



Go Green

Ontario's Action Plan On Climate Change

August 2007

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GO GREEN: ONTARIO'S ACTION PLAN ON CLIMATE CHANGE

INTRODUCTION: WHY GO GREEN?

Scientists, and most notably, the United Nations Intergovernmental Panel on Climate Change (IPCC) have shown that the earth's climate is changing dramatically, and human industrial activity and the burning of fossil fuels are largely to blame. Before the Industrial Revolution, the carbon dioxide (CO₂) concentration in the earth's atmosphere was about 280 parts per million.

We are now at about 380 parts per million. At 380 parts per million, coral reefs are dying, glaciers are melting, seas are rising and an estimated 35,000 people died in the 2003 European heat wave. According to the IPCC, without significant action to reduce emissions, CO₂ concentrations may reach 750 parts per million this century.

Partly, this is because molecules of CO₂ remain in the atmosphere for up to 200 years. Which means the CO₂ molecules produced by the first cars, the Wright brothers' plane and the first coal-fired electricity plants may still be airborne.

Climate change is a crisis we caused together, and a responsibility we all share, together. So it's important we act, not only because we can't ignore the science, not only because we bear the responsibility, and not only because we have an obligation to our children.

We must also act, because this environmental crisis is also an economic opportunity. As a province with a strong manufacturing sector, plenty of natural resources, and a smart, educated, skilled workforce, there are opportunities for Ontario.

We don't have to choose between a strong economy and a healthy environment. Faced with the challenge of climate change, the only way to have a strong economy is to go green. And the only way to go green is to have a strong economy.

Go Green: Ontario's Action Plan on Climate Change is Ontario's *greenprint* for creating solutions, here, together. The time for imagining is over. Ontario is going green – now.

ONTARIO'S ACTION PLAN

Go Green: Ontario's Action Plan on Climate Change includes some of the most comprehensive, forward-looking steps on the environment that Ontario has ever contemplated.

We're setting firm targets and goals that we will meet together — not only for the distant future, but for right now, too.

Go Green will improve the way we live and travel in southern and central Ontario, the way we heat and light our homes, and the way we encourage and support businesses and industries that think green.

Through *Go Green*, your government is making green choices. But this plan will also enable everyone to make better, greener choices that will save money and help the economy. It will give Ontario's businesses the tools they need to go green and thrive – and offer opportunities for new, green business to take root and grow in our province.

Go Green is a five-point action plan:

- **Green Targets** – We have set short-, medium- and long-term targets for reducing Ontario's greenhouse gas emissions, starting now and continuing through mid-century. And we're setting out the measures to achieve these targets – new regulations, conservation, a phase-out of coal-fired power plants and much more renewable energy. From phasing out inefficient light bulbs to rebates for energy audits to provincial sales tax breaks for energy efficient products, there are new programs and incentives for Ontario consumers, businesses, and municipalities to get green.
- **MoveOntario 2020** – We're launching the largest transit investment in Canadian history – a \$17.5 billion plan that includes 52 rapid transit projects in the GTA and Hamilton, the country's largest urban area. It calls for 902 kilometres of new or improved rapid transit, creating 175,000 jobs during construction.
- **Creating Jobs by Going Green** – The *Next Generation Jobs Fund*, a new \$650-million program, will secure the next generation of high-paying jobs for Ontarians by supporting businesses' commercial development, use and sale of clean and green technologies and businesses right here in Ontario.
- **Green Power** – A \$150 million investment will help Ontario homeowners fight climate change, conserve energy and adopt green technologies. In addition to a world leading standard offer for renewable energy, we have set long-term targets to double the amount of electricity from renewable

sources by 2025. In the short term we have gone from 10 to nearly 700 windmills, in place or planned. And we now have a standard offer for clean energy to enable power users to improve their efficiency through cogeneration (combined heat and power electricity production). We are removing other barriers that prevent more widespread use of cogeneration.

- **Grow Green** – In addition to the Greenbelt Act, which ensures there will always be nature and open spaces around our most populated areas, 50 million new trees will be planted in southern Ontario by 2020. Under the Places to Grow Act, we are growing more sustainable, energy-efficient, transit-friendly communities and we are setting strong targets to make sure we are achieving our goals. We're also bringing in new programs to promote locally grown Ontario food – the best in the world.

ONTARIO'S GREEN TARGETS

Go Green: Ontario's Action Plan on Climate Change sets ambitious but realistic targets:

Together, we will reduce Ontario's greenhouse gas emissions to 6 per cent below 1990 levels by 2014 – a reduction of 61 megatonnes relative to business-as-usual.

By 2020 Ontario will reduce greenhouse gas emissions to 15 per cent below 1990 levels – a reduction of 99 megatonnes relative to business-as-usual.

By 2050 we will reduce greenhouse gas emissions to 80 per cent below 1990 levels.

These reduction targets won't be easy to achieve, but they are achievable – and they're worth it. These targets put Ontario among the leaders in addressing climate change. No place in Canada is committed to producing more real reductions than Ontario.

If the federal government does its part by introducing an emissions trading system for industry compatible with other markets — an effective regime with real caps on emissions, real reductions over time and with the same 1990 baseline used by most of the international community — Ontario will achieve these targets even sooner.

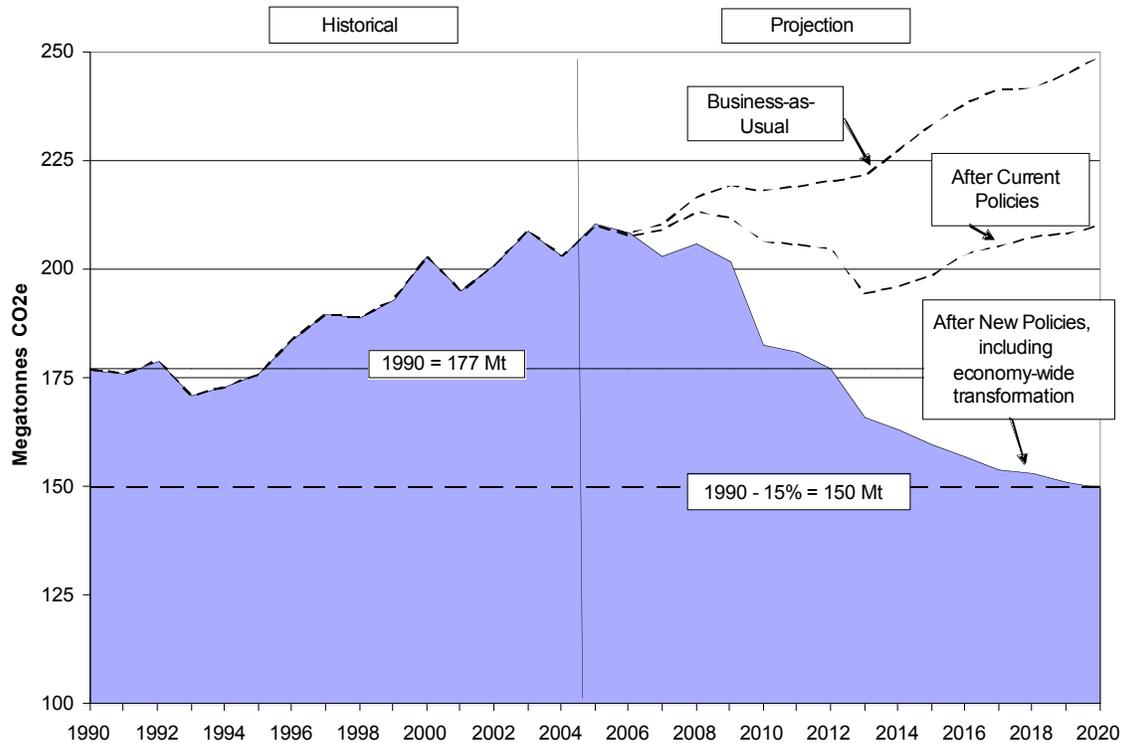


Figure 1 - Reducing Ontario's greenhouse gases by 2020: ambitious but real targets

We didn't pick these targets out of thin air. They are real, achievable goals—reductions in greenhouse gases that will contribute to addressing the defining issue of our generation, and establish a green, competitive economy.

How will we reach these targets? First, we'll finish the job of closing down our coal plants and we'll carry on with our existing policies like the Greenbelt Act, which protects an area of environmentally sensitive and agricultural land the size of Prince Edward Island. With the Places to Grow initiative, we have a new Growth Plan that establishes clear targets and performance standards for sustainable urban communities. These initiatives get us 50 per cent of the way to our 2014 target.

About 15 per cent will come from our ambitious transit investments (such as MoveOntario 2020) and working on initiatives with the federal government and other partners, including strong, national fuel-efficiency and auto emissions standards.

