (well over 10 million per day) are greater than the emissions from Ontario's iron, steel, cement, chemicals sectors combined. This highlights the important role that transit can play in getting people out of cars. However, existing land use patterns and the location of suburban employment centres means that transit alone will not serve the majority of Ontarians' day-to-day needs. More transit will help alleviate congestion and serve to offer our rapidly growing population a viable low-carbon transportation alternative.

Ontario's approach to reducing transportation emissions will recognize the emission reduction potential of different technology and mode choices. Ontario must transition as many existing drivers as possible to transit, cycling and walking. New communities need to be built alongside transit with sustainable densities. Ontario also recognizes that millions of passenger trips per day will be made by automobile. That is why our strategy will focus on helping households shift to affordable and viable ultra-low and zero-emission vehicles, including multi-vehicle households where second, third or fourth cars are often used primarily for commuting.

In 2011, single-occupant vehicles in the Greater Toronto and Hamilton Area accounted for 46 per cent of all trips made in the province.

Before 2008, there were fewer than 1,000 public electric vehicle charging stations in all of Norway. In 2009, programs were launched simultaneously by Transnova nationally and locally in Oslo to increase the availability of EV infrastructure. As of 2014, there were nearly 6,000 public charging stations across Norway, mostly using regular alternating current outlets.

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Industry: Ontario's industrial emissions, the second-largest source of emissions overall, dropped by 21 per cent between 1990 and 2012. In many cases, this was due to the implementation of energy efficiency measures. This was also due to shifts in the economy from a predominance of low-value-added manufacturing to a more diversified economy. There is also a decreasing trend in carbon intensity of manufacturing industries, measured as emissions per dollar of manufacturing GDP, which was 34 per cent lower in 2012 than in 1990. In other cases, emissions reductions have been due to contraction and shifts in the manufacturing sector, including slowdowns in key industries such as forestry.

In 2014, the industrial sector represented 14.4 per cent of Ontario's economy, contributing $104 billion to the province's GDP.

Buildings: Ontario's third-largest source of emissions — the buildings sector — represents about 19 per cent of the province's total greenhouse gas emissions. This number rises to about 24 per cent if electricity used by equipment and appliances in buildings is taken into account.

Measures such as conservation and retrofits have meant a significant improvement in emissions intensity in the buildings sector — about 32 per cent between 1990 and 2012. However, emissions caused by buildings overall are rising due to population and economic growth, and the associated increase in buildings and floor space.

Since 2009, Toronto's Eco-Roof Incentive Program has helped fund the installation of more than 100 green and cool roofs on buildings across the city. Green and cool roofs help reduce urban heat and associated energy use. Green roofs also help manage storm water runoff, enhance biodiversity and improve air quality

The one-quarter acre Rooftop Urban Farm at Ryerson University in Toronto produced more than 3,500 kg of fresh vegetables for consumption on campus over one summer, while also reducing associated greenhouse gas emissions from transportation of agriculture, cooling the campus and saving energy.

Agriculture: Agriculture has a complex relationship with emissions. Some farming activities — raising livestock, using on-farm equipment such as tractors or food processing — add emissions. Plants and vegetation, on the other hand, absorb carbon dioxide, a key greenhouse gas, and store it in plant material and the soil, thereby reducing atmospheric carbon. Land use planning that helps protect agricultural land — which is fundamental to Ontario's capacity to produce food — climate-smart farming practices, and energy efficiency all help ensure the right balance for the agri-food sector's success, the health, security and productivity of fertile lands, and the effective management of emissions.

Reaching 37 Per Cent by 2030

All sectors of the province's economy, including the transportation, industrial and building sectors, are vital to creating jobs and ensuring a good quality of life in a thriving Ontario. Our strategy will support the continuing strength and growth of all sectors as we work together to decrease emissions, transform the buildings in which we work and live, and change how people move from place to place.

By 2030, we envision that Ontario will have started to build the framework to minimize energy use and to use renewable energy in buildings. We will have put in place buildings-science expertise, production capacity for buildings materials, and the technologies and workforce to maintain and build near-net-zero buildings. Our commitment to resilient buildings will help communities cope with and withstand the impacts of climate change.

We will have progressed further in our ongoing work to improve access to more sustainable transportation modes such as walking, cycling and transit. Passenger and freight travel demands will be filled via road or rail vehicles powered by more efficient, low-carbon technologies.

