

Taking Action for Victoria's Future

Victorian Climate Change White Paper - The Action Plan
July 2010



Published by the Victorian Government Department of Premier and Cabinet, Melbourne, July 2010.
© The State of Victoria, Department of Premier and Cabinet 2010.

This publication is copyright. No part may be reproduced by any process except in accordance with the provisions of the Copyright Act 1968.

Authorised by the Victorian Government
1 Treasury Place, East Melbourne
Printed by Stream Solutions
Printed on 100% Recycled paper
ISBN 978-1-921697-39-5

DISCLAIMER

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

ACCESSIBILITY

If you would like to receive this publication in an accessible format, such as large print or audio, please telephone 03 9651 2624, or 03 9651 5094 (TTY), or email climatechange@dpc.vic.gov.au.

An electronic copy of this document is available online at www.premier.vic.gov.au.

MESSAGE FROM THE PREMIER

STRONG ACTION ON CLIMATE CHANGE WILL POSITION VICTORIA TO HAVE A STRONG ECONOMY, SUSTAINABLE COMMUNITIES, AND A BETTER, CLEANER WORLD.

Victoria has long been the leader in climate change policy in Australia.

Over the last ten years we have taken significant steps to reduce our emissions. We have worked with the Victorian community to become more energy efficient; we have set strong targets for renewable energy; we have worked in partnership with industry to deliver major investment in new energy technologies; and we started and drove the hard work of putting a price on carbon in collaboration with the other States and Territories.

Victoria still strongly supports the need for a national price on carbon. Despite the disappointing defeat by the Senate of the Federal Government's proposed Carbon Pollution Reduction Scheme, the Victorian Government believes a carbon price must be part of Australia's long-term response to climate change. However, Victoria is no longer willing to wait for this to occur. We must do our fair share in global efforts to reduce emissions.

There has never been a stronger case for urgent action on climate change. Victoria's climate has already changed significantly and the impacts will become very serious if action is not taken both here and internationally. There is no doubt that climate change poses huge risks for our economy, our environment and our way of life. Victoria and the rest of the world must act now to avoid the worst impacts of climate change in the future.

But equally, there are great opportunities in acting early, and our actions to address climate change will create a 'climate of opportunity' for Victoria's innovators and entrepreneurs.

Our legacy to the next generation must be an innovative and resilient Victoria, able to adjust to a low carbon future and take advantage of the new jobs, technologies and markets that flow from it. *Taking Action for Victoria's Future* sets out the Government's commitment to deliver this legacy and get on with the task of tackling climate change. It will:

- set Victoria a target to reduce emissions by at least 20% by 2020 compared to 2000 levels (equivalent to 40% per capita);
- commit to reducing the greenhouse gas emissions of Victorian brown coal-fired generators by up to four million tonnes over the next four years, culminating in a total saving of 28 million tonnes by 2020, equivalent to the closure of two units of Hazelwood Power Station;
- implement a plan to raise the energy efficiency of Victorian homes to an average of 5 Stars by 2020;
- put Victoria on track to generate 5% of our electricity from solar energy by 2020;
- create jobs by taking advantage of the opportunities in a low carbon economy;
- prepare Victoria for the physical impacts of climate change; and

- keep Victoria ahead of the game, ready for the eventual introduction of a carbon price.

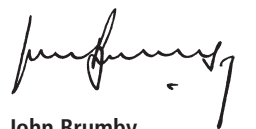
This White Paper Action Plan will be supported by the *Climate Change Bill*, which will be introduced shortly into Parliament. A White Paper Implementation Plan will be released later this year following further consultation with the community and industry.

Initially over \$329 million in new funds has been ear-marked, on top of \$322 million announced in the last eight months for climate change and renewable energy programs.

All Victorians – governments, businesses, households and individuals – share a responsibility to consider carefully the actions each of us can take, big and small, to reduce our emissions.

Victoria must look ahead and make some bold decisions if we are to sustain our standard of living and create new economic opportunities.

By taking a leading role in tackling climate change, the Government is determined to ensure that the legacy our generation leaves to future generations of Victorians is a strong economy, sustainable communities and a better, cleaner world.



John Brumby
Premier of Victoria



MESSAGE FROM THE MINISTER FOR ENVIRONMENT AND CLIMATE CHANGE AND THE MINISTER FOR ENERGY AND RESOURCES

WITH THIS WHITE PAPER, VICTORIA NOW HAS A SPECIFIC ACTION PLAN FOR THE NEXT FOUR YEARS, CLEAR TARGETS FOR THE FUTURE AND THE MOST RECEPTIVE AND SUPPORTIVE INVESTMENT ENVIRONMENT IN AUSTRALIA FOR RENEWABLE AND LOW-EMISSIONS ENERGY.



This White Paper Action Plan has been developed through a lengthy process of consultation which started with the release of a Green Paper in June 2009, followed by rounds of submissions and local meetings to gather community views and new ideas.

Victoria firmly believes in the need for a well-designed emissions trading scheme in Australia to deliver our part of agreed international targets. The disappointing outcome at Copenhagen and the defeat of the Carbon Pollution Reduction Scheme legislation has created uncertainty for the public and business alike. But the failure to achieve a globally binding agreement and the absence of a price on carbon in Australia should not be an excuse for inaction.

Victoria has resolved to push ahead with reforms, particularly over the next four years, to ensure we stay at the forefront of the climate change debate, give certainty to Victorian businesses and set our State on a clear path to reducing greenhouse gas emissions. Early action will pay long-term dividends by easing the burden of adjustment to a future carbon price and positioning

Victorian businesses to grow by developing the new products and services needed for the low carbon economy.