Another 15 per cent will come from other new policies—things like home energy audits, retrofits (such as replacing and/or sealing entry doors and windows), and working with municipalities to reduce their greenhouse gas emissions.

Climate change is the defining issue of our generation—we've come a long way, but we have more to do, together. By putting Ontario at the forefront of green innovation, we can meet our responsibility to the generations to come and create jobs and new opportunities for people today.
Premier Dalton McGuinty

The remaining portion will come from research and innovation into new technologies, many through our \$650 million *Next Generation Jobs Fund* as well as through our \$527 million Ontario Research Fund, which will fight climate change *and* strengthen the economy.

The government will use a similar approach to get us to our 2020 and 2050 targets.

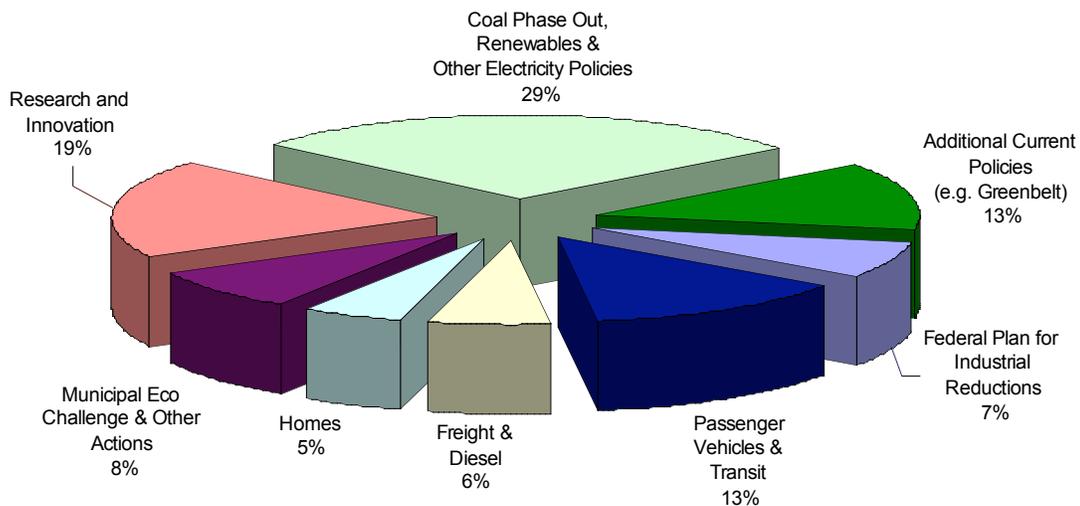


Figure 2 - Where Emissions Reductions Will Have Been Achieved by 2020: Based on Current and New Policies

To achieve our targets, Ontario needs progress in every sector. There is no single or simple policy fix for bringing down emissions across the various sectors. In a number of areas we will have to work closely with other provinces, state governments and the federal government. Current and new government policies and initiatives will continue to take action on reducing greenhouse gas emissions related to buildings, land use, transportation and industrial emissions. In the longer term, Ontario will continue on a path of innovation and transformation of key sectors.

Our progress will be measurable — with hard greenhouse gas emissions targets, as well as regular, independent reports on how we’re doing as a province in combating climate change. There will be a required report to Ontarians every year in the Legislature and an independent review by the Environment Commissioner on Ontario’s progress in reducing greenhouse gas emissions.

Please visit www.gogreenontario.ca for more information on climate change and Ontario's climate change reduction targets, including related technical documents.

MOVEONTARIO 2020

The Ontario government is launching a multi-year \$17.5 billion rapid transit action plan for the Greater Toronto Area and Hamilton (GTAH) that will deliver jobs, increase transit ridership and reduce congestion.

MoveOntario 2020 will build 902 kilometres of new or improved rapid transit, starting in 2008. This project will remove 300 million car trips off our roads – that's good news for the air we breathe – and the fight against climate change we're waging.

It will create 175,000 jobs during construction and deliver major rapid transit projects, which will improve the speed, frequency, convenience and accessibility of public transit services in the GTAH.

The Greater Toronto Transportation Authority (GTTA) will report back to the province in early 2008 with a detailed implementation plan for Move Ontario 2020.

The Province is funding two-thirds of this plan (roughly \$11.5 billion) and is asking the Government of Canada to contribute one-third of the capital costs (about \$6 billion). The 12-year construction program will be financed over 50 years. Municipalities will be responsible for the operating costs associated with these projects. Provincial gas tax funding is available to municipalities to support increased operating expenditures. In addition, the GTTA will recommend strategies for municipalities to deal with increased operating costs as part of its implementation plan.

OTHER GO GREEN ONTARIO TRANSPORTATION INITIATIVES

In addition to MoveOntario 2020's unprecedented boost to Ontario's transit network, we're going to make sure that Ontario continues to lead the pack with one of its most important industries – the auto industry. Ontario has long been the economic engine of Canada — and the auto industry is a key driver of Ontario's economy.

The auto industry is Ontario's largest manufacturing sector. In fact, Ontario is the largest motor-vehicle assembler in North America, surpassing Michigan in each of the past three years.

In 2006, the auto sector accounted for 41 per cent of Ontario's merchandise exports, with 98 per cent of these exports destined for the United States. In 2006, the sector employed an estimated 134,000 Ontarians.

While the automotive sector is one of Ontario's biggest employers, emissions from automobiles are also a major source of greenhouse gas emissions. Cars

and light trucks account for 12.5 per cent of all greenhouse gas emission in Canada, similar to worldwide light vehicle GHG contributions.

The places that are first to develop cleaner, environmentally friendly cars will have an enormous competitive advantage.

That's why, worldwide, the race is on to develop cars that leave a much smaller ecological footprint — vehicles that are lighter, more fuel efficient or powered by new, greener sources of energy.

We want these cars to be built and driven in Ontario.

What Ontario has done so far — transportation

The automobile industry is important to Ontario. We have a lot at stake in ensuring it is strong, and we can best do so by ensuring it is clean and produces greener products.

We're already providing rebates of up to \$2,000 for purchasers of qualified low-emission vehicles such as hybrid cars and trucks. We're also investing in Ontario's auto industry to help it find more green solutions.

In addition to these incentives and investments such as MoveOntario 2020, we're also supporting the greening of the transportation sector by:

- Investing \$4.9 billion since 2003 in public transit, including:
 - Over \$1.8 billion in GO Transit
 - *GO Transit ridership has increased by about 10 per cent to 49 million in the past three years — that's 4.4 million more passenger trips.*
 - *That means an average of more than 1.4 million fewer car trips each year in and around the GTA and Hamilton.*
 - Delivering more than \$1.6 billion by 2010 through the gas tax funding program to municipalities across the province to improve their public transit systems and to increase ridership
- Investing in research and development — through programs like the Ontario Automotive Investment Strategy and the new *Next Generation Jobs Fund* as well as the Ontario Research Fund
- Investing in Ontario's infrastructure — ensuring that goods needed for manufacturing move with maximum efficiency and minimum pollution-causing congestion
- Encouraging carpooling — opening High Occupancy Vehicle (HOV) lanes on 400-series highways and developing a long-term HOV plan which will result in 450 km of HOV lanes across the Greater Golden Horseshoe and an expanded network of Car Pool parking lots
- Expanding commuting choices — through MoveOntario 2020, GO Transit expansion, gas tax investments, the GTTA fare card, and other transit programs already underway across the province

Taking public transit to work just once a week would reduce your carbon output by about 0.2 tonnes a year. Pembina Institute

What's next

We're creating the \$650 million Ontario *Next Generation Jobs Fund* to support strategic economic opportunities and investment (more about this on page 15). It's modeled after the already successful \$500 million Ontario Automotive Investment Strategy, which has helped to leverage more than \$7 billion in total new auto investments in Ontario since 2003. This new fund is designed to develop and manufacture green technologies and products across all sectors, but the auto industry will obviously be an important recipient too.

Tougher emissions standards

Our goal is to ensure a progressive approach to emission standards and fuel economy harmonization with the US.

So, as a first step, we're asking the federal government to implement national standards. Ideally the federal government will work with their US counterparts on new standards for all new vehicles sold in North America. These standards need to be fair, aggressive, and achieve real greenhouse gas reductions.

In addition to smog-producing emissions, greenhouse gas emissions also need to be reduced to combat climate change. As we shift to a greener economy, Ontario will pave the way by establishing a low-carbon fuel standard. This will reduce the carbon content of transportation fuels by 10 per cent by 2020.

Boosting alternative fuels

Alternatives to oil and gas already exist, but bringing these to your local pump will take a sustained effort.

Consumers are demanding alternatives. Now it's up to governments to prove that alternative fuels — like hydrogen — are safe, practical and sound so that industry can step in to meet those demands. Through initiatives such as the \$650 million *Next Generation Jobs Fund*, Ontario will lead the way in bringing these alternatives to reality.