Further, we'll be achieving emissions reductions in the industrial sector through our cap and trade program, and will have set the groundwork for an industrial sector that is a global leader in resource efficiency, and continues to be innovative, productive, and internationally competitive.

Ontario will take the following actions to achieve these goals:

1. **Reduce emissions from transportation by promoting the uptake of zero emission and plug-in hybrid vehicles.** A shift to low- and zero-emission vehicles is vital to the fight against climate change, as well as an important opportunity for technological innovation. As vehicle manufacturers offer more options for zero-emissions vehicles, our strategy will ensure access to affordable and fast public charging, charging at workplaces, apartments, condominiums and public institutions, a modernized vehicle price incentive, making the green plate program permanent, and reducing emissions through use of automated vehicles.

The Lexus RX 450h, the hybrid-electric version of the Lexus, is produced at Toyota's Cambridge, Ontario plant. It is the first luxury hybrid vehicle to be manufactured in Canada.

2. **Reduce emissions from goods movement.** Meeting our targets requires us to reduce emissions from the movement of goods. Our strategy will focus on measures that support the use of natural gas and low-carbon fuels in goods movement, and the electrification of goods movement where possible. We will also work to identify other emissions reductions opportunities in goods movement generally.
3. **Explore additional low-carbon fuel opportunities.** While broad-based electrification of the transportation sector will help achieve significant emissions reductions in the long-term, short-term reductions will occur by reducing carbon-intensity of transportation fossil fuels sold in Ontario. Low-carbon fuels will also allow modes of transportation like long- and heavy-haul trucking and marine transport that are not easily electrified to be part of Ontario's sustainable transportation future.

4. **Develop a coordinated approach to reduce emissions from new and existing buildings.** A net-zero energy building is a highly energy-efficient residential or commercial building that uses renewable technology to produce as much energy as it consumes. Our strategy will support net-zero buildings across the province through updates to Ontario's Building Code, incentive programs, removal of regulatory barriers, and encouraging the transition to lower carbon fuels and to building materials that store carbon.

The Mapdwell Solar System is an interactive online rooftop solar mapping tool that allows users to precisely estimate rooftop solar electric potential for almost every building in a given city by a simple click or by inputting an address. The tool uses three-dimensional elevation data to create a surface model of the sample terrain that accounts for the shape of building rooftops and structures, existing infrastructure, and tree foliage.

5. **Establish reducing greenhouse gas emissions as an important factor in transportation and land use planning initiatives.** Provincial frameworks guide transportation, land use planning and urban design. Establishing emissions reduction as a priority will embed smart design in long-term decision-making and help Ontario move towards net-zero emission communities. This includes integrated transit planning to maximize GHG reductions and ensure transit-supportive land use planning.

6. **Create incentive programs.** Ontario will develop, through the action planning process, energy retrofit programs targeted at the residential, small- and mid-sized businesses and large emitting industries.

Panasonic is developing reusable products that harness solar energy. By combining the convenience of dry cells with the cost-efficiency of rechargeable batteries, its Eneloop Solar Storage system offers small-scale, sustainable energy and lighting solutions to people in non-electrified regions and elsewhere.

Leaving a Smaller Carbon Footprint

- **On The Go Mimico** is a residential condominium project that will offer residents regional transit at their doorstep, with access to Mimico GO station from its property. This complex integrates geoexchange and cogeneration technology that takes energy from the earth in the winter and puts it back in the summer, redirecting and recycling where needed.
- **The Village at Riverbend** is a state-of-the-art community being built in London, Ontario on an energy-producing smart grid designed to let the buildings generate and share all the energy the community will need for everyday life and work activities. Advanced technology will allow unused energy to be stored for future use.

