Aboriginal acknowledgement

The Victorian Government proudly acknowledges Victoria’s Aboriginal community and their rich culture and pays respect to their Elders past and present. We acknowledge Aboriginal people as Australia’s first peoples and as the Traditional Owners and custodians of the land and water on which we rely. We recognise and value the ongoing contribution of Aboriginal people and communities to Victorian life and how this enriches us. We embrace the spirit of reconciliation, working towards the equality of outcomes and ensuring an equal voice.

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The Premier of Victoria
The Minister for Energy, Environment and Climate Change

The Andrews Labor Government is laying the foundations for effective and long-lasting climate change action. This will safeguard our state’s internationally recognised liveability and our economy.

Victoria’s target of net zero greenhouse gas emissions by 2050, combined with a series of interim targets, will help guide our transition to a healthy, prosperous, net zero emissions economy. A well-managed transition will ensure a secure, affordable and sustainable energy supply and create jobs in the industries of the future. Achieving these targets will also mean Victoria is doing its fair share to keep the rise in global temperatures to well below 2 degrees Celsius and as close to 1.5 degrees Celsius as possible.

Victoria’s Climate Change Framework sets out four pillars for achieving net zero emissions by 2050. We need to: increase energy efficiency and productivity; move to a clean electricity supply; electrify our economy and switch to clean fuels; and reduce our non-energy emissions and increase carbon storage. Victoria’s Renewable Energy Targets of 25 per cent by 2020 and 40 per cent by 2025 will help us join the global shift to decarbonised economies. This is important because the electricity sector alone emits about half of Victoria’s overall emissions.

As the Government, we are playing our part and leading by example. Victorian Government departments will reduce their reported emissions by 30 per cent below 2015 levels by 2020.

Tackling climate change is everyone’s responsibility, and that is where TAKE2 comes in. TAKE2 – Victoria’s Climate Change Pledge is about collective climate change action.

Through the TAKE2 website, individuals and families are pledging actions alongside businesses, local government, community sector organisations, educational organisations and the State Government. It also showcases the great work being done across Victoria. We would like to congratulate everyone who has pledged so far and encourage all Victorians to help keep Victoria a thriving and resilient state.

The Hon. Daniel Andrews MP
Premier of Victoria

The Hon. Lily D’Ambrosio MP
Minister for Energy, Environment and Climate Change
Minister for Suburban Development
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Acting now on climate change

Purpose

On June 9 2016, the Premier and Minister for Energy, Environment and Climate Change announced TAKE2 - Victoria’s climate change pledge program.

This document provides an overview of the TAKE2 pledges made by the Government and voluntary pledges made by local governments, businesses, community organisations, educational organisations, and individuals and families.

Victorian Government action on climate change

Climate change is one of the most critical issues facing Victoria and the world. As the Government, we are laying the foundations for far reaching action on climate change in our state. This will safeguard Victoria’s economic future. It will deliver jobs and investment in goods, services and low emissions technologies, which local and global consumers increasingly demand.

Victoria’s Climate Change Framework sets out:

- our vision for Victoria in 2050 and our approach to achieving it
- the steps the Government is taking in the period to 2020 to commence the transition
- how the proposed Climate Change Act will drive action
- the transition required across the economy – and some of the challenges to be addressed – to 2050.

The diagram shows we have been getting on with the job of reducing emissions in Victoria. It shows our important first steps. We are starting the transition while ensuring energy affordability and reliability.