Greening Ontario's Cars and Trucks

To increase the supply of, and the demand for, more clean and fuel-efficient vehicles on Ontario's roads, we will introduce a range of incentives to encourage people to shift toward greener vehicles. Working with climate change experts and environmental stakeholders, we will consult with Ontario's auto manufacturers and other stakeholders to identify the greenest vehicles — the most fuel-efficient vehicles with the lowest emissions. Through these consultations we will also introduce a special green eco-license plate to provide recognition of these green vehicles.

The province will also consult with the trucking industry, manufacturers, experts, Transport Canada, and other jurisdictions to determine the most promising green vehicle technologies and applications for commercial trucking, and the programs and incentives necessary to ensure their adoption by private industry.

Building on these consultations, we will introduce a \$15 million program to provide incentives to convert 1,000 of Ontario's medium-duty commercial vehicles to hybrid electric and other fuel-efficient technologies. Several green vehicle technologies are available that can significantly reduce the environmental impact of commercial trucking. For example, commercial hybrid vehicles can generate significant environmental benefits by reducing fuel consumption, GHG emissions and air pollution. Similarly, cleaner burning natural gas vehicles emit considerably less GHG and air pollutants than conventional gasoline vehicles.

In addition, to reduce emissions from trucks and make our roads safer, the government is working with the province's trucking industry to mandate the use of speed limiters – something the industry and environmental groups have supported. We will also work with our partners to have the use of speed limiters adopted in other states and provinces.

Ontario's Drive Clean program continues to reduce smog-causing emissions from vehicles by identifying emissions problems and having them repaired. This government has implemented improvements to Drive Clean including refocusing the program on older, more polluting vehicles and tightening emissions standards. Drive Clean emissions standards for all heavy-duty diesel vehicles have been tightened twice since April 2004 to be the most stringent in North America. Diesel school buses are required to meet the more stringent of these standards to help protect the health of school children.

MoveOntario 2020 will build 902 kilometres of new or improved rapid transit, starting in 2008, and will deliver 52 rapid transit projects. It will result in 800 million new transit trips per year, taking 300 million car trips off GTA roads. This will reduce carbon dioxide emissions in the region by 10 megatonnes.

Ontario is committed to developing a **low carbon fuel standard** that will require carbon emissions from transportation fuels to decrease 10% by 2020 — the equivalent of removing 700,000 cars from the roads.

**CREATING JOBS BY GOING GREEN —
THE NEXT GENERATION JOBS FUND**

The *Next Generation Jobs Fund* is a new \$650 million program that will help companies invest in the development and commercial sale of clean cars, clean fuels, and clean technologies here in Ontario.

Companies that apply for financial support from the fund will have to demonstrate that they can:

- Secure good jobs for Ontarians
- Reduce greenhouse gas emissions

The fund will:

- Help establish Ontario as a global leader in an emerging market
- Build on existing expertise in areas in which Ontario has a strong research and commercial base or create new expertise, and
- Create synergies among researchers, business people and entrepreneurs

This five-year strategy is modeled on the government's already successful Automotive Strategy, which has helped leverage more than \$7 billion in total new automotive investments and anchored thousands of high-value Ontario jobs.

...the kind of positive partnership that can accelerate green vehicle technologies while also helping to ensure we remain at the forefront of competitive jurisdictions...

**Arturo Elias, President,
General Motors Canada**

...a blueprint for how governments can work with business and labour to make sure our high-skilled workforce stays in the province for years to come.

**Buzz Hargrove, National President,
Canadian Auto Workers Union**

The *Next Generation Jobs Fund* includes the auto industry but goes beyond. Research cited in *The Economist* (June 2, 2007) reports that global investment in green

technologies such as renewable power generation, biofuels and low-carbon technologies rose from US \$28 billion in 2004 to US \$71 billion in 2006. Ontario should – and will – be at the forefront of these tremendous opportunities for economic growth, jobs and environmental protection.

Ontario's financial participation will be strategically tailored to individual situations, and may include support for infrastructure building, research and training programs.

SUSTAINABILITY IN ONTARIO TODAY

Ontario is already showing leadership in renewable energy and green technologies. Some recent initiatives:

- A \$235 million investment in General Motors that includes the development of fuel-efficient cylinder de-activation engine technology and the production of 100 prototype fuel cell-equipped Chevrolet Equinoxes
- A \$21 million investment to help Queen's University create its Advanced Research and Innovation Centre that specializes in bio-processing and biomaterials
- A \$10 million investment with Roxul Inc. of Milton to support the development of new commercial, industrial and residential insulation products that use recycled scrap material from the steel and construction industries
- A \$6 million investment in the Ontario BioAuto Council to help move emerging technologies into the marketplace, building on a \$5.9 million investment in the BioCar Initiative, a research project to turn Ontario's harvest into viable materials for the auto industry
- A \$6 million investment to support Lakehead University in working to continue and improve the sustainable development of Ontario's boreal forest
- A \$1.6 million investment with wood composite manufacturer Flakeboard company in Sault Ste. Marie that will feature a biomass combustion

The *Next Generation Jobs Fund* is a new \$650 million program that will help companies invest in the development and commercial sale of clean cars, clean fuels and clean technologies here in Ontario.

GREEN POWER

Ontarians say overwhelmingly that they want it to be easier to practice conservation, and that nowhere should it be easier than at home.

The Government of Ontario agrees.

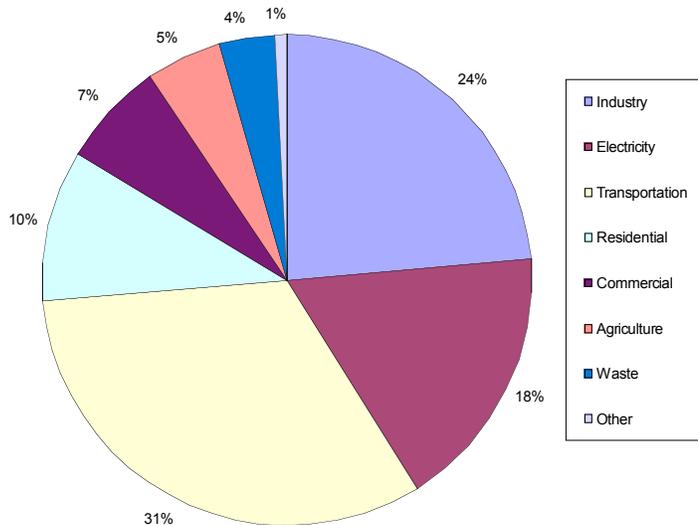


Figure 3 - Percentage of Ontario 2005 Greenhouse Gas Emissions by Sector

Source: Environment Canada Greenhouse Gas Emissions Inventory (2007)

Residential emissions account for 10 per cent of the greenhouse gas emissions in Ontario.

With the right plan in place, Ontarians can conserve more, and we can lower emissions by relying on cleaner sources of energy.

This plan will help make it easier for Ontarians to conserve at home and will allow consumers more options for purchasing green power.

What we've done so far — building a Conservation Culture

In 2004, the government set a target helping Ontarians reduce their energy consumption, to create a culture of conservation that would make Ontario a North American leader in energy efficiency. We're on the way:

- We've established conservation goals. Ontario has set targets that will save Ontarians 6,300 megawatts of electricity through conservation by 2025. Of

this, more than 40 per cent will be saved by 2010, representing an investment of up to \$2 billion by Ontario's Conservation Bureau.

- Last year local distribution companies delivered more than 500 conservation programs.
- This summer, local utilities partnered with the Ontario Power Authority to deliver five conservation programs across the province: Every Kilowatt Counts, Summer Savings, Great Refrigerator Round Up, Peak Saving, Cool Savings. In addition, the Energy Efficiency and Conservation Measures for Aboriginal Communities program is being rolled out to all 134 First nations communities in Ontario. Details for these programs can be found at the Ontario Power Authority's website at: www.powerauthority.on.ca.
- Ontario now has the most conservation-minded building code in Canada, which will improve the energy efficiency of Ontario's homes and businesses.
- Ontario's Energy Efficiency Act matches the top North American energy efficiency standards for most residential appliances. These regulations cover an estimated 95% of the energy consumption as covered by California regulations.
- In addition to building our homes more efficiently and sustainably, we have to build our communities more efficiently – preserving green space, building near transit, increasing density and reducing the distance people have to commute to work. We are one of the leading jurisdictions in North America for planning for sustainable growth through innovative land-use planning legislation and policy such as the reformed Planning Act, the new Provincial Policy Statement, the Places to Grow Act and the Greenbelt Act.
- Ontario's Chief Energy Conservation Officer has reported that we are well on our way to meeting the commitment of reducing peak electricity demand by 5 per cent by this year.
- *Bill 21, the Energy Conservation Responsibility Act*, received Royal Assent in March 2006. This legislation establishes the framework for the installation of smart meters in Ontario homes and small businesses. Smart metering provides consumers with information to better manage their electricity use and costs.