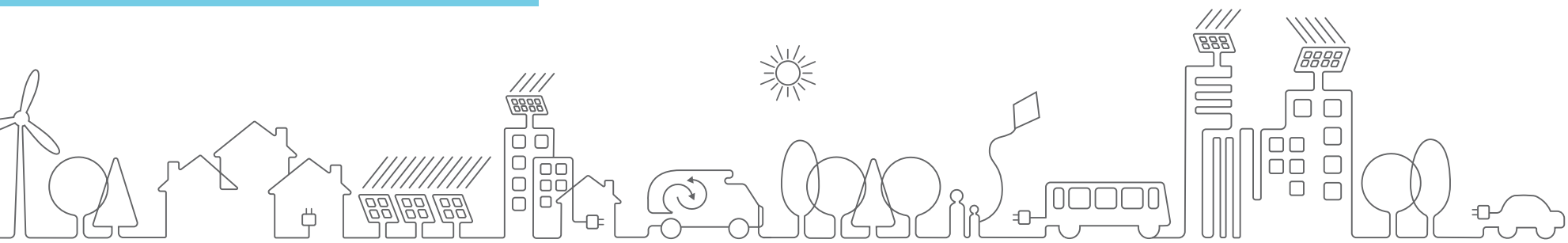
SECTION 5

Adapting and Thriving in a Changing Climate

Climate change requires a shift in thinking and behaviour. There are costs to inaction and there are risks if we don't plan ahead. Ontario must consider vulnerabilities caused by changing weather patterns in areas such as public safety and emergency response, roads and other infrastructure, buildings and homes. There will be impacts on Ontario businesses, remote communities and potential disruptions of Ontario's food supply. Ontario also needs to consider vulnerabilities to biodiversity and natural resources in the province

Adapting and managing risk must be considered side-by-side with reducing greenhouse gas emissions as Ontario plans and invests for the future.

In 2011, in response to the growing climate change challenge, Ontario appointed an expert panel on climate change adaptation. Its recommendations formed the basis of Climate Ready, Ontario's first-ever adaptation strategy and action plan. This living document continues to guide Ontario's path forward in managing risk in a changing climate.



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Infrastructure: Ontario's infrastructure is vulnerable to climate change in ways that increase the risk of disruption to our economy, workplaces, food supplies and more. For example, power plants that generate electricity are vulnerable to severe weather. Power lines and substations that distribute electricity can be stressed by increased demand for electricity as temperatures rise. Highways, roads and bridges can experience freeze-thaw fluctuations that can shorten their life cycles. Buildings also need to be energy efficient and resilient to climate change.

The Canadian Mortgage and Housing Corporation has established a method for establishing the long-term costs of alternative planning approaches. The Life Cycle Costing Tool for Community Infrastructure Planning helps assess and quantify the costs of numerous infrastructure options at the earliest possible stage, and demonstrates their long-term financial effectiveness. One use, for example, would be to determine if a project could make use of different green infrastructure alternatives.

Communities: Ontario is actively working to curb urban sprawl and to plan and create healthy, walkable, higher-density and transit-supportive communities that are more energy efficient and, therefore, produce less greenhouse gas emissions. We are also encouraging municipalities to plan resilient communities, for example, by directing development away from flood-prone areas.

The Federation of Canadian Municipalities' Green Municipal Fund supports sustainable community development through initiatives that support air, water, and soil, and mitigate the impacts of climate change. The fund champions initiatives that can generate new lessons and models for municipalities of all sizes and types in all regions.

Agriculture: Ontario agriculture is vulnerable to climate change impacts such as more frequent and more violent storms that flatten crops and cause flooding. Drought and erratic weather patterns brought on by climate change — unseasonal warming followed by frosts, for example — reduce crop yields and hurt the rural economy. These impacts are occurring around the world and will affect food processing, food prices and food availability in Ontario, challenging our food security.

Farmers are particularly vulnerable to extreme weather events and gradual changes in weather patterns, both of which directly affect their home and livelihood. While agriculture has been able to adapt to recent changes in climate, increased innovation and tools to support farmers will be needed to ensure the rate of adaptation in agriculture can keep pace with the changing climate over the next 25 years. Working with the farming community will be critical to ensuring the resilience of the sector.

Forestry: Ontario's public lands cover 932,000 square kilometres, an area two times the size of California, of which more than 270,000 square kilometres are publicly managed forests. Ongoing sustainable forest management helps our forests' continuing and long-term contribution to climate change mitigation by absorbing and storing carbon dioxide — while also conserving natural ecosystems, providing habitat for fish and wildlife, sustaining timber and biomass resources, and underpinning our forest industry and jobs.

Natural resources and ecosystems: A changing climate with changing patterns of warmer, wetter, and drier conditions also affects the natural environment and threatens biodiversity. For example, climate change could have negative impacts on the lifecycle of both wild and managed pollinator species like bees and butterflies, upon which about 75 per cent of all flowering plants depend. By conserving nature, restoring ecosystems and adapting natural resource management, we reduce vulnerability and increase resilience to impacts. In addition, natural systems provide low-cost adaptation solutions. For example, wetlands can provide effective storm water management services and help mitigate the impacts of extreme weather on infrastructure such as storm sewers.