This White Paper sets out an Action Plan based on 10 key actions. There are important commitments made against each of these actions with the details to be finalised after a further round of discussions with the community and industry and completion of necessary regulatory analysis, such as Regulatory Impact Statements.

This will be followed later this year by an Implementation Plan spelling out the funding for and details of each of the initiatives.

On some of the key reforms – particularly regarding Victoria's brown coal-fired power stations – Victoria is calling on the Federal Government to provide the necessary financial support to achieve the goal sooner rather than later.

This White Paper Action Plan reinforces the leadership shown by the Victorian Government and introduces many new initiatives and policies. Most importantly, the paper recognises that while climate change is a daunting challenge, it offers many new and exciting opportunities –

and that, with our culture of creativity and innovation, Victoria is well placed to identify and take up these opportunities. In particular, the paper shores up the Government's commitment to making Victoria a leading location for renewable and low-emissions energy technologies, giving us a clear edge as the world moves towards the wide spread adoption of technologies in the coming decades.



Gavin Jennings
Minister for Environment and Climate Change



Peter Batchelor
Minister for Energy and Resources



VICTORIA'S STRONG RECORD

THE VICTORIAN GOVERNMENT HAS LONG RECOGNISED THE NEED TO ACT ON CLIMATE CHANGE AND HAS SHOWN STRONG NATIONAL LEADERSHIP ON CLIMATE CHANGE POLICY.

Over the last decade, the Government has worked with communities, businesses and local councils across Victoria to drive down emissions. The Government has adopted policies to encourage innovation and new investment in Victoria in areas such as renewable energy and water management, and has supported communities that are taking action to adapt to climate change impacts.

Victoria has led Australia in taking action on climate change.

Victoria was the first State to:

- set a mandatory energy efficiency target for electricity retailers, implemented through the *Energy Saver Incentive Scheme*;
- introduce a mandatory energy, water and waste resource efficiency program for the biggest commercial energy and water users (*Environment and Resource Efficiency Plans*);
- adopt the *5 Star Energy Efficiency Standard* for new homes, which has now been extended to all major renovations and will increase to a 6 Star standard from May 2011;
- introduce a mandatory 10% renewable energy target to drive new investment (the *Victorian Renewable Energy Target*);
- adopt a market based approach to managing and protecting native vegetation on private land (Victoria's ecoMarkets programs, including *BushTender*, *BushBroker* and *EcoTender*);
- introduce an integrated energy technology development policy and delivery mechanism, through the *Energy Technology Innovation Strategy*; and
- introduce *Climate Communities*, an innovative program to promote and support local action on climate change.

Other leading Victorian actions include:

- *Securing Our Natural Future*, a 50 year strategy to manage and protect our natural resources, land and biodiversity;
- *Future Coasts*, a ground breaking initiative providing detailed mapping and data to assess the vulnerability of Victoria's coasts to sea level rise and associated impacts; and
- *Our Water, Our Future*, a comprehensive long term plan to secure Victoria's water supply into the future, including a desalination plant, upgraded irrigation infrastructure and an expanded water grid.

At the national level, Victoria has:

- consistently advocated for Australia's engagement with the international community on climate change policy, through support for the Kyoto Protocol (ratified by Australia in December 2007) and a new globally binding agreement to reduce emissions;
- called for a new round of national reform on climate change in partnership with the Federal Government and State and Territory Governments;
- supported the development of low-emissions coal in partnership with the Commonwealth;
- played a key role in the development and evolution of the *National Strategy for Energy Efficiency*; and

- led the nation in the reform of markets for energy, water and ecosystems services.

In 2007, Victoria was the driving force behind the establishment of the *Garnaut Climate Change Review*. The Review was hosted by Victoria and changed public discussion about climate change in Australia by reframing the climate challenge in economic terms. The Review made the case that it was in Australia's national interest to secure the strongest possible global mitigation agreement. This was based on Australia being the developed country likely to be most severely damaged by unmitigated climate change, and analysis demonstrating that the benefits to Australia of strong global action, with Australia playing its full part, outweighed the costs.

VICTORIA MUST PLAY ITS PART IN GLOBAL EFFORTS TO REDUCE GREENHOUSE GAS EMISSIONS

THE OVERWHELMING WEIGHT OF SCIENTIFIC EVIDENCE INDICATES THAT CLIMATE CHANGE IS REAL AND IS DIRECTLY ATTRIBUTABLE TO HUMAN ACTIVITY.

Victoria faces some particularly difficult challenges in reducing emissions because of our heavy reliance on brown coal. To move to a low carbon future, we will need to adopt a new approach to managing and using our energy resources. Our electricity sector will need to undergo a significant transformation. We will need to become more efficient in our homes and businesses.

The Victorian Government has long argued that the introduction of a national emissions trading scheme is the most efficient way to reduce our emissions. But, in the absence of a national carbon price, Victoria is now moving to start the transformation of the State's economy to a low carbon future. If a carbon price is introduced the Victorian

Government will review the Action Plan to ensure that Victorian policy is complementary to, and will support the effective operation of, a carbon price.

Continued uncertainty as to the nature of a carbon price within the Australian economy is now undermining investor certainty and, given the delay in the adjustment process, has the potential to increase the cost of emissions reduction in the future.

State-based action will help maintain the momentum of our climate change response and ensure that Victoria plays its part in national and global efforts. It will also help ensure a smooth economic transition towards a low carbon future, helping avoid the chance of abrupt or more costly transition in the future.

Clear action by Victoria will:

- help drive a diversified and sustainable energy mix;
- prepare Victorian households and businesses for a carbon price;
- help Victoria capture the economic benefits of clean, low carbon industries; and
- substantially reduce Victoria's emissions.