Unplugging that extra fridge in the basement could save you \$150 a year in energy costs and reduce greenhouse gases by 1350 kilograms.
PowerWise

What Ontario is Doing Now – Closing Coal and Expanding Renewable Energy

The first step is to make our electricity supply more green and clean.

Ontario's industries, homes and businesses have long enjoyed safe, stable, affordable electricity. Now it's time to move away from smog and greenhouse gas producing power plants and toward energy that's renewable and doesn't emit carbon dioxide or pollution.

Smog from coal-fired power stations hurts our health. In 2005, a study found a relationship between dirty emissions from coal-fired stations and up to 668 premature deaths, 928 hospital admissions and 1,100 emergency room visits in Ontario.

And CO₂ from these stations contributes to climate change. Each day that we remain dependent upon old, dirty energy technology represents a missed opportunity.

Around the world, the supply of clean, renewable energy is rising. As the world turns to energy sources that are greener and more sustainable, Ontario needs to be at the leading edge. But we have to break some wasteful, dirty habits first.

CLOSING DOWN COAL

The government is phasing out Ontario's coal-fired generating plants by 2014. This commitment is the law — the government has put it into regulation.

We wish it could be done faster, and we have already eliminated one of our five plants to date. Since 2003, Ontario has reduced greenhouse emissions from coal plants by almost one-third — the equivalent of taking 2 million cars off the road for a year. And, while phasing out coal completely will take time, we're committed. In fact, Ontario is the only place in the world that has made such an ambitious commitment.

The Ontario Power Authority's preliminary Integrated Power System Plan projects another one-third cut in those emissions between 2006 and 2011, with the complete elimination of coal-fired generation in Ontario by the end of 2014.

As coal plants are phased out, they will be replaced by a mix of energy from clean, renewable sources such as hydro, biomass, wind and solar, as well as energy conservation.

Our government's energy plan will result in a 50 per cent increase in clean renewable electricity capacity by 2015.

Developing clean, renewable energy

Investment in renewable energy has been stepping up since 2003—in that year there were exactly 10 wind turbines in the province. Now we're up to nearly 700 that are up and running or in the works, making Ontario one of the biggest producers of wind energy in Canada.

We're making similar strides in solar power, with a massive new solar energy farm under development now near Sarnia.

Starting now, Ontarians are going to find it easier to invest in renewable energy and conservation.

The Government of Ontario announced a new \$150 million investment to make this easier – and more. These programs, funded through money set aside in the 2007 budget, include:

- A Home Energy Retrofit program that will provide up to \$5,000 for home energy retrofits that include Energy Star® qualified furnaces for heating, domestic solar water heaters and insulation – as well as rebates for home energy audits
- A retail sales tax exemption at the point of sale (that is, there is no provincial sales tax when you buy) for Energy Star® light bulbs, decorative light strings, refrigerators, dishwashers, clothes washers, freezers, dehumidifiers and room air conditioners purchased, rented or leased from July 20, 2007 and before July 20, 2008
- A target to help equip 100,000 homes with solar power in Ontario
- Extending the retail sales tax rebate on qualifying solar, wind, micro hydro-electric and geothermal equipment to December 31, 2009
- A one-stop shop, in partnership, starting with a release of a website developed with the Clean Air Foundation, where consumers can go to find out how to go solar
- A program for the industrial, commercial and institutional sectors to encourage the use of solar thermal equipment
- A program to be developed with Ontario's green energy retailers to help Ontarians purchase 100 per cent green power
- A pilot project to provide zero-interest loans for homeowners to install renewable energy systems

We want your investment in renewable energy to benefit your pocket book and the environment, too. There's already a toll free line and a website where you can find out how – go to 1-888-668-4636 or www.energy.gov.on.ca.

Conserving Ontario's energy

Working together, Ontarians will reduce peak electricity demand in 2025 by 6,300 MW — nearly equal to the capacity of Ontario's coal-fired electricity generating stations.

To get to this ambitious goal, we all have a role to play.

The Conservation Bureau, led by the Chief Energy Conservation Officer provides leadership in planning and co-ordinating electricity conservation in Ontario, enabling \$2 billion in conservation program investments. Many of these are delivered through Ontario's Local Distribution Companies (the local providers of electricity).

There's a new \$150 million in programs, which include a pilot program that allows two local electricity utilities to provide loans to support energy efficiency and renewable energy retrofits in homes and businesses in their service territory — improvements like solar water heaters.

It also includes a program that makes it easier and more worth your while to do an energy audit on your home. An energy audit can show homeowners how to improve energy efficiency for things such as heating, cooling, and hot water, through measures such as better insulation and the installation of more energy efficient equipment. By making the suggested investments, a typical homeowner could save about \$800 per year on their energy bills and reduce greenhouse gas emissions by up to 5 tonnes through energy efficiency retrofits.

To encourage more audits, the government is offering an energy audit rebate of up to \$150. The goal is to conduct 130,000 audits over the next four years.

Another way to meet our conservation goal is by making smart, simple choices — such as how we light our homes.

Old, inefficient light bulbs — which have been around for more than 125 years — waste much of their energy as heat, use more electricity and cause more CO₂ emissions than their modern compact fluorescent counterparts.

Ontario will phase inefficient light bulbs out completely by 2012, joining with Australia and California in switching to efficient light bulbs; New Jersey has committed to phasing out incandescent bulbs in their government buildings. The federal government is following our lead too.

Compact fluorescent bulbs are up to 70 per cent more efficient than incandescent bulbs. Replacing three incandescent bulbs in each Ontario household with three efficient bulbs will save 680 GWh of energy each year — enough to power 56,000 homes or two cities the size of North Bay.

To help Ontarians make the switch, the government is already working with manufacturers, retailers and community groups to educate the public on the easy energy savings of switching light bulbs and promoting opportunities for getting more energy efficient bulbs in homes and businesses. Since 2003, sales of energy efficient bulbs have increased to about 3 million per year in Ontario.

What Green Power at Home will mean

By taking these measures at home, Ontarians will reduce CO₂ emissions by 5 megatonnes by 2020 — 5 per cent of the total reductions we plan to achieve by that date. These measures also will put Ontario well onto the path of clean energy, with 15,700 megawatts (MW) of our power coming from renewable sources by 2025 (doubling from mid-2006 levels of 7,850 MW).

Just as importantly, Green Power at Home will help create new categories of green industry in Ontario. We'll need more experts who can conduct those 130,000 energy audits, engineers, designers and manufacturers of energy efficient products and retrofit components, builders and trades people who can install and retrofit our homes and workplaces.

MORE GREEN POWER – THE NEW CLEAN ENERGY STANDARD OFFER PROGRAM

What we've done so far – energy

Ontarians have made important strides in improving energy efficiency. We know that in a globally competitive — and increasingly green — world economy, the places that are first to adopt new standards of energy efficiency will have a competitive edge.

In Toronto during the hottest days of last summer, for example, peak energy demand was actually lower than during the peak summer days of 2005 – people responded to the call for moderation and used their air conditioners less.

Across the province, Ontarians are conserving more and using less energy, and the supply of clean, renewable energy is increasing.

In Niagara Falls, for example, “Big Becky” is hard at work – the largest rock tunnel-boring machine ever built. Becky is digging a 10.4 kilometre tunnel under the City of Niagara Falls. When it's completed in 2009, it will increase electricity output at the Sir Adam Beck Generating Complex by 14 per cent — an additional 1.6 billion kilowatt hours of clean, reliable power. That's enough to supply 160,000 homes.

Through the Renewable Energy Standard Offer Program, we recently contracted for more than a million solar panels at farms outside Sarnia – enough to provide power for 6,000 homes. The Renewable Energy Standard Offer Program is expected to add up to 1,000 MW of new renewable energy over 10 years.

However, Ontarians want to do more, faster.

What's next

Together, we can help make Ontario's economy the most energy efficient in North America.

To achieve this, the Government of Ontario is building on the success of its world-leading *Standard Offer* plan for renewable electricity.

To help businesses make the switch, the government has announced that it will offer a new, world-leading Clean Energy Standard Offer Program.

The Clean Energy Standard Offer Program lets electricity users take energy that would otherwise be unused or wasted – such as excess heat — and use it to produce electricity that can be sold back to Ontario's power grid. We're doing some of this already in Ontario but there's room to do much more.

Ontario's Clean Energy Standard Offer Program will help reduce barriers for small energy generators and distributed energy projects that use natural gas or surplus energy streams. The program will support greater use of clean sources of energy to generate electricity for Ontario.