Government initiatives, including the Greenbelt Plan and Ontario's 50 Million Tree Program, help to sequester and store carbon on lands in southern Ontario that are increasingly being affected by urbanization and deforestation. Ontario's Greenbelt protects nearly two million acres of valuable land and water across the Greater Golden Horseshoe by curbing urban sprawl and preserving our agricultural lands and natural heritage.

A Climate Resilient Ontario by 2030

Ontario recognizes the need to plan, prepare and adapt to changing weather. We will help municipalities, public utilities and the broader public sector identify their vulnerabilities and prioritize their response to the risks posed by climate change. The strategy will be to bring together the necessary scientific information, as well as clear land use planning policies to enable decisions and action to adapt to, manage the risks of, and build resilience to a changing climate.

By 2030, we envision that Ontario will be better prepared for the impacts of climate change. As part of infrastructure planning principles, consideration will have been given to investing in infrastructure that can stand up to the test of a changing climate. We will have made strides in keeping Ontarians healthy and safe both from the impacts of extreme weather and on-going changes to seasonal weather patterns.

Corktown Common is an ecologically diverse urban park in the core of Toronto that combines a park, a prairie, and a wetland with a playground and greenspace. This green infrastructure provides benefits that include flood control, recreational opportunities, storm water management features, and improved biodiversity and wildlife habitat.

FoodShare is a non-profit organization that, since 1985, has worked with communities and schools to deliver healthy food and food education. Foodshare believes everyone deserves access to affordable high-quality fresh food. Since 1985, FoodShare has pioneered innovative programs like the Good Food Box, impacted what kids eat in school, and improved the way people eat and grow food across Toronto every day. Every year FoodShare distributes over 16,000 cups of nutritious, vegetable-based soups across Toronto. FoodShare supports healthy school food programs and hands-on education to teach students food skills, inspire healthy eating, and connect to where food comes from.

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We will be actively planning and building resilient, low-carbon, mixed-use, healthy and walkable communities with convenient access to transit, and a higher proportion of green space.

Food systems and agricultural lands will be proactively protected and resilient. Agri-food policies and programs will be more oriented to climate-smart agriculture and energy efficient food production. Biodiversity will be conserved and natural resources and ecosystems will be managed for resilience.

By 2030, we will have improved our understanding of the roles of forests, peatlands, wetlands and grasslands in climate change mitigation and adaptation. This knowledge will enable us to manage our lands in a sustainable way and design green infrastructure in the built environment to better support the absorption and storage of carbon.

Ontario will take the following actions to achieve these goals:

1. **Integrate climate change adaptation considerations in infrastructure decision-making.** The province will guide infrastructure decision-making and investments so that these decisions properly consider the potential impacts of a changing climate.
2. **Align climate change objectives with agriculture and natural systems.** Our strategy will ensure pollinator and soil health and food security, as well as help the agricultural sector adapt to climate impacts. The agricultural sector will be able to capitalize on new opportunities associated with low-carbon food production while remaining healthy, productive, safe and sustainable for Ontarians. Ontario will continue to take action to reduce the vulnerabilities and strengthen the resilience of natural systems. The strategy will build on existing measures such as managing and restoring wetlands, increasing green spaces and managing diverse forests.
3. **Develop an approach to assess emissions and absorption from agriculture, forestry and other land uses.** Understanding how to measure the flow of carbon in agriculture, wetlands, forests and wood products will help us identify ways to mitigate climate change and better understand how our actions impact nature's ability to pull carbon from the atmosphere.

The Intergovernmental Panel on Climate Change (IPCC) provides requirements and methods for quantifying how agriculture, wetlands, forests and wood products absorb, store and release carbon. Ontario will consider international best practices and accounting standards such as IPCC guidance to develop an approach to estimate, monitor and report the net effect on greenhouse gas levels in the atmosphere.

4. **Establish a climate change modeling collaborative for climate data.** Our strategy will establish a one-window source for climate data. This will ensure open access to standardized and wide-ranging climate information. It will help both public and private sectors make informed and evidence-based decisions regarding adapting to climate change and increasing resilience.

Raising Public Awareness:

We All Have a Role to Play

Along with this strategy, our government is launching a multi-media public awareness and education campaign to make Ontarians more aware of climate change, how it affects us, and what we can do to mitigate it.

You might ask, "what could I possibly do that could change the weather?"