Victoria will need to adopt fresh approaches, move in new directions and take bold actions to reduce our emissions and transform our economy.

HOW CLIMATE CHANGE IS LIKELY TO AFFECT VICTORIA

Our climate in 2030 (compared to 1990)	Our climate in 2070 (compared to 1990)	How will we experience these changes?
<ul style="list-style-type: none"> • Average annual temperatures up to 1.2°C higher • More days each year when temperatures exceed 35°C • Up to a 9% decrease in average annual rainfall • Global sea level rise of up to 15 centimetres 	<ul style="list-style-type: none"> • Average annual temperatures up to 3.8° higher • Nearly twice as many days each year when temperatures exceed 35°C • Up to a 25% decrease in average annual rainfall • Global sea level rise of up to 47 centimetres 	<ul style="list-style-type: none"> • Longer, hotter summers • Hotter drier conditions will result in significant reductions in run-off for major water catchments • More intense droughts as a result of warmer temperatures and higher evaporation rates • Fewer rainy days, but increasing rainfall intensity when it does rain • There will also be fewer 'wet' years (or years with above average rainfall) • Reducing extent and duration of snow cover in Victoria's alpine areas • More high fire danger days each year • Higher 100 year storm tide heights

VICTORIA'S EMISSIONS PROFILE

VICTORIA'S EMISSIONS IN 2008

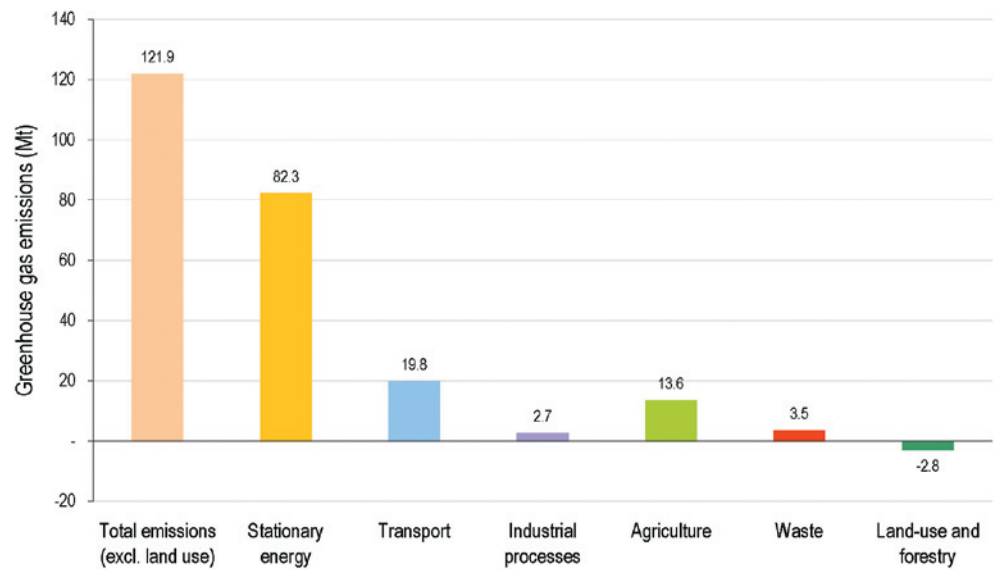


Figure 1 – Victoria's greenhouse gas emissions in 2008 (breakdown by sector). The stationary energy sector (mostly brown coal electricity generation) remains the greatest contributor to Victoria's emissions.
Source: Commonwealth Department of Climate Change and Energy Efficiency.

It is worth noting that, like Victoria, many jurisdictions are already taking steps to reduce their emissions (see table below). Victoria must ensure that we are able to keep pace with the scale of changes occurring internationally.

WHAT ARE OTHER PLACES AROUND THE WORLD DOING ON CLIMATE CHANGE?

Country/State	Emissions Reduction Commitment
<i>Developed:</i>	
Australia	5-25% below 2000 by 2020
California	Return to 1990 by 2020
Canada	20% below 2006 by 2020
European Union (Combined)	20% below 1990 by 2020
Japan	25% below 1990 by 2020 *
Scotland	42% below 1990 by 2020
South Korea	30% relative to BAU by 2020
United Kingdom	34% below 1990 by 2020
Regional Greenhouse Gas Initiative (North-Eastern US and Canada)	10% below 1990 by 2020
<i>Developing:</i>	
Brazil	36% relative to BAU by 2020
China	40-45% reduction in emissions per unit of GDP by 2020 compared to 2005 levels
India	20-25% reduction in emissions per unit of GDP by 2020 compared to 2005 levels
Indonesia	26% relative to BAU by 2020
South Africa	34% relative to BAU by 2020 *
* In the context of a global climate change agreement	

TAKING ACTION FOR VICTORIA'S FUTURE: OUR ACTION PLAN

THE VICTORIAN GOVERNMENT IS POSITIONING VICTORIA THROUGH 10 NEW ACTIONS TO REDUCE OUR EMISSIONS; CAPITALISE ON NEW JOBS, NEW TECHNOLOGIES AND NEW MARKETS; AND ADAPT TO A CHANGING CLIMATE.