Ontario is also moving forward with the next phase of the Combined Heat and Power initiative, which will allow for the procurement of larger cogeneration projects.

What it will mean

Ontario's new Clean Energy Standard Offer Program will encourage Ontario businesses and industries to make more efficient use of energy and therefore decrease greenhouse gas emissions. It helps our economy by helping our industries be more efficient and more innovative, by providing incentives to find solutions to climate change.

Purchase energy-saving models of office appliances and equipment, such as EnergyStar-approved computers, LCD monitors, printers and photocopiers. Not only will this help save energy, but it will save money too.
davidsuzuki.org

Ontario's **coal phase-out** initiative is the single largest greenhouse gas reduction initiative across Canada. The replacement initiative will reduce greenhouse gas emissions by up to 30 million tonnes.

GROW GREEN – FORESTS AND AGRICULTURE

Forests are one of Ontario's greatest resources — and they play an important role in removing greenhouse gases and pollutants from our air. Trees function as a carbon “sink” – a receptacle for carbon that would otherwise accelerate climate change.

While reducing human-made greenhouse gas emissions is one way to combat the problem of climate change, scientists have suggested that increasing the amount of carbon absorbed by nature could be effective, too.

In other words, if we plant more trees and continue to manage our forests sustainably, they will absorb more carbon.

What's been done so far

Through initiatives like the *Greenbelt Act*, *Places to Grow Act*, and new parks, we have protected more than 3.8 million acres across Ontario. This includes:

- Providing tools to encourage voluntary efforts to conserve and restore natural areas on private land through the Natural Spaces program
- Expanding city parks in Hamilton and Oakville by close to 50 acres
- Protecting 180 acres of provincially significant natural heritage lands to create Hamilton's newest conservation area - Eramosa Karst
- Donating more than 200 acres of natural heritage land to communities and organizations to protect and expand parkland
- Delivering 650 acres of ecologically significant lands in the Town of Oakville into the care of Conservation Halton
- Protecting 5,500 acres of ecologically significant land in Rouge Park and the new Bob Hunter Memorial Park.

We've taken serious steps toward protecting forested areas in Ontario, in many cases close to our most built-up urban areas. We recognize the importance of forests across Ontario, and we understand how they are threatened and the challenge of protecting and enhancing them.

In northern Ontario, our vast boreal forests remain an important source of income for northern families, a habitat for wildlife and a lucrative travel and tourism destination for Ontarians and travelers from around the world.

In southern Ontario, many of our former forests were cleared over the previous centuries. We know that even a partial restoration of southern Ontario's forests would absorb more CO₂ from the atmosphere and help filter out fine particulates that are a source of smog. And we know there's plenty of room for more trees, and lots of work for people to plant and grow them. New urban forests in

southern Ontario will also provide shade, reducing the demand for cooling during the summer.

What's next – 50 million trees

Ontarians have said they want their province to do more to protect — even expand — our forests.

Together, we're going to take a historic step — we're going to plant 50 million trees across southern Ontario by 2020.

In northern Ontario's managed forests the government will also continue our efforts to replant trees. Together we'll continue to manage this sustainable resource sustainably to ensure the maximum potential of Ontario's forests to store carbon.

What it will mean

We'll work with private landowners and community groups to plant 50 million trees on private and public lands by 2020. We'll also plant 100,000 trees in cities and parks over the next two years.

That's enough trees to cover an area of 25,000 hectares (nearly 62,000 acres). Over their lifetime, the trees in *each* hectare of new forest will store more than 5.5 tonnes of CO₂ annually. The total carbon removed by these 50 million trees is equivalent to the emissions of 172 million car trips from Toronto to Barrie.

In our cities, these new trees will help reduce the so-called "heat island" effect and help eliminate smog and to improve air quality.

The Grow Green part of Ontario's Climate Change Action Plan will create this vital new carbon sink. It will also return forests and greenery to parts of the province that have been deforested, improving the province's natural beauty, creating a habitat for birds and wildlife, and improving our quality of life.

Grow Green and Ontario's Farms

Ontario's farmers are good stewards of the environment. They know from experience that when you're good to the land, the land is good to you.

Ontario's farmers are also some of our most innovative people. In a competitive global economy, they're adapting to changing markets while continuing to grow healthy, high-quality food for Ontario families.

As part of Ontario's Action Plan on Climate Change, the government will be there to help our farmers continue to operate environmentally responsible agricultural operations.

What's next — helping Ontario farmers Grow Green

Ontarians know that there are many advantages to buying Ontario food. Local food travels a shorter distance from the field to your fork, meaning it is fresher. More and more top chefs, dieticians and nutritionists, are recognizing the local advantage and the benefits of concepts such as “the 100-mile diet” (a diet based mostly on food grown within 100 miles of where you live). Buying locally also helps protect jobs for farming families – and their farms – and jobs in Ontario’s agri-food industry.

Another advantage to buying Ontario food is that doing so reduces greenhouse gases from transportation. Food grown closer to home requires less energy to ship — and shipping is a major source of greenhouse gas emissions.

Not only do Ontario’s farmers produce high-quality food, the agri-food sector pumps over \$30 billion a year into the Ontario economy and supports 700,000 jobs. We need to ensure that in a changing, more sustainable global economy, Ontario’s agri-food sector continues to find success.

To build opportunity for Ontario farmers, reduce greenhouse emissions and improve our quality of life by ensuring quality on our plates, the Ontario government has launched a major new campaign, *Pick Ontario Freshness*, to promote locally grown Ontario food.

Reducing methane emissions

Methane is a naturally occurring potent greenhouse gas produced, for example, as manure decomposes. Each year, global farming operations produce about 2.8 billion tonnes of methane (expressed as CO₂ equivalent), or 47 per cent of all global methane emissions.

Ontario farmers have recognized the need to reduce their share of methane emissions, so the government will provide assistance to farmers to help manage this manure and capture the methane.

On July 26, 2007, the government announced a \$9 million program of financial assistance for farmers and the agri-food industry to design and construct biogas digesters that convert methane from manure and food processing by-products into electricity. The program is expected to fund 25-30 digesters. A digester that uses manure from 250 cows could result in 400 fewer tonnes of greenhouse gases and 550 more megawatt-hours of power production every year.

The government will also introduce a regulation to phase-in new requirements for methane capture in our landfills, the source of 4 per cent of Ontario’s human-made greenhouse gas emissions in 2005. That methane can and should be used for clean energy.

Facilities that generate electricity from methane capture are eligible for 20-year power purchase agreements through the Renewable Energy Standard Offer Program.

Managing agricultural carbon emissions – countryside carbon trading

As economists assess the potential long-term effects of climate change on the global economy, many places are already responding by treating carbon as a pollutant. And increasingly, business leaders and policy experts have been calling for carbon-trading systems that put a price on carbon.

Carbon-trading systems provide an economic reward for initiatives that offset carbon emissions by, for example, reducing tillage on farmland, improving manure management, planting grasses or trees that absorb carbon or continuing to manage existing forests in a sustainable way that preserves carbon.

Ontario will work with its agricultural partners in developing, initiating and verifying carbon offset initiatives to encourage their inclusion in carbon trading systems under discussion. These initiatives could reward farmers, private landowners or First Nations who manage their lands to capture and store carbon. Their work will provide important co-benefits such as increasing conservation lands, improving habitat, and preserving wetlands, reducing waste and improving water quality.

The \$9 million **Ontario Biogas Systems Financial Assistance Program** will help turn GHGs from farms into clean energy.

The government is working with partners to plant as many as five million trees per year in southern Ontario to reach **50 million trees** by 2020. The initiative will cost \$79 million and help remove 3.8 million tonnes of carbon dioxide from our atmosphere by 2054 , equal to 172 million car trips from Toronto to Barrie.

MORE SUSTAINABLE CITIES AND TOWNS

Canada is an increasingly urban nation: more than 80% of the country's population lives in cities and the number continues to increase. In southern Ontario, urban growth rates are among the fastest in North America – comparable to cities such as Dallas, Chicago and Atlanta.

To make sure that cities are growing green means ensuring that they are more vibrant, accommodate more people better and use land more efficiently. Greener cities offer travel alternatives to the automobile whether that means taking transit, walking, or cycling.

Sprawling communities are a major contributor to climate change and air pollution because of their overdependence on automobiles, which burn fossil fuels and according to the David Suzuki Foundation, about 70% of greenhouse gas emissions generated from transportation are from cars and trucks, and two-thirds of that is generated in urban areas.

More compact and complete communities also reduce pressure on critical agricultural lands and natural areas.

What we have done so far

In 2006, the Growth Plan for the Greater Golden Horseshoe was brought into effect to set a new standard for sustainable urban development in southern Ontario. Recognized as an award-winning approach to urban planning and sustainability by the American Planning Association and the Canadian Institute of Planners, the Growth Plan establishes strong targets and performance standards for community development.