But step-by-step, decision-by-decision, our choices do have an impact: turning off the lights when we leave a room, taking transit or walking or cycling, buying high-efficiency appliances, conserving water. They all mean less energy needs to be produced which means fewer emissions are launched into the air. And all these individual acts, all these separate decisions, add to a significant whole.

And they can make a measureable, often personal, difference. Our government's decision to close coal plants and reduce greenhouse gas emissions, for example, has had a direct impact on Ontario's air quality. In 2005, Ontario had 53 smog days. In 2014, there were none. Zero. Now, imagine what a difference that has made to the elderly people walking down your street, your daughter with asthma, your growing baby just strengthening his lungs.

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Generational change is equally important. Our attitudes towards energy conservation, sustainable forest management, preserving and protecting the environment form at an early age. Parents, teachers and mentors directly influence the behaviours of children and youth, and are crucial to inspiring the next generation to continue to fight climate change.

Ontario's Stewardship Youth Ranger Program gives youth the chance to spend eight weeks working outdoors on natural resource management projects such as creating habitat for species at risk, rehabilitating wetlands and monitoring the health of the forest.

There's a lot to be done and the transformation to a low-carbon economy and society will come with costs. But the costs of inaction are far greater. Climate change affects our weather, our economy, our health and society. It impacts our ability to preserve and protect our environment: our forests and lakes, lands and wildlife. It impacts the ability of First Nations and Métis communities to exercise their Aboriginal and Treaty Rights regarding their lands and resources. It affects our future, our children's future, and the future of this planet.

That's why it is so important that every person in Ontario take up this fight. It depends on each of us being aware of the problem, finding solutions, and taking steps, large and small, to conserve energy and reduce emissions to combat climate change and prepare for its impacts.

We all have a role to play.

> "The good news is we have everything we need now to respond to the challenge of global warming. We have all the technologies we need, more are being developed. But we should not wait. We cannot wait. We must not wait."

Al Gore
Founder and Chairman, Climate Reality Project
Former U.S. Vice-President

The Action Plan to Come...

Climate change is a massive global concern. But we are not powerless. The world knows what has to be done, and it is beginning to take the practical steps to get there.

With this strategy, our government is setting out the path that Ontario will travel as a responsible global citizen and a leader in the fight against global warming.

In 2016, we will release a detailed five-year action plan with specific commitments to meet our near-term 2020 emissions reduction target, and establish the framework necessary to meet our targets for 2030 and 2050. Actions will be implemented after further consultation, where appropriate, and will focus on all areas of the economy, including transportation, buildings, industry, energy, waste, agriculture, forestry, and government.

Ontario will report on, and renew, its action plan every five years.