- ACTION 1 – Legislating to cut Victoria's greenhouse pollution by at least 20%
- ACTION 2 – Moving towards a cleaner energy future
- ACTION 3 – Making Victoria the solar State
- ACTION 4 – Supporting cleaner and more efficient homes
- ACTION 5 – Positioning Victoria to be a global leader in clean technology
- ACTION 6 – Creating new opportunities in agriculture, food and forestry
- ACTION 7 – Delivering innovative transport solutions
- ACTION 8 – Greening Government
- ACTION 9 – Helping Victorians adapt to climate change
- ACTION 10 – Strengthening our Climate Communities

Together the priority actions in *Taking Action for Victoria's Future* will result in:

- Significant reductions in Victoria's carbon emissions
- A more diverse energy mix with a greater proportion of renewables
- New opportunities, new jobs and new technologies
- More energy and water efficient Victorian homes and businesses
- Resilient communities able to adapt to a changing climate
- Victorians empowered to take action on climate change

The White Paper Implementation Plan to be released later this year will set out funding and details of the specific initiatives underpinning these actions.

A landmark *Climate Change Bill* will put into law many of the actions set out in *Taking Action for Victoria's Future*. This Bill will be introduced shortly into Parliament and the Implementation Plan will be released later this year.

Together, these documents will build on key recent Government policy statements which will underpin action on climate change and promote sustainable outcomes for Victoria:

- *Premier's Statement on Climate Change and Energy* (November 2009)
- *Securing Our Natural Future: A White Paper for Land and Biodiversity at a Time of Climate Change* (December 2009);
- *Jobs for the Future Economy* (April 2010);
- *Victoria's Energy Future* (June 2010); and
- *Ready for Tomorrow: A Blueprint for Regional and Rural Victoria* (June 2010).

ACTION 1 - LEGISLATING TO CUT VICTORIA'S GREENHOUSE POLLUTION BY AT LEAST 20%

01

TARGETS

VICTORIA IS COMMITTED TO REDUCING GREENHOUSE GAS EMISSIONS IN OUR STATE BY AT LEAST 20% BY 2020 (BASED ON 2000 LEVELS).

Climate change threatens our future prosperity, environment and development. Without strong action globally, and at home, the projected impacts and costs of future climate change are significant. For these reasons, Victoria will set an emissions reduction target for the State and take action to achieve this target.

“The benefits to Australia of strong global action, with Australia playing its full part, outweigh the costs.”
Professor Ross Garnaut

The Intergovernmental Panel on Climate Change recommended that to avoid dangerous climate change the scale of emissions reduction required for developed economies is between 25% and 40% by 2020 (based on 1990 levels) depending on the nature of a global agreement.

It is clear that coordinated global and regional action is needed to achieve this ambitious goal. In the absence of a binding global agreement emerging from the Copenhagen climate change conference in 2009, many countries are not willing to wait any longer and are now pressing ahead with action.

The Victorian Government is now setting a 20% target representing a new

benchmark for action on climate change in Australia.

This target will put us on a firm pathway to play our part in even larger reductions needed globally to avoid dangerous climate change in the longer term. In the event the Commonwealth adopts a scheme to regulate greenhouse gases, including by establishing a carbon price, the *Climate Change Bill* will be reviewed to ensure consistency with any higher target from the Commonwealth.

Despite the scale of the challenge and the costs associated with it, the economic case for action on climate change is clear. The Stern Review estimates that if we don't act, the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year. If a wider range

of risks and impacts is taken into account, the estimates of damage could rise to 20% of GDP or more.

By contrast, the Stern Review further estimates that the costs of action – reducing greenhouse gas emissions to avoid the worst impacts of climate change – can be limited to around 1% of global GDP each year.

The increase in individual catastrophic events as the average global temperature increases could have a major impact in terms of loss of life, asset destruction and business interruption. As an example of the scale of potential costs, the autumn 2010 flooding and storms in Victoria resulted in estimated costs of over \$1 billion.

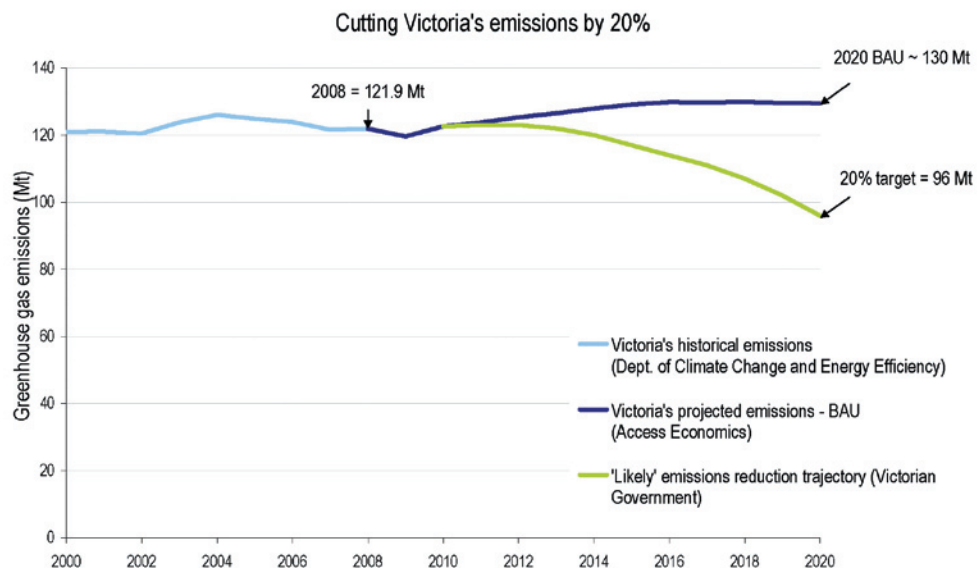


Figure 2 – Under a ‘business-as-usual’ scenario Victoria’s emissions are projected to increase to around 130 Mt in 2020 (dark blue line). This BAU scenario includes the national Renewable Energy Target (RET), but excludes the Commonwealth’s proposed Carbon Pollution Reduction Scheme (CPRS). The green line represents a likely emissions trajectory if Victoria is to achieve a 20% reduction by 2020.