With enforceable standards for more compact, complete communities, the government is reducing car dependency and diminishing the development footprint. Without a growth plan, we could expect that CO₂ emissions from automobiles would increase by about 45% over the lifetime of the plan.

The Growth Plan's implementation is also supported by the Provincial Policy Statement passed in 2005 that sets out strong new rules, across the province, for land use and development, with an emphasis on building sustainable communities.

Taken as a whole, the new approach to urban planning means we will be building more sustainable cities and towns across the province now and in the future. By doing so, we are reducing pressures on important agricultural and natural heritage lands.

The McGuinty government is providing \$200 million in **loans** and \$20 million in **grants** over the next three years to **help municipalities** reduce greenhouse gas (GHG) emissions.

Ontario's **2006 Building Code** introduced energy-efficiency requirements that, over the next seven years, will save enough energy to power 380,000 homes and will reduce greenhouse gas emissions the equivalent of taking 250,000 cars off the road.

MAKING INDUSTRY AND GOVERNMENT MORE GREEN

What's been done so far — Industry

Industry likes certainty — fair, even-handed rules that enable business leaders to plan ahead and work to improve. Worldwide, industry leaders have been looking to government to provide strong leadership on reducing greenhouse gas emissions — so that they can know with certainty how to best manage their emissions.

The Ontario government has strengthened pollution controls. The Ontario government has a five-point action plan to reduce industrial emissions of harmful air pollutants as part of its commitment to clean up Ontario's air. The plan includes an initiative to reduce emissions of two of the most significant smog and acid rain causing pollutants, nitrogen oxides (NO_x) and sulphur dioxide (SO₂). NO_x and SO₂ limits apply to facilities in seven large industrial sectors – base metal smelting, iron and steel, cement, petroleum refining, pulp and paper, glass and carbon black. This builds upon an earlier regulation that included emissions trading for the electricity sector. Emissions trading is one of many tools being used in Ontario to help reduce smog-causing emissions from each of these sectors in a flexible, least-cost way. Ontario's emission trading program covers NO_x and SO₂.

We're also piloting new, more accurate ways to measure smog and particulates — so we know better what we have to deal with to combat these pollution menaces. And we're strengthening penalties and enforcement.

What's next

Many jurisdictions have found that the most cost-effective way to reduce greenhouse gas emissions by industry is for a national government to create an effective carbon-trading system.

Under such a system, capped industries that emit carbon would be given allowances, which would permit them to emit a limited amount of CO₂. Only a certain number of allowances are available to these companies, and the total number of allowances represents a hard cap on all emissions produced. In addition, companies that are not capped could also receive credits for their emissions reductions, to sell into the market.

If a company pollutes beyond its limit, it must purchase allowances from other capped companies that have polluted less than their allowance limit or credits from uncapped companies. In effect, companies that exceed their emission caps would be fined for polluting, while companies that successfully reduce their emissions would be rewarded.

This would not only lead to an overall reduction of carbon emissions over time, it would provide real targets for industries to reach, reward innovation and protect

jobs by giving companies the flexibility to manage their own emissions in a way that works for them.

The McGuinty government is calling on the federal government to create a national carbon-trading system that would:

- Use 1990 emissions levels as the baseline, as the Kyoto Protocol did
- Insist on real reductions in greenhouse gases, not “intensity” targets that continue to let greenhouse gas emissions rise.

On March 30, 2007, Premier McGuinty signaled Ontario’s interest in potentially joining the **Regional Greenhouse Gas Initiative (RGGI)** and the **Western Regional Climate Action Initiative**, both state-level strategic partnerships whose mandates are to reduce greenhouse gases.

GO GREEN AND YOUR ONTARIO GOVERNMENT

Go Green is designed to help everyone in Ontario make green choices that help deal with climate change. But the government has to make green choices too. Ontario is one of North America's leaders in addressing climate change and we will continue to lead by example — to demonstrate to the public and to business leaders that sustainability is not only achievable, but economically desirable.

To ensure Ontario remains at the forefront, we'll take the following steps:

- We will further reduce the government's energy demands and commit to reducing consumption from the electricity grid by another 10 per cent by 2012.
- The Ontario government reduced its own electricity consumption by 12% between 2004/05 and 2006/07. Ontario has met this target through innovations like extensive energy retrofits in government-owned buildings, and helping the government's 62,000 employees conserve energy. Premier McGuinty also announced recently that this summer, as long as the weather is warm, it's *casual dress* for all government employees – no ties, no jackets, no stockings – to enable the air conditioning to be used less and to conserve.
- We will establish two new E85 fuelling stations for Ontario government E85 vehicles. We will work with municipalities and corporations and seek opportunities for their fleets to access our E85 fuelling stations.
- Effective now, the Ministry of the Environment Headquarters is purchasing all its electricity from 100 per cent renewable sources. The government will ask all parties to support an initiative to make all electricity purchases by the Ontario Legislature from 100 per cent renewable sources.
- The government has immediately stopped purchasing old, energy inefficient light bulbs, instead of waiting for the phase-out.
- Leadership in Energy and Environmental Design (LEED) will be the design standard for new government-owned construction, major renovations and alternative financing and procurement projects, where appropriate. Over the next 5 years, existing government owned and leased office buildings over 90,000 square feet will be assessed and building ratings established, using the Building Owners and Managers Association (BOMA) "Go Green Plus" program. In addition, the government will also be piloting a green roof project.

On June 2, 2007, the McGuinty government announced it is adopting an internationally-recognized **green design standard** for new government-owned office building construction and major renovation projects.

WORKING WITH OTHER GOVERNMENTS AND NON-GOVERNMENTAL ORGANIZATIONS

Climate change is a global issue that requires global solutions. While we know we can count on Ontarians' innovation and ingenuity to provide opportunities and solutions here at home, Ontario must continue working with other places in the world to share information, solutions and ideas that will benefit all of us.

Ontario has become an official observer as part of the Western Climate Initiative (WCI) to better explore joining with six western states and two Canadian provinces in establishing a regional greenhouse gas reduction goal and developing market-based strategies to achieve the goal.

The Premier has similarly begun discussions with governors of north-eastern US states to explore the possibility of Ontario joining their Regional Greenhouse Gas Initiative. This initiative places strict caps and long-term reductions on greenhouse gas emissions from the electricity sector.

In May, Ontario and California signed an agreement to co-ordinate policies on fuel standards. Ontario will require producers to reduce carbon emissions from transportation fuels by 10 per cent by 2020 – equivalent to removing 700,000 cars from the roads.

We have joined the Renewable Energy and Energy Efficiency Partnership – a worldwide organization sharing our own environmental and energy objectives.

Ontario's municipalities need help too—in many ways it is at the local level where action on climate change starts first and is most effective. To help, on June 13 the Government of Ontario announced the Municipal Eco Challenge Fund, a three-year, \$20 million grant and \$200 million loan program to help municipalities reduce greenhouse gas emissions.

We also must work to reduce energy consumption from less obvious sources. For example, providing drinking water services requires a considerable amount of electricity. The more we do to reduce leakage and improve this critical infrastructure, the more we protect our water sources and the more we reduce electricity demand. Achieving financially-sustainable water and wastewater services is a long-term goal and we continue to make critical investments and to improve how these services are provided. In 2006-07, the province, together with our federal partners, invested \$231 million to improve municipal water and wastewater infrastructure.

In addition to directives to the Ontario Power Authority that enable the authority to spend up to \$2 billion in conservation program investments by 2010, the province has doubled funding to support not-for-profit groups in the non-governmental sector that deliver innovative conservation initiatives. The \$1.5

million Community Conservation Initiatives program supports community-based projects across Ontario.

Ontario has also announced a new, four-year \$6.6 million Community Go Green Fund that will provide funding for not-for-profit groups at the local or grassroots level to educate the public about global warming and run programs in Ontario communities that reduce greenhouse gases.

EDUCATION

Educating Ontario's primary and secondary school students about the environment is a priority for the government. This spring, a Working Group headed by astronaut and scientist Dr. Roberta Bondar was asked to report to the Government of Ontario on how to enhance students' understanding of these issues through the provincial curriculum. The Bondar Working Group's report made 32 recommendations, including integrating environmental education into all subjects in all grades and working more closely with community partners and other government ministries to enhance environmental education. Education Minister Kathleen Wynne has accepted all 32 recommendations of the Working Group's report, calling it "a blueprint for action." She has asked Ministry staff to draft an official policy document, which will be ready this fall.