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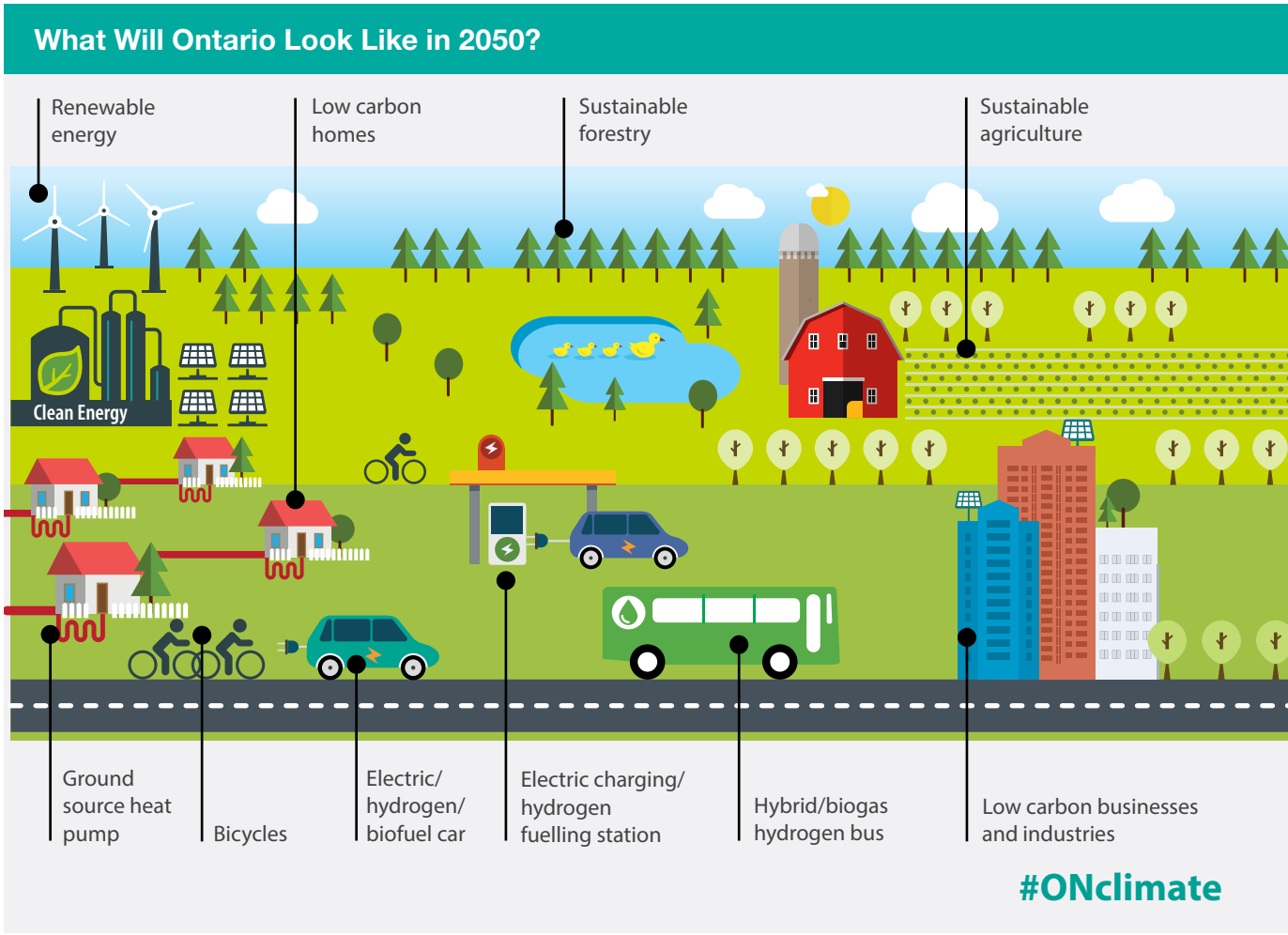
Taking Responsibility, Making a Difference

Our government is committed to a healthy and prosperous Ontario. It is our responsibility to be excellent stewards of the air, land and water entrusted to our care.

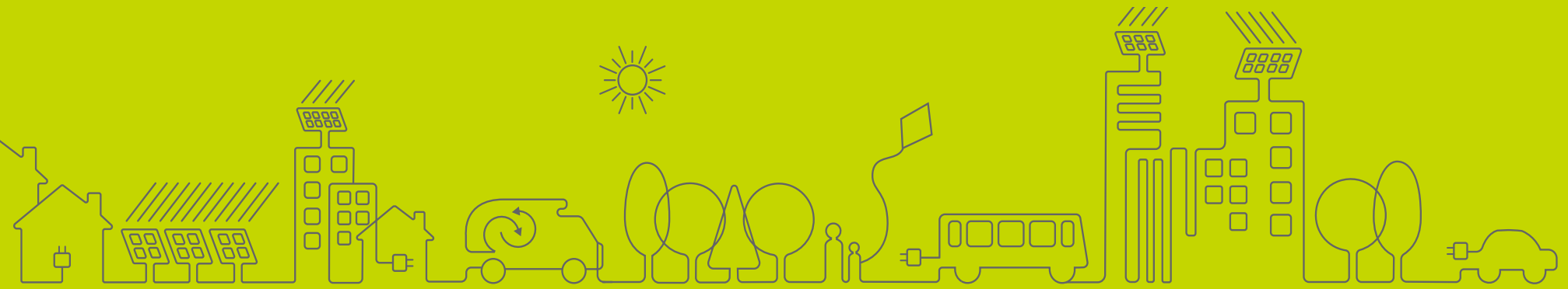
Fighting climate change is part of that responsibility, and it's a responsibility we call upon everyone to share.

Ontarians are already taking a stand. They're changing their habits. They're acting individually and collectively to conserve energy and reduce emissions. But so much more can be done.

So let's do it. Let's work together to build this legacy of hope and optimism for our children and grandchildren. Let's work together to fight climate change, build a stronger Ontario, and make a difference to our future — and the future of our planet.



#ONclimate



Learn more about Ontario's efforts to address climate change by visiting:
Ontario.ca/climatechange

Ontario