Source: Victorian Government/Access Economics, Commonwealth Department of Climate Change and Energy Efficiency.

ACTION 1 - TARGETS

The costs of tackling climate change, whilst significant, will be lower if the world acts now. But the costs will rise steeply if action is delayed. The International Energy Agency's *World Energy Outlook (2009)* estimates that each year of delay before moving to a more sustainable emissions path would add around \$500 billion to the global investment cost of delivering the required changes.

The significant investment required to tackle climate change also offers strong opportunities for Victoria in the context of a global transition to a low carbon, climate-resilient economy.

Through *Taking Action for Victoria's Future* we are getting on with the job of moving towards a low carbon economy. We will act strongly on investment in infrastructure, jobs and technology; and **we will move to legislate in the Victorian Climate Change Bill to reduce Victoria's emissions by at least 20% by 2020 compared to 2000 levels. This equates to a 40% cut in each Victorian's average contribution to greenhouse gas emissions. The Victorian Government also recommits to advocate for a national target of at least 80% by 2050 in the context of a global agreement.**

These emissions reductions will occur in Victoria through energy and fuel efficiency, changes to our energy mix, improved agricultural practices and land carbon sequestration. Creating the conditions for emissions abatement will drive low carbon investment within Victoria and make it more cost effective to achieve long

term emissions reductions targets. This Action Plan sets out the initial actions required to set us on a path to meet this target. Under this Action Plan, Victoria's total emissions are expected to be in decline by 2014.

If a national price on carbon does not eventuate, we will develop further commitments to help deliver the 20% Victorian target.

The Victorian Government firmly believes that it is in our interests to play a leading role in the transition to a resilient, low carbon economy. Victoria has a strong base on which to build: through competitive advantages in clean technologies for water, energy and waste; leadership in innovative financial and policy tools such as environmental markets; diverse commercial and industrial activities in urban development, automotive, food and farming, and financial services; creative and skilled people; and strong capabilities in the critical enabling technologies (ICT, design and biotechnology). This strong foundation will underpin the new economy.

The investment environment created by Government action will support the development and uptake of clean technologies and systems at home, positioning our businesses for international leadership on climate change. Our new ClimateTech strategy will focus our capabilities on the climate challenge, position Victoria in the 'top-5' internationally for clean technologies and build strong industries for our future.

These actions will significantly build on Victoria's commitment to

secure and create jobs in a low carbon economy, particularly in the renewable energy sector and the energy services sector (home and building audits and retrofits).

Taking Action for Victoria's Future also commits to the establishment of a Premier's Leadership Forum on Climate Change. The climate change debate will remain very dynamic as new science comes to hand and new technologies emerge along with on-going efforts to develop a national and international consensus on the right steps to tackle climate change. To stay abreast of these debates, and tap into the expertise of community opinion leaders, the Premier will establish a Leadership Forum on climate change which will meet quarterly and provide advice to the Premier on emerging issues and opportunities.

ACTION 1 - CLIMATE CHANGE BILL

A LANDMARK CLIMATE CHANGE BILL WILL BE INTRODUCED SHORTLY IN PARLIAMENT. THE BILL WILL LEGISLATE VICTORIA'S TARGET TO CUT EMISSIONS BY AT LEAST 20%, ESTABLISH THE FRAMEWORK FOR MEASURING AND REPORTING ON CLIMATE CHANGE ACTIONS AND EMBED CLIMATE CHANGE CONSIDERATIONS INTO A RANGE OF GOVERNMENT PROGRAMS AND DECISIONS.

Making climate change core business for government is critical to ensure that the Victorian Government responds in a timely, effective and appropriate way to the impacts and opportunities of climate change.

The Climate Change Bill will:

- 1) Legislate a target to reduce greenhouse emissions by at least 20% by 2020 compared to 2000 levels
- 2) Amend powers under the *Environment Protection Act* to effectively ban new power stations based on current brown coal technologies
- 3) Amend powers under the *Environment Protection Act* to allow for greenhouse gases to be regulated. This will enable the setting of a greenhouse gas 'trigger' for large emitters, enabling the regulation of greenhouse gases as part of licensing and approvals
- 4) Legislate to ensure that decision-makers take climate change into account in specified government decisions
- 5) Legislate for a Climate Change Adaptation Plan to be developed by the Government every four years, outlining the climate change impacts and risks to Victoria, as well as the Government's priority areas for a State response
- 6) Legislate to create new arrangements for the ownership, registration and transfer of forestry and carbon sequestration rights which will facilitate the development of the emerging carbon sequestration industry, bring Victoria's legal framework in line with national approaches and allow Victorians to easily participate in State and national sequestration efforts
- 7) Legislate to allow the *Climate Communities Program* access to increased funding through the Sustainability Fund, allowing for the further promotion of local actions to tackle climate change
- 8) Legislate to allow the Government to enter into Climate Covenants with communities, regions, industry and other stakeholders, allowing them to take ownership of climate change issues and empowering them to be innovative and proactive in their response to climate change
- 9) Legislate to ensure that the Government must report every two years on climate change science and Victoria's progress towards its emissions reduction target
- 10) In the event that the Commonwealth introduces a national emissions trading scheme, or an economy-wide carbon price, it will be necessary to review the Climate Change Act immediately to ensure consistency with any Commonwealth scheme

CLEAN ENERGY

THE VICTORIAN GOVERNMENT RECOGNISES WE MUST SIGNIFICANTLY CUT GREENHOUSE GAS EMISSIONS IN THE ELECTRICITY SECTOR.