ADAPTING TO CLIMATE CHANGE

Scientists, most notably the IPCC, tell us that, while we can prevent the worst effects of global climate change if we act now, the volume of greenhouse gases already in the atmosphere means that Ontario will still experience some of these effects, no matter what.¹

Climate change will impact on public and private infrastructure, the natural environment, people and other species.

That's why we need to take steps to adapt to the changes that will occur.

An Expert Panel on Adaptation will be appointed to assess the vulnerability of Ontario to the effects of climate change and to make recommendations to address these threats. The panel will include members from a range of sectors and communities – environmental non-government organizations and experts in the field of climate change adaptation, engineers and health specialists, as well as representatives of Ontario's First Nations and northern communities.

¹ **National Roundtable on the Environment and the Economy, Climate Change Adaptation Policy** http://www.nrtee-trnee.ca/eng/programs/Current_Programs/Adaptation/adaptation_e.htm

As a key species that is already under pressure, research will be enhanced on the health and sustainability of Ontario's polar bear population. Experts will review whether this species should be listed under Ontario's newly strengthened Endangered Species Act.

The Ontario polar bear population is the most southerly population of polar bears in the world. In recent years, sea ice in southern Hudson and James Bay has melted earlier and frozen later so polar bears are now spending more time on shore where food is very limited. A recent study of Ontario polar bears documented a decrease of up to 15 per cent in the body weight and size when compared to bears captured 20 years ago. Research scientists believe this is likely caused by the longer time the bears are spending on shore.

GO GREEN – MORE WAYS YOU CAN TAKE ACTION, NOW

A global problem like climate change is a global responsibility. And sometimes, the size of the challenge can seem overwhelming.

It's important to remember that even when you make simple changes, you can make a big difference for the climate we all share.

Change doesn't have to be big — or expensive, or complicated — to make a big difference.

In fact, it's easy to reduce greenhouse gases — and save money at the same time.

Below are some helpful tips and links to get you started.

At Home

- Look for the Energy Star Label. Products with this internationally recognized symbol use 20 – 40 per cent less energy than standard products. For example, new refrigerators use 40 per cent less energy than models made 10 years ago. A new fridge could save enough energy to light an average house for three months.
 - [Natural Resources Canada: Appliances - EnerGuide Ratings](#)
 - [eartheasy: Energy-Efficient Appliances](#)
 - [Natural Resources Canada: The International Energy Star Symbol](#)
- Let the sun shine in. During winter, keep your blinds, drapes and shutters open to allow daylight in. Sunlight creates passive solar heating, even in the winter. This can provide a couple of degrees of extra heat to a room.
 - [Passive Solar Energy](#)
- Choose a laptop over a desktop. A desktop computer uses five times more energy. Make sure you have your computer's power management function turned on; screen-savers don't save energy.
 - [Energy Star: Desktop vs. Laptop](#)
- Switch to a water-saving showerhead. They use half the water as a standard head. 5-7 litres/min compared to 10-18 litres/min for a standard showerhead.
 - [AM Conservation Group Inc.](#)
- Switch to a renewable energy provider. For more information on licensed retailers, visit the Ontario Energy Board's website at: www.oeb.gov.on.ca
- When you are in the market for a new home, choose one that is close to transit and offers opportunities for walking and cycling – you will save money and the environment.

At Work

- Reduce paper use around the office. Pulp and papermaking is the fifth largest industrial consumer of energy in the world. Print and photocopy using both sides of the paper. A high-speed copier set to run double-sided can save upwards of \$60 per month. Not to mention reducing paper use means more trees left to remove excess CO₂ from the air.
 - [The Environment At MIT](#)
- Turn off printers, computers and photocopiers when leaving your workplace to reduce energy wastage.
- Choose energy efficient office equipment.
- Use video-conferencing over business trips to minimize your staff's environmental impact through air travel.
 - [David Suzuki Foundation: Air Travel and Climate Change](#)
- Find alternative methods of transportation to the office and encourage your colleagues to do the same.
 - [Go Green Ontario](#)

Your vehicle

- Reduce how much you drive. Every 3.7 litres burned by your car releases 10 kg of greenhouse emissions.
 - [David Suzuki Foundation: Transportation Solutions](#)
- Try carpooling. Just one more passenger per car would mean over 83 million litres of gas saved each day. In the Greater Toronto Area (GTA), there are HOV lanes now on highways 403 and 404, under construction on the QEW through Burlington and Oakville, and many more HOV lanes planned for the GTA and Ottawa.
 - [CarpoolTool.com: Canada's Free Carpool Service](#)
- Reduce idling, especially near schools, day cares, parks, and hospitals.
- Keep your car well maintained and tires inflated properly to reduce emissions and increase your fuel efficiency.
- If considering the purchase of a new or used vehicle, check the fuel efficiency of the various models.
- Observe speed limits and drive wisely to conserve fuel.

For further information and other good tips visit: [Natural Resources Canada: Tips on Saving Energy in Your Home](#)

Active Transportation

- Reduce the amount you drive.
- Use transit wherever and whenever possible.
- Be active – walk or ride your bicycle to work, school, shops, or when visiting friends.

CONCLUSION

There's no doubt that global climate change is happening, right now.

The science is clear, the debate is over and we cannot afford to wait another decade or more to take action.

We have a responsibility to take action. It's also an opportunity.

And here in Ontario, building opportunity is what we do best.

We have already built a strong province — a place where young people get the education they need to succeed, families get the quality health care they deserve and businesses and industries thrive in an economic environment that is competitive and innovative, strengthened by a workforce that is second to none.

Our responsibility is not just to address climate change. It's to ensure a prosperous Ontario economy, with well-paying, meaningful jobs and opportunity. Working together to help Ontario Go Green, we can do both.

And we will.

To develop Go Green, we took some of the best ideas and practices on the environment and the economy from around the world and looked at how they can be applied to Ontario, if we work together. When it comes to building a better environment and economy, there's no "you" or "them" — it's all of us, together.

This is only a start. It's the newest phase of solutions that will take generations to develop and complete. We know Ontario will do this. And we're confident that they'll be able to look back on the start we are making now and be thankful that we had the vision and foresight to move forward.

Now it's time for all of us in Ontario to do what we do best — to use our talent and creativity to tackle the challenge of the 21st century — making our province the greenest place on Earth.

Go Green.

APPENDIX I: SUMMARY OF RESULTS ACHIEVED TO DATE

It's no secret that climate change has attracted increasing attention from policymakers and the public alike recently. This is natural, as the evidence of the challenge mounts and our scientific understanding of what's needed grows.

But the Government of Ontario has been taking climate change seriously for a long time.

Since coming to office in 2003, the McGuinty government has been doing its part to address climate change while building a stronger economy for Ontarians.

1. Leading by example

The McGuinty government is paving the way for innovative new ideas that will help reduce emissions. It has been working hard to encourage innovators to come together to develop solutions, while taking decisive steps to reduce energy consumption and promote efficiency across government.

- Premier McGuinty created an annual Shared Air Summit in June 2005. The summit brings together environmental, health, government and business leaders from around the world to develop ways to reduce air pollution through innovation. At the most recent summit on June 18, 2007 the Premier announced Ontario's ambitious but real targets for reducing greenhouse gas emissions.
- Ontario is committed to taking strong and immediate action on climate change and transboundary air pollution, and recognizes that inter-jurisdictional cooperation is key to addressing these issues. The solution to this shared problem lies in our ability to work collectively and aggressively across borders, and as partners with neighbouring jurisdictions in the cause for cleaner air.
- Since 2006, Ontario has signed a number of agreements with other provinces to address climate change and transboundary air pollution, including the provinces of New Brunswick and Quebec, as well as the State of California. Ontario has also signed Letters of Intent with American jurisdictions and regional organizations, which include the State of Michigan and Northeast States for Coordinated Air Use Management (NESCAUM).
- Ontario will continue to pursue agreements with other jurisdictions to work with our neighbours to clean our air and take firm action on climate change.
- In April 2007, the Province of Ontario announced its intentions to ban inefficient lighting in common applications by 2012. The government also announced an immediate ban on the purchase of incandescent bulbs for Ontario government facilities on April 18, 2007. The Province's office supplies Vendor of Record (VOR) has begun to offer an extended range of compact fluorescent, energy efficient fixtures and other efficient bulbs for desktop use.

The purchase of incandescent lighting through the Province's VOR is no longer permitted. Over the next 5 years, existing government owned and leased office buildings will be assessed to identify opportunities to phase inefficient light bulbs out completely by 2012.

- The Ontario Public Service has made more energy-efficient procurement choices (e.g. favouring LCD monitors and laptops), and adopted energy- and cost-saving usage policies (e.g. powering down computers at night and on weekends and using power-saving settings through the day). We are paying more attention to disposal and recycling to cut down on heavy metals found in e-waste.