- Energy Efficiency and Productivity Statement
- Renewable Energy Roadmap
- $2 million funding for Climate Change Action Package
- Independent review of the Climate Change Act 2010
- Strengthened the Victorian Energy Efficiency Target scheme

- Set Victoria’s 2050 target of net zero emissions
- Launch TAKE2 - Victoria’s climate change pledge
- Renewable energy targets of 25% by 2020 and 40% by 2025
- New Energy Technologies Sector Strategy
- Launch $20 million New Energy Jobs Fund
- Introduced Climate Change Bill to Victorian parliament
- $5.56 million for the Virtual Centre for Climate Change Innovation
- $266 million transition package for the Latrobe Valley
- $21 million for building resilience along our coastline
- Climate-Ready Victoria. Information on how climate change will affect Victoria and how we can adapt

- Energy Efficiency and Productivity Statement
- Renewable Energy Roadmap
- $2 million funding for Climate Change Action Package
- Independent review of the Climate Change Act 2010
- Strengthened the Victorian Energy Efficiency Target scheme

- Set Victoria’s 2020 target of 15-20% below 2005 levels
- Climate Change Framework to 2050
- Joined the Under2 MOU
- Seek independent advice on Victoria’s 2021-25 and 2026-30 interim targets
- Victoria’s Climate Change Adaptation Plan 2017-2020
- State-wide vulnerability assessment
TAKE2 – Acting now

As the Victorian Government, we know that it is time to get real about climate change. The world is moving to a clean economy and we are positioning Victoria to take advantage of the opportunities that result. In June 2016 we announced a state target of net zero greenhouse gas emissions by 2050. To make an immediate start, we have also set a 2020 target to reduce emissions by 15-20 per cent below 2005 levels. The TAKE2 program will help Victoria to meet these targets.

TAKE2 is a pledge and review process similar to that used under the Paris Agreement. It is one of the most comprehensive climate change pledging programs in the world and the first state government-led climate change pledging program in Australia.

TAKE2 is a critical innovation that puts Victoria at the leading edge of action, nationally and internationally. It complements other actions, including the development of strong legislation, regulatory standards and funding programs. The flexibility of TAKE2 means that it will continue to support and complement future action without duplication. For example, if a carbon price or other strong action were introduced at the national level, TAKE2 would remain an important tool for guiding action in Victoria.

Everyone in Victoria can join in and make a pledge through TAKE2. If you care about our future world, you can pledge your actions at www.take2.vic.gov.au

What is TAKE2?

Since its launch, TAKE2 has focused on reducing emissions and building capacity between now and 2020. Pledges are public commitments to reduce emissions. The TAKE2 pledges are:

1. **Victorian Government operational pledge**
   All Victorian Government departments have committed to specific actions to reduce the greenhouse gas emissions from their operations – buildings, motor vehicles and procurement of goods and services.

2. **Victorian Government sector pledges**
   The Victorian Government has introduced policies and programs to drive emissions reductions across key sectors of the economy. We will continue to introduce new policies and programs to support action across the economy.

3. **Voluntary pledges**
   Local governments, businesses, community organisations, educational organisations and individuals and families can pledge to specific emissions reduction actions. Anyone can make a pledge through the TAKE2 website.

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1. The Paris Agreement is an international agreement to keep the rise in global temperatures to well below 2 degrees Celsius, to work towards limiting the rise to 1.5 degrees Celsius, and to achieve global net zero emissions greenhouse gas emissions in the second half of the century. In the lead up to the Agreement, countries pledged actions to reduce their emissions. The Agreement requires that these pledges be periodically reviewed and refreshed to put the world on a path to net zero emissions.
How TAKE2 works

It’s straightforward to make a pledge.

Next steps

A lot has been done, but we need to do more. We are serious about climate change action.

We introduced the Climate Change Bill into Parliament in 2016 - the Bill includes a process for strengthening TAKE2. It will establish in law how we will set five-yearly interim targets and will formalise pledging to meet these targets all the way to 2050. The Victorian Government will be required to make pledges. Local government will be able to participate in the legislated process and have their actions reported alongside those of the Victorian Government. Business and the community can continue to make voluntary pledges.

TAKE2 – pledges to 2020

The pledges below describe the actions committed to date, but there is more to come – we will continue to pledge actions. People and organisations will also continue to pledge through the TAKE2 website between now and 2020.

Current pledges are presented in two ways in the following pages:

Mapped to Victoria’s Climate Change Framework’s emissions reduction pillars: increasing energy efficiency and productivity, moving to a clean electricity supply, electrifying our economy and switching to clean fuels, and reducing non-energy emissions and increasing carbon storage.

More detailed summaries of each pledge category: Victorian Government operational pledges, Government sector pledges, and voluntary pledges.

We can track our progress

Sharing the results of our pledges, we can all learn from one another and continue to improve our actions. We will continue to improve the TAKE2 website www.take2.vic.gov.au which shows what is being done across our state.
1. Victorian Government operational pledge – reducing emissions from the whole of government

This section outlines Victorian Government action to reduce the greenhouse gas emissions from our operations – use of buildings, motor vehicles and procurement of goods and services.

The Victorian Government will reduce emissions from the operations of government departments by 30 per cent below 2015 levels by 2020. All Victorian Government departments and many Victorian government statutory agencies have pledged actions to reduce their emissions.

- **Increase our energy efficiency and productivity**
  - Initiatives to improve the energy efficiency of government buildings and infrastructure
  - Procurement of more energy-efficient appliances by departments and agencies
  - Cogeneration initiatives to produce electricity and heat for government buildings
  - Transport efficiency measures such as using more fuel efficient cars for the government fleet

- **Move to a clean electricity supply**
  - Installation of solar panels on government buildings
  - Government purchases of greenpower or renewable energy certificates
  - Support for ResourceSmart Schools

- **Electrify our economy and switch to clean fuels**
  - Government procurement of hybrid vehicles
  - Waste reduction measures in government departments and agencies to avoid methane emissions from landfill
  - Government procurement measures to reduce non-energy emissions from purchasing goods and services

- **Reduce non-energy emissions and increase carbon storage**
  - Procurement of more energy-efficient appliances by departments and agencies
  - Cogeneration initiatives to produce electricity and heat for government buildings
  - Transport efficiency measures such as using more fuel efficient cars for the government fleet

The Government will strengthen its operational pledge over time. To help meet 2020 target for the Government’s operational emissions and lay the foundations for greater emissions reductions in future we will:

- conduct an audit of current Government emissions to identify emissions reduction opportunities
- establish a baseline for monitoring and reporting on emissions reduction across all government operations
- develop a robust methodology for decision-making consistent with the objectives and principles contained in the proposed Climate Change Act.
The Greener Government Buildings Program improves the energy efficiency of existing government buildings, reducing operating costs and greenhouse gas emissions. Building improvements typically consist of upgrades to lighting, heating and cooling systems, building automation, on-site generation (e.g. solar power) and water saving measures.

It will reduce greenhouse gas emissions by 25,000 tonnes each year and save up to $100 million in the longer term by slashing energy use in government buildings.

Money saved on energy bills will repay the initial investment in just five years, and will continue to save energy for years to come. This not only brings environmental benefits, but also strengthens the State’s finances.

We have committed $33 million to the program for 2016-18.

**Increase energy efficiency and productivity**

- The Greener Government Buildings program will deliver 25,000 tonnes of emissions reductions per year (see Box 1) through energy efficiency measures.
- VicRoads’ state-wide lighting retrofit program will save 28,000 tonnes of emissions by 2020* by replacing existing sodium lighting with more efficient LED technology.
- Museum Victoria’s energy management program funded through the Efficient Government Buildings Program will deliver estimated annual cost savings of $1.6 million and reduce annual greenhouse gas emissions by nearly 10,000 tonnes, a 35 per cent reduction compared to expected emissions without the program.
- Zoos Victoria and Sustainability Victoria are carbon neutral with programs in place to reduce their emissions where possible and offset any residual emissions.
- Support for the ResourceSmart Schools initiative helps schools embed sustainability in everything they do. Schools take action to minimise waste, save energy and water, promote biodiversity and reduce greenhouse gas emissions.
- Cogeneration in Victorian hospitals improves energy efficiency by combining electricity generation and heating and cooling.
- The Government is amending its Standard Motor Vehicle Policy to require the purchase of more fuel efficient four-cylinder vehicles and is looking at other procurement measures to reduce the emissions from its purchases of goods and services.
- The Victorian Government Value Creation and Capture Framework will provide best practice guidance for departments and agencies to enhance value creation through capital infrastructure projects, development of public land and precinct projects, and to consider value capture as a project funding source. It will require projects to set objectives and identify opportunities for optimising the economic, social and environmental benefits (including those related to climate change) delivered by Government investments.

*All quantified emissions reductions in this document referred to as ‘by 2020’ are cumulative between June 2016 and December 2020.
Our operational pledge – what we’re doing now (continued)

**Move to a clean electricity supply**
- Department of Environment, Land Water and Planning (DELWP) will install solar photovoltaic panels at nine of its office sites, with estimated emissions reductions of around 1,200 tonnes by 2020. DELWP will also purchase 25 per cent renewable energy in 2017.
- Solar installations on hospitals and office buildings will reduce emissions by at least 6,000 tonnes by 2020.
- The Department of Justice and Regulation will install a total of 1,208kW of solar PV at a number of prisons across the state. This will reduce emissions by around 8,300 tonnes by 2020.
- Estimates suggest the water sector is responsible for approximately one quarter of Victorian Government emissions. Water corporations are developing pathways to net zero emissions (see Box 2).

**Electrify our economy and switch to clean fuels**
- The Department of Justice and Regulation’s passenger vehicle fleet is 65 per cent hybrid vehicles, with policy to procure low emissions vehicles where possible.

**Reduce non-energy emissions**
- Waste reduction measures that avoid methane emissions from landfill. These include a Department of Health and Human Services program to install on-site recycling of food waste at a number of Victorian public hospitals, and to provide guidance on organic waste recycling for health services.

**Building capacity and knowledge**
- Issuing Green Bonds to finance new and existing projects that offer climate and environmental benefits (see Box 3).
- Department of Health and Human Services introduced a web-based system for collecting data on use of energy and other utilities.

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**Box 2: Victoria Water Corporations net zero emissions pathways**

The water sector is responsible for the largest proportion of Government emissions, contributing almost one quarter of the emissions from Government activities.

DELWP is working with the water sector to develop appropriate timelines and pathways to achieve net zero emissions, consider price impacts for customers and reduce emissions cost effectively. As part of this work:

- Water corporations will pledge a pathway for net zero emissions; this will be adopted in the Statement of Obligations by July 2017.
- The four metropolitan water corporations will examine an early path to achieve net zero emissions by 2030.
- The water sector will adopt renewable targets of at least 25 per cent by 2020 and 40 per cent by 2025.

DELWP, water corporations, Catchment Management Authorities and regulatory bodies will develop principles to guide emissions reductions, evaluate emission reduction activities and agree on carbon accounting methodologies.

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**Box 3: Victorian Government Green Bonds**

On 19 July 2016 the Government issued $300 million worth of Green Bonds. Green Bonds are used to finance new and existing projects that offer climate and environmental benefits.

The Victorian Government is the first government to issue Green Bonds in Australia, and the first state or national government in the world to issue bonds that have been certified by the independent Climate Bonds Initiative.

Issuing Green Bonds sends a strong message to investment markets both nationally and internationally. It has the potential to increase the use of certified Green Bonds with flow on impacts such as increasing the scale of investments in projects and assets that reduce greenhouse gas emissions.
2. Victorian Government sector pledges – driving emissions reductions across sectors

This section outlines Victorian Government policies and programs to drive emissions reductions across key sectors of the economy.

- **New Energy Jobs Fund**
  - Strengthened the Victorian Energy Efficiency Target scheme
  - High Capacity Metro Trains
  - Melbourne Metro Rail Authority Sustainability Target
  - Remove 50 metropolitan railway crossings (these will reduce road congestion)
  - Agriculture Infrastructure and Jobs Fund

- **Move to a clean electricity supply**
  - Renewable energy targets of 25% by 2020 and 40% by 2025
  - Community Renewables Solar Grants
  - Renewable Energy Purchasing Initiative
  - Marine energy atlas, marine energy proposal guidelines and wave energy demonstration pilot

- **Electrify our economy and switch to clean fuels**
  - Waste to Energy Renewable Energy Action Plan
  - Hybrid Vehicle Registration Discount
  - Victorian Cycling Strategy 2016 – 2026
  - Solar Trams

- **Reduce non-energy emissions and increase carbon storage**
  - Agriculture research and development
  - Waste and Resource Recovery Plans
  - Develop market for organic products e.g. compost
  - Education to reduce waste and improve resource recovery
  - Protect and rehabilitate transport corridors and waterways
  - Enable joint projects on public land to increase carbon storage
  - Research and analysis on the carbon benefits of revegetation and biodiversity projects including in marine ecosystems (‘blue carbon’).

**Increase our energy efficiency and productivity**

**Transport**

**Agriculture**

**Waste**

**Land use and natural environment**
Energy

Energy use, including electricity and gas for heating, cooking and for industry, is Victoria’s biggest source of greenhouse gas emissions. The electricity sector alone emits about half of Victoria’s overall emissions. Action to reduce emissions from energy use has economic benefits: reducing energy use saves money, while increasing renewable energy and shifting to clean energy technologies drives investment and creates new jobs.

We have a number of major initiatives to drive reductions in this sector and support transition to a clean energy system while ensuring affordability and security.

Victoria has set Renewable Energy Targets of 25 per cent by 2020 and 40 per cent by 2025. These targets, and Victoria’s policy and programs to meet them, will increase renewable energy investment in Victoria, creating thousands of new jobs and moving the State towards a sustainable energy future.

• A competitive auction scheme to meet the targets will increase renewable energy generation in the State and reduce our emissions by up to an estimated 2.2 million tCO₂e by 2020.

• The Government is using its purchasing power to build renewable energy in regional Victoria. This will attract around $200 million in investment for two new windfarms with a total generation capacity of around 100 megawatts of clean energy. These projects are expected to reduce emissions in Victoria by 0.25 million tCO₂e by 2020.

• To facilitate growth of renewable energy, the Victorian Government has appointed a Renewable Energy Advocate.

• The Community Renewables Solar Grants Initiative will provide funding for over 40 lifesaving clubs across Victoria to install solar panels, generate their own renewable power and reduce emissions by around 1,400 tCO₂e by 2020.

The Victorian Government is supporting businesses and households to improve their energy efficiency and productivity by investing over the next four years:

• $10 million to provide energy efficiency upgrades to 1,500 public housing properties and 1,000 households who are most in need due to chronic health conditions.

• $5.4 million to expand the Victorian Energy Efficiency Target (VEET) scheme to provide incentives for more Victorians to take up energy efficiency measures.

• $3 million to roll-out the Residential Efficiency Scorecard, providing practical information on how to improve the energy performance of our homes.

• $3 million for grants to assist small and medium businesses to identify and implement energy efficiency opportunities.

These measures, including the VEET scheme, will reduce energy consumption and are projected to reduce emissions by more than 11 million tCO₂e by 2020. It will also save Victorians money. Families who participate in the VEET scheme can save up to $150 per annum on their energy bill.
The New Energy Technologies Sector Strategy outlines the Government’s priorities to ensure Victoria is ready for the transformation of the energy sector and is well placed to capture the economic and environmental benefits on offer.

- The $20 million New Energy Jobs Fund supports the Strategy by funding Victorian new energy projects that create long-term sustainable jobs, increase the uptake of renewable energy generation, drive innovation and reduce emissions. Some projects will also reduce emissions from waste and from transport.

We are also taking a range of actions to make the most of potential opportunities and new technologies. This will create new jobs and ensure Victoria’s economy benefits from the opportunities in low carbon industries.

- Actions to implement Plan Melbourne will improve energy efficiency, reduce energy demand from buildings and encourage renewable energy during the master planning of new communities.

- The Government’s development of a marine energy atlas will identify coastal areas suitable for marine energy. Integrated guidelines for assessing marine energy proposals will help progress the use of wave, tidal and offshore wind energy, along with a wave energy demonstration pilot at Port Fairy.

- Carbon Project Development Guidelines will help developers prepare proposals for tidal or wave energy in marine areas under state control.

- Victoria will continue working with the Commonwealth to develop strong policy to decarbonise the electricity sector, tighten vehicle and fuel standards and strengthen residential and commercial building standards.

- The Government will spend $266 million creating local jobs and growing local businesses in the Latrobe Valley to support communities during the transition to clean energy, this includes $10 million through the Economic Facilitation Fund.

- The Government will explore research and development in carbon capture and storage.

- Increased productivity and employment.
- Reduced energy costs for consumers.
- Improved health and resilience to climate change.
- Renewable energy targets will deliver up to 5,400MW of renewable energy projects. This would create $9 billion in new capital expenditure, contribute $2.5 billion in direct economic activity, and an additional 11,000 Victorian jobs.
Transport

Transport is Victoria’s second largest contributor to greenhouse gas emissions, accounting for 18 per cent of our total emissions in 2014. The majority of these emissions come from cars and commercial vehicles on our roads. Population growth will add to the growing pressure our transportation system faces.

We are planning for our future needs while minimising greenhouse gas emissions. We will focus on improving the efficiency of our transport system and help Victorians switch to cleaner modes of transport. We will enable Victoria to benefit from newer and cleaner technologies. We will deliver the right transport system as part of a liveable, prosperous and low carbon Victoria.

**CO-BENEFITS**

- Improved quality of life and reduced pressure on living costs.
- Improved fuel security from a reduced dependency on imported petrol and diesel.
- Enhanced biodiversity.
- Improved wellbeing from reduced congestion, less air pollution and fewer accidents at level crossings.
- More physical activity, less noise-related stress and less air pollution will improve public health and reduce pressure on our health system.

**ACTIONS**

- Precinct planning will encourage a shift to walking, cycling and public transport use in new communities.
- High Capacity Metro Trains will encourage people to shift from their car to public transport.
- The Melbourne Metro Rail Authority Sustainability Target will reduce emissions associated with the construction and operation of the Metro Tunnel by approximately 20 per cent.
- The removal of 50 metropolitan railway level-crossings will reduce road vehicle emissions through improved traffic flow.
- The Victorian Government will link the tram network’s power demand to new dedicated large-scale solar projects in Victoria. Renewable energy certificates matching the network’s power demand will be procured by the Victorian Government from new solar projects, with the certificates being voluntarily surrendered to the Clean Energy Regulator.
- The Victorian Cycling Strategy 2016 – 2026 will get more Victorians cycling safely through planning and investment in cycling.
- The Government’s partnership with Landcare Australia will protect and rehabilitate transport corridors.
- The Hybrid Vehicle Registration Discount creates an incentive for buyers of electric and hybrid vehicles.
- Funding of the $4.5 million Intelligent Transport System (ITS) Transport Technology Grants Program will research how to move trams and buses more efficiently.

Image by Bronwyn Kidd
The Agriculture sector is a major source of greenhouse gas emissions in Victoria, accounting for 12 per cent of our total emissions in 2014. It is also a major contributor to the Victorian economy. In 2014-15 the Victorian agriculture sector produced $13.1 billion worth of grain, meat, dairy, fruit, vegetables, fish, wood, plant fibre and animal products – around 25 per cent of Australia’s total production.

Most emissions from Victorian agriculture come from ruminant animals (e.g. dairy cattle, beef cattle and sheep). Other important sources of emissions include animal manure and nitrogen applied to crops and pastures. Further research will help identify where agriculture can reduce emissions while maintaining productivity and will test whether innovative ideas will work on the farm. Farmers may also be interested in growing trees to store carbon, which can also provide shelter for livestock or provide additional farm income.

**CO-BENEFITS**

- Rural and regional jobs.
- Land and soil health and resilience.
- Reducing methane emissions from sheep can increase meat production.
- Reducing methane emissions from dairy cattle can increase milk production.
- Resilience of rural and regional communities.

**ACTIONS**

- Support innovative agricultural projects through the New Energy Jobs Fund such as Waranga Green Energy – a bio-energy project that will produce heat and power from animal waste.
- The Agriculture Infrastructure and Jobs Fund will spend $200 million to improve the efficiency of the supply chain and build resilience in the agriculture sector.
- Research is essential to reducing emissions in agriculture. Current research projects include:
  - emissions and animal performance impacts of stock feed additives and supplements already proven to reduce methane emissions
  - reducing nitrous oxide emissions from dairy production systems
  - reducing methane emissions from sheep and dairy cattle by improving genetics and developing new grazing strategies.
- The Agriculture Victoria website will inform farmers about how they can reduce emissions and farm costs and build capacity: http://agriculture.vic.gov.au
Waste

The waste sector contributes less than two per cent of Victoria’s emissions. Emissions from waste are declining even while Victoria’s population continues to grow. Managing our waste is an essential service. The Victorian Government’s waste sector pledge focuses on actions to reduce the amount of organic waste sent to landfill. Organic materials produce methane, a potent greenhouse gas, when they break down in landfill. We can reduce Victoria’s greenhouse gas emissions by using this waste to produce energy or compost and other valuable products instead of burying it. It will also reduce the impact of landfills on neighbouring communities.

**ACTIONS**

- The Statewide Waste and Resource Recovery Infrastructure Plan sets a 30 year vision for Victoria.
- This seeks to establish a system where waste is only sent to landfill after all viable resource value has been recovered. It also identifies recovery of organic materials as a key priority.
- Seven Regional Waste and Resource Recovery Implementation Plans will determine how waste will be managed in each region over the next 10 years. They will set a clear direction to enable collaboration between government, industry and the community to increase recovery of waste.
- Government funding will support industry to improve waste management to meet the Plan. Depending on the focus, this investment could potentially reduce emissions by up to 400,000 tCO₂e by 2020. Possible projects include the conversion of commercial and industrial food waste into energy, which could reduce emissions by around 40,000 tCO₂e by 2020.
- The ‘Love Food, Hate Waste’ program, part of education work to reduce waste, will increase the community’s support for better waste management and improve resource recovery.
- The Government will support market development for organic materials diverted from landfill and improve confidence in the quality of products.
- Support for local councils will expand kerbside organic collections, saving up to 200,000 tCO₂e.

**CO-BENEFITS**

- Reduced need for landfill sites.
- Reduce odour from landfill.
- Production of useable byproducts, e.g. compost.
- Produce energy from waste.
- More jobs – an estimated 9.2 people employed to recycle every 10,000 tonnes of waste, compared to 2.8 people for landfill.
Planting trees and other vegetation on cleared land, revegetating degraded land and managing existing forests better can increase the carbon stored or "sequestered" in natural systems. This can significantly reduce Victoria's greenhouse gas emissions and is an important part of meeting our target of net zero emissions by 2050. Determining the best ways to increase carbon storage in natural systems is complex. Research is therefore key.

$222 million of funding over the next four years will be used to improve the health of waterways and catchments through a range of on-ground works including revegetation.

A pilot carbon project, established in 2016, will demonstrate how private companies can plant native trees and other plants on public land and generate carbon credits. The pilot project, involving Greenfleet, will inform the future rollout of such projects on public land.

The Government is investigating the use of public land for carbon storage projects with private and other non-government investors.

Waterway and Integrated Catchment Management Programs, which will focus on enhancing and protecting high quality vegetation and re-establishing vegetation, will support wildlife habitats and linkages between them; provide buffers in riparian areas; help prevent erosion; and store carbon.

Government support for research will improve measuring and assessing carbon sequestration. Examples include:
- researching the impacts on carbon stocks of different fire management approaches (including planned burning);
- assessing carbon storage in Victoria’s marine and coastal ecosystems – seagrass, saltmarsh and mangroves - to understand its future potential;
- a carbon stocktake of the net carbon impacts of existing government funded biodiversity programs on public and private land; and
- improving carbon modelling capability on the benefits of investing in revegetation of waterways, biodiversity and carbon projects.

Victoria will work with the Commonwealth to identify and remove obstacles to land managers receiving credits from the Commonwealth’s Emissions Reduction Fund.

- Land and soil health and resilience.
- Enhanced public amenity.
- Support for rural and regional communities.
- New jobs and services.
- Enhanced biodiversity.
3. Voluntary pledges – everyone has a role to play

Through its website, TAKE2 gives everyone a chance to participate. TAKE2 continues to grow.

To date:
- 28 local governments have pledged, representing over 3 million Victorians.
- The 216 businesses that have pledged have a total annual revenue of over $209 billion and employ more than 229,000 people.
- The 88 community groups that have pledged have over 180,000 members.
- The schools and tertiary institutions that have pledged have over 240,000 students
- Including all sectors (business, local government, community, education and individuals) we now have over 2,400 pledges.

<table>
<thead>
<tr>
<th>Everyone</th>
<th>Business</th>
<th>Local Government</th>
<th>Community organisations</th>
<th>Educational organisations</th>
<th>Individuals and families</th>
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</thead>
</table>

Increase our energy efficiency and productivity
- Energy management including buildings and equipment
- Buy fuel efficient vehicles, sharing cars and avoiding travel
- Purchase energy efficient or local products and equipment
- Design products to minimise use of energy and materials
- Reuse heat from industrial processes
- Measures through the Council Plan and land use planning
- ResourceSmart Schools
- Saving energy through building renovations

Move to a clean electricity supply
- Install solar panels or solar heating
- Purchase renewable energy
- Install batteries linked to renewables
- ResourceSmart Schools
- Facilitate opportunities through land use planning
- Community renewables projects

Electrify our economy and switch to clean fuels
- Buy electric vehicles or hybrids
- Walking, cycling and using public transport
- Facilitate opportunities through land use planning

Reduce non-energy emissions and increase carbon storage
- Plant trees and other vegetation
- Reduce waste, including food
- Offset emissions through carbon planting
- Develop land management plans that incorporate climate change
- Minimise waste going to landfill from products and services
- Land use planning to support urban forestry and linking habitats
MCG – sporting and environmental champion

TAKE2 Founding Partners, the MCC and MCG have recently completed an energy efficiency upgrade that converted the stadium to one of the most environmentally sustainable in the world.

They’re using a million litres of water less each year on the turf. They recycle 75 per cent of waste, making them one of the world’s best. And with the new energy efficiency improvements, they’ll save enough electricity annually to light up the ‘G’ for six years.

Foodbank – saving food and the planet

This TAKE2 Founding Partner is rescuing edible food and giving it to Victorians in need. The food comes from farmers, manufacturers and wholesalers. It’s perfectly good, but because of problems with labelling, excess stock, or a particularly bumper harvest, it’s otherwise headed for landfill.

Last year, Foodbank worked with 450 welfare agencies to turnover 9 million kilos of food, which would have been wasted and turned it into the equivalent of 17.5 million meals for over 525,000 Victorians.

VicSuper invests in a green future

Operating sustainably is a major focus for TAKE2 Founding Partner VicSuper. For a long time now it has measured, reported and offset greenhouse gas emissions from its operations. It purchases 100 per cent renewable energy, and staff work in energy efficient buildings and use hybrid cars.

With around 240,000 members and over $16 billion in net assets, VicSuper is one of Victoria’s leading superannuation funds. VicSuper sees its big opportunity to help Victoria achieve net zero greenhouse gas emissions in its investments and ability to influence others. Globally, it already has around $900 million invested in assets that positively impact climate change, like renewable energy, sustainable forestry, agriculture and low carbon mandates.

VicSuper plans to do even more in future. In 2017 it will launch a responsible investment option, which won’t invest in direct fossil fuel activities or companies that damage the environment.
More examples of climate change pledges can be found on the TAKE2 website www.take2.vic.gov.au