The introduction of a national carbon price is the best way to achieve a reduction in the use of coal for power generation. In fact, International Power, the owner of Victoria's most emissions intensive power station – Hazelwood – had indicated its intention to close that plant by 2016 if the Commonwealth's Carbon Pollution Reduction Scheme (CPRS) legislation had been passed.

In the absence of a national emissions trading scheme, the Victorian Government is committed to reducing emissions from the electricity sector through the measures outlined in *Taking Action for Victoria's Future*.

The detailed scope, cost and impacts of these measures will be determined following the completion of industry consultation, including relevant Regulatory Impact Statements. These measures will place Victoria at the forefront of actions in the stationary energy sector across the nation to achieve greenhouse gas emissions reductions.

Substantially reduce brown coal-fired generators' greenhouse gas emissions

Victoria has the most greenhouse gas emissions intensive coal-fired power stations in Australia. The Victorian Government believes that the most efficient way of replacing these power stations is through the introduction of a national emissions trading scheme. However, the Commonwealth Government has made it clear that it is unlikely that such a scheme will be introduced until at least 2014.

The delay in commencing a national emissions trading scheme has created considerable uncertainty for energy investment in Victoria.

To unlock this investment and reduce Victoria's brown coal emissions, the Victorian Government is committing to reducing the greenhouse gas emissions of Victorian brown coal-fired generators by up to four million tonnes over the next four years, culminating in a total saving of 28 million tonnes by 2020.

This is of a similar magnitude to the emissions reductions anticipated under the Commonwealth's CPRS and equivalent to the closure of two units of Hazelwood Power Station.

The Victorian Government intends to engage in discussion with all of Victoria's brown coal-fired generators and intends to conduct a competitive 'open book' process in order to ensure that the abatement is secured at least cost for Victoria. The guiding principles for this process are:

- emissions reductions must be delivered at a reasonable price for Victorians;
- security of supply is maintained to meet the needs of our growing economy;
- price impacts for households and businesses are minimised;
- there is no opportunity for windfall gains should a national emissions trading scheme be introduced; and
- four million tonnes of abatement is achieved by 2014.

The Victorian Government will work in partnership with the Commonwealth Government to deliver this approach.

Regulating to ensure no new brown coal power based on conventional technologies

The Victorian Government commits to no new approvals being granted for new coal fired power stations based on conventional brown coal technologies. Through the *Climate Change Bill* we will set a target emission level of 0.8 tonnes of CO₂ equivalent (per MWh) for new power stations – bettering the performance of black coal stations and broadly comparable to the performance of open cycle gas.

This measure will provide greater certainty for investors in new, low emissions power stations.

The Victorian Government will reserve the right to consider regulating emissions from existing brown coal-fired electricity generators if agreement on a phase down cannot be negotiated and a national carbon price is not in place.

Victoria's brown coal resource has provided a cheap source of energy for more than a century, but existing brown coal-fired plants are the largest contributors to Victoria's high level of greenhouse gas emissions.

02

\$30 million to further explore the development of a CCS 'hub' - the CarbonNet project

It is well established that there is no 'silver bullet' for reducing emissions from the stationary energy sector. Rather, a portfolio of options is required as part of our response, especially where there is great uncertainty about the development path of technologies and their associated costs. As part of this portfolio approach carbon capture and storage (CCS) is one such option which could be of significant importance to the State. The Victorian Government through the CarbonNet project will explore the development of a network of pipelines that transport carbon (captured from different technologies) to storage sites in the Gippsland Basin. This will lower the long term-cost of CCS.

The Victorian Government is committing \$30 million in funding – on top of an existing contribution of \$3.3 million – to leverage support from the Commonwealth Government through its \$2.4 billion CCS Flagships Program. Victoria has the best geology for CO₂ storage in Australia. The Commonwealth has already provided \$4.5 million to the Victorian Government to further progress CCS research.

A strong economy for the Latrobe Valley

The Latrobe Valley is the centre of Victoria's electricity generation sector, which is based primarily

on brown coal. However, recent history has seen an evolution to a much more diversified economic base in the Valley, including sustainable forestry and agriculture. Significant changes to the way Victoria's brown coal resources are used will create new opportunities, local jobs and skill needs in the region. Over time, the development of sustainable uses of coal, as well as the other abundant natural resources of the region, can open up new opportunities for some of the 3,100 people currently working in electricity generation and coal mining to move into other jobs.

When the Commonwealth Government makes a carbon price operational, it will have the primary responsibility for financing economic change in the Latrobe Valley. The Victorian Government will work with the Commonwealth to ensure that the appropriate support is available for the Valley.

As emissions from the electricity sector in Victoria are reduced, there will be a progressive shift from conventional technology to other research and development projects. New gas-fired power stations and the use of dried coal technology will create new jobs, requiring new skills.

The Government recently released *Ready for Tomorrow - A Blueprint for Regional and Rural Victoria*, which outlines the Government's plan for a sustainable and prosperous regional and rural Victoria. This includes the development of a new Gippsland Regional Plan to attract growth

and position Gippsland as a smart and sustainable region. *The Regional Infrastructure Development Fund (RIDF)* will support key investments to develop the broader Gippsland economy and address current infrastructure gaps.

The Victorian Government will also create a Latrobe Valley Advantage Fund to provide resources across three priorities:

- *Skilling the Valley* - investing in local capabilities, and identifying opportunities and developing new skills for the Latrobe Valley;
- *Attracting New Industries and Jobs* - through business development, investment and innovation support, networks and partnerships; and
- *Sustainable Research* - new opportunities in the Latrobe Valley and Gippsland region will be identified and supported, particularly sustainable resource management, low emissions energy and alternative uses of coal.

The Government will also invest in green skills for young people and in helping workers affected by the Valley's adjustment to a low carbon future to retrain and move into new areas of employment. New opportunities will also be identified and supported through the *ClimateTech Strategy* (see Action 5).

SOLAR

THE VICTORIAN GOVERNMENT IS COMMITTED TO OFFERING THE MOST COMPREHENSIVE SUPPORT FOR SOLAR ENERGY OF ANY AUSTRALIAN STATE.

The national Renewable Energy Target (RET) will deliver around 20% of Victoria's energy from renewable sources by 2020, mostly from wind.

Alongside the RET the Victorian Government will take additional action now so we can get to a cleaner, more diversified electricity supply sooner. The Government will also deliver the most comprehensive support for solar of any Australian State.

This includes the Commonwealth's Small Renewable Energy scheme (SRES) for solar hot water and domestic solar photovoltaic panels and the Solar Flagships program which will provide \$1.5 billion for large-scale solar generation. There are three Victorian bids short listed in Phase One of Solar Flagships for which the Victorian Government has committed \$100 million in funding support for electricity supplied from 2015. A Commonwealth decision is expected in early 2011.

Introducing a Large Scale Solar Feed-In Tariff

The Government will increase Victoria's electricity supply from large scale solar power to approximately 5% by 2020 (approximately 2500 GWh). The interim target for 2014 is 500 GWh. New State Government

policies to achieve these targets, such as this new feed-in tariff, will be outside the RET to ensure additional abatement, with details on incorporation of existing projects to be determined through a consultative process and a Regulatory Impact Statement.

By 2020, this measure is expected to result in the construction of between five and ten large plants across northern Victoria.

This new feed-in tariff will provide the incentive necessary for investment in new large scale solar generation facilities in Victoria.

The design of the new feed-in tariff is subject to resolution of the appropriate legal framework, conditions and pricing, which will involve a consultative process including a Regulatory Impact Statement. Tenders for this third phase of solar development will be called after completion of this process and announcement of the successful Solar Flagships projects.

The Government will also examine the feasibility of making this feed-in tariff available to other next-generation low-emissions technologies, such as geothermal.

Support for solar hubs

The Victorian Premium Household Feed-In Tariff has been very successful. Installations have

recently been growing at 1 MW per month and are expected to reach over 40 MW by 2014.

Beyond households, the Government sees enormous potential for solar energy at a commercial scale.

The Government will work with business and community groups who wish to install renewable energy facilities such as solar at a larger than residential scale, including those not currently eligible for support under the Victorian Premium Feed-in Tariff. This will enable businesses, community groups and large factories to meet their own energy needs using zero emissions technology at a more affordable cost.

To harness business interest and to develop an effective model for medium-scale solar energy the Government will establish a Medium Scale Solar Working Group.

This group will help advise on the current barriers to investment and what additional measures are required to encourage the use of solar energy in business facilities across the State.

This initiative will complete a three-pronged approach to solar investment in Victoria, making us the only State that has support for solar at all scales.

The Victorian Government is also committing \$5 million for up to 10 solar energy hubs across Victoria, delivering 8.6 MW of community-based solar power and providing opportunities for the more than 500 accredited installers. Communities will be able to benefit from bulk purchases of solar panels and installation services, reducing the cost of individual rooftop solar system installations.

Victoria has abundant natural resources to allow us to generate a large proportion of our electricity from zero emissions sources such as solar, wind and geothermal capacity.

VICTORIA'S SUPPORT FOR SOLAR POWER

Project	Generation (GWh)	Capacity (MW)	Year
Solar Systems (Silex) – pilot	~4	2	2011
Solar Systems (Silex) – full scale	~270	154	2016
Victorian Large-Scale Solar Project	330	180-200	2015
Large-Scale Solar Feed-in Tariff	500	~285	2014
Solar Hubs	~15	8.6	2013
Households	~75	~40	2014

VICTORIA'S CURRENT AND FUTURE ELECTRICITY SUPPLY

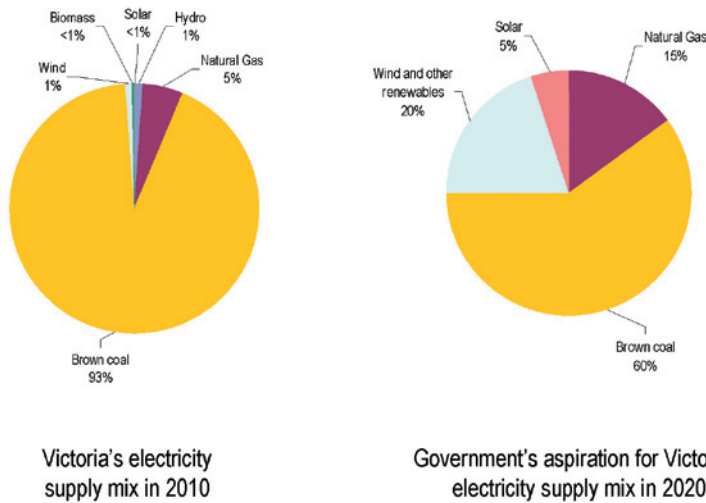


Figure 4 – Victoria’s projected electricity mix in 2010. The 2020 scenario includes the national expanded RET, Victoria’s proposed Large-Scale Solar Feed-in Tariff and assumes the Commonwealth’s CPRS commences in 2014.

Open ‘green doors’ to support gas and renewables projects

To streamline development of renewable energy projects the Victorian Government is establishing a Green Door for Renewable Energy. The Green Door will be a ‘one-stop shop’ for energy projects that meet a low emission threshold of 0.5 tCO₂/MWh, which includes both renewable energy and low emissions gas projects. Every project will be assigned a case manager to help navigate the application and planning processes.

For projects larger than 30MW, the Green Door is also likely to identify them as ‘State Significant Projects’ and put them on a path to co-ordinated planning approvals if they commit to applying good practice consultation principles with local communities.

Sharing the benefits of renewable energy

To be successful – and to provide certainty to investors – Victoria’s renewable energy transition needs community support. Community concerns about amenity, noise and environmental and cultural heritage impacts need to be addressed and support provided to communities and councils that are keen to capture the opportunities from new renewable energy projects.

The Premier has already called on regional communities to nominate themselves as hubs for investment in renewable energy and, if the project has the backing of the local people, he will champion their proposal.

In addition to requirements for good practice consultation, we will investigate how best to share the benefits across the community of generating 20% and beyond of Victoria’s electricity needs through renewable sources by 2020. To do this, we will investigate best practice international models for sharing benefits and pilot applicable approaches in Victoria.

Support for pilot-stage sustainable energy research and development

The Victorian Government will re-allocate \$41 million in uncommitted funds within the Energy Technology Innovation Strategy to provide competitive grants for pilot renewable energy plants and technology projects. This will provide funding to private sector-led projects at the pilot and R&D stages. Technologies eligible for support from the program will include renewables, smart grid technologies and energy efficiency for the commercial and industrial sector.

Mapping Victoria’s renewable energy resource

Victoria has already released resource atlases for our wind and solar resources. The next step is to identify key risks and opportunities to guide the location of proposals for new energy projects. We will apply existing and new information (relating to biodiversity, high landscape and heritage values, residential dwellings and population trends) to energy resource data across the State.

Connecting renewable energy to the grid

Connection to the electricity grid has been identified as a barrier to new renewable and distributed energy projects. To ensure that any barriers to increase renewable and distributed energy are addressed, the Victorian Government will take a strong leadership role in advising the national energy market institutions and develop Victorian capability to achieve workable solutions through the *ClimateTech Strategy* (see Action 5).

HOMES

THE VICTORIAN GOVERNMENT IS COMMITTED TO A GOAL OF HAVING ALL VICTORIAN HOMES AT AN AVERAGE ENERGY EFFICIENCY OF 5 STAR BY 2020.

Victoria has a strong record of promoting household energy and water efficiency and was the first Australian State to introduce the 5 Star Energy Standard for newly constructed homes.

New homes

From May 2011, the Victorian Government will implement the Council of Australian Governments (COAG) decision to require all new homes and major renovations to meet a 6 Star minimum energy rating. Victoria is also implementing requirements for solar or low-emissions hot water and new water efficiency standards, subject to a Regulatory Impact Statement.

Existing homes

Many existing homes were built when energy use and climate change were not a primary consideration. As a result, these older homes usually have poor energy efficiency, with an energy rating of only 1 to 2 Stars.

Improving the energy efficiency of our existing homes will ensure that our dwellings are using less energy and generating fewer greenhouse gas emissions, while at the same time reducing our energy bills.

This is why the Government is setting a goal of improving the energy efficiency of Victoria's existing housing stock to an average 5 Star equivalent energy rating by 2020.

In working towards this goal, the Government will:

- seek to double the target of the *Victorian Energy Saver Incentive* and expand the list

of eligible energy efficiency activities, subject to a Regulatory Impact Statement;

- deliver a comprehensive household retrofit program to assist Victorian householders to reduce their energy consumption through energy efficiency upgrades, including support for low income households and public housing tenants;
- launch a new website to give households detailed information on opportunities to save energy and obtain Government rebates;
- maintain Victoria's strict rules for accreditation of home energy assessors to ensure public confidence in the advice given by home retrofitting companies;
- advocate to the Commonwealth for the commencement of the \$35 million GreenStart program in Victoria to provide further energy efficiency improvements for low-income households; and
- extend the Victorian rebate scheme for installation of solar hot water systems to help households reduce their energy bills and emissions, complementing the Commonwealth Government's rebates.

The new COAG requirement for disclosure of a home's energy performance when a house is sold or leased will also come into effect in 2011, subject to a Regulatory Impact Statement.

Reducing energy in our homes is not just about insulation and

light globes; it is also about being smarter in how we use energy on a daily basis. Through an expansion of the Government's *Climate Communities Program* (see Action 10), all Victorians will be able to learn more about reducing energy use in our homes, workplaces and schools, and taking action on climate change. These new programs will put Victoria on the path to achieve the Government's goal of an average 5 Star equivalent energy rating by 2020. In tracking our progress the Government will consider what further measures are needed to reach this goal.

The roll out of smart meters will provide the key energy efficiency tool for Victorians to save energy and money, and will create a smarter grid better able to incorporate renewable energy and electric cars.

GreenPower

Victorians are keen supporters of the GreenPower program, with over 300,000 homes sourcing their energy from renewable power (around 15%). The high level of concern about climate change suggests this number can be increased to accelerate the demand for renewable energy. The Government will encourage even more Victorians to take part in this program, with the aim of having 500,000 homes participating in GreenPower.

As a demonstration of its support for clean energy, the Government is extending its own GreenPower commitment from the current 25% to 35% by 2015 and 50% by 2020 (see Action 8).

Victorians are already taking steps to make their homes more efficient, reducing their energy consumption and saving them money. However, much more can be done to realise the many opportunities to improve the energy efficiency of our homes.

ACTION 