II. Creating cleaner sources of power

In 2005, a study found a relationship between dirty emissions from coal-fired stations and up to 668 premature deaths, 928 hospital admissions and 1,100 emergency room visits in Ontario. In addition, in 2006, Ontario's coal plants produced 25 million tonnes of greenhouse gases.

Ontarians know we must do more to clean our air and to combat climate change.

That's why the McGuinty government is shifting Ontario to cleaner sources of energy.

- Ontario is the only place in the world that is committed to completely eliminating coal-fired generation. From 2003 to 2006, Ontario has cut greenhouse gas emissions from its coal plants by nearly one third.
- Ontario's Renewable Energy Standard Offer Program makes it easier and more cost-effective for businesses and entrepreneurs to sell renewable power to the grid by setting a fixed price for small generation projects that use renewable energy.

Over the next 10 years, this will add up to 1,000 megawatts of renewable power to Ontario's electricity system.

- We're doubling the target for renewable energy sources to 15,700 MW by 2025.

III. Building a culture of conservation

By making smart choices that conserve energy, we can all contribute to an Ontario with more jobs in an innovative economy, stronger communities and a healthier environment with cleaner air to breathe. The more we reduce our demand for electricity, the less we'll need to spend increasing supply by building new sources of power.

That's why, in 2004, the McGuinty government set a target helping Ontarians reduce their energy consumption, creating a culture of conservation that would make Ontario a North American leader in energy efficiency.

Ontario has set targets that will save Ontarians 6,300 MW of electricity through conservation by 2025. Of this, more than 40 per cent will be saved by 2010, including a 1,350 MW or a 5 per cent reduction in peak electricity demand by the end of 2007.

We are well on our way to reducing projected province-wide peak demand by 5% by the end of 2007. In fact, according to the Chief Energy Conservation Officer, Ontario was already at 80% of target in 2006.

The government established the Conservation Bureau to help build a culture of conservation across the province.

Bill 21, the Energy Conservation Responsibility Act, received Royal Assent in March 2006. This legislation allows the government to require, for example, public and broader public sector organizations to prepare energy conservation plans and engage in regular reporting on progress. This legislation also establishes the framework for the installation of smart meters in Ontario homes and small businesses. Smart metering provides consumers with information to better manage their electricity use and costs.

IV. Investing in cleaner transportation and fuels

The McGuinty government is also helping Ontarians reduce greenhouse gas emissions by increasing the use of ethanol in gasoline at the pumps — and providing incentives for Ontarians to switch to greener vehicles.

- People who buy a qualifying hybrid vehicle receive a PST rebate of up to \$2,000.
- The McGuinty government is investing heavily in public transit — \$4.9 billion since 2003.
- Through the gas-tax funding program, Ontario is delivering more than \$1.6 billion by 2010 to municipalities across the province to improve their public transit systems and increase ridership.
- The \$17.5 billion Move Ontario 2020 plan provides a vision for the build-out of 52 rapid transit projects in the GTA and Hamilton - the largest investment of its kind in Canadian history.
- The GTTA is working on the development of an implementation plan and will report back in 2008.
- We now require an annual average of five per cent ethanol in gasoline, which will reduce 800,000 tonnes of greenhouse gas emissions annually .

- Our investments in highways now include High Occupancy Vehicle (HOV) lanes, recycled pavements, more energy efficient lighting, and information technology solutions to keep the highway system moving efficiently.

V. Protecting our green space and building greener cities

We know that not only must we reduce greenhouse emissions; we also need to protect our forests and farmland.

These are precious resources that help to capture and store climate-altering carbon dioxide, and filter emissions of air pollutants.

That's why the McGuinty government has gone farther than any government in Ontario's history to protect Ontario's green space and ensure more sustainable urban communities.

The Greenbelt Act, 2005 and the Greenbelt Plan protect approximately 1.8 million acres of environmentally sensitive and agricultural land — an area the size of Prince Edward Island — from urban development and sprawl.

The Places to Grow Act, 2005, sets clear targets and performance standards for more environmentally sustainable, transit-friendly, and vibrant urban communities and towns.

The new Provincial Policy Statement, 2005 has provided municipalities and other decision-makers with enhanced and clear policy direction to use land more efficiently and to protect our precious resources such as natural areas and good farmland for future generations.

Conservation can be as easy as planting a tree. Plant leafy (deciduous) trees on the sunny side of your house. During the summer they provide shade, and in the winter they will shed their leaves to let the warming sunshine through. Pine or fir trees on the north side provide an energy-saving windbreak.

Ontario Conserves

The reformed Planning Act has provided municipalities with new tools they can use to grow and develop more sustainably and be more compact.

VI. Partnerships with business and industry

Ontario's innovative industries and businesses are working hard to do their part to reduce emissions and improve efficiency while remaining competitive with the rest of the world.

To ensure that Ontario continues to grow as it goes green, the McGuinty government has been working with business and industry to ensure new technologies and processes are implemented to reduce emissions in a way that is making Ontario's economy even stronger.

In 2005, the government introduced tough new standards for 40 pollutants to protect Ontario communities from the impacts of air pollution, the largest update in over 25 years. The government is also reviewing and determining standards for 15 new toxins.

The government also created the Industry Emission Reduction Plan, which creates new emissions caps for industrial pollution sources in Ontario.

In January 2005, the government signed the Canada-Steel Sector memorandum of understanding, agreeing to cooperate with government and industry plans to reduce greenhouse gas emissions.

VII. Investing in Research and Innovation

Ontarians know that new technologies are a valuable and necessary tool to deal with air pollution and climate change — and that the places that develop these new technologies will be the first to benefit and profit from them.

Through the new Ministry of Research and Innovation, led by Premier McGuinty, the government is investing \$290 million in climate change research and innovation projects all across Ontario.²

Ontario's has established a new Centre of Excellence for Energy to further the government's innovation agenda by encouraging research and development into leading edge and emerging energy sources and technology.

Ontario has a fuel cell innovation program to advance the commercialization of fuel cells and related technologies with an emphasis on moving innovative products to the manufacturing state, leading to cutting-edge jobs and investment.

Turning your water heater down from factory settings to 49° C. could save energy and reduce greenhouse gases by over 100 kilograms a year

Pembina Institute

VIII. Investing in public awareness

In towns and cities all over Ontario, people are taking action on climate change.

Whether it is by saving energy in the home, taking transit or buying energy-saving technologies in their workplace, Ontarians are eager to do their part.

Empowering the public and ensuring that all Ontarians are well informed about climate change, helps us all make more informed and positive decisions in our personal, family and work lives.

That's why the McGuinty government is working hard to increase awareness about climate change.

² For a list of climate change-related projects funded through the Ministry of Research and Innovation, see their website at <http://www.mri.gov.on.ca/english/default.asp>

The government supports groups that promote individual and community action on climate change.

The Ministry of the Environment's web site (www.ene.gov.on.ca) provides information about Ontario's air pollution and climate change initiatives, fostering awareness of climate change and other environmental issues.

The Ministry of Energy (www.energy.gov.on.ca) and Conservation Bureau (www.conservationbureau.on.ca) websites provide information to consumers on how to conserve energy, which helps to reduce costs and protect the environment.

IX. Adapting to climate change

Even if all greenhouse gas emissions stopped tomorrow, the gases that cause climate change would remain in the air for years to come. This means that climate change may get worse before it gets better.

The new realities imposed by climate change — such as heat stress and poor air quality — mean that Ontarians must find new ways to adapt to changing climate conditions.

Working with other agencies, organizations, and municipalities, the McGuinty government is working hard to ensure that communities around the province successfully manage the impacts of climate change.

The McGuinty government has created an award-winning series of interactive posters, workbooks, calendars, and other materials focused on understanding, mitigating, and adapting to climate change.

Upgrading your old gas furnace to a high-efficiency model will reduce your carbon output by 1.5 tonnes and save you over \$300 per year.

Taken together, all of the measures listed above have had a real, positive effect on Ontario's greenhouse gas emissions.

Since 2003, greenhouse gas emissions across Ontario have declined by one per cent, or 2 million tonnes. So, every year, we're producing fewer emissions than we did in 2003.

Realizing that Ontario needs to prepare for how to cope with climate change, the Ontario government has established an Expert Panel on Climate Change Adaptation that will provide the province with adaptation strategies to address the impacts of climate change in our communities and our ecosystems.

Dr. Ian Burton and Dr. David Pearson, both accomplished and respected professors of science and leaders in their respective fields, have been appointed as co-chairs of Ontario's new Expert Panel on Climate Change Adaptation.

But there is more to do.

We need to coordinate our efforts if we hope to do our part to fully address this problem — and realize benefits from developing solutions.

That's why the McGuinty government has developed a comprehensive plan that, when implemented, will make Ontario a world leader in the technologies, techniques and talents that will power our global economy tomorrow — and into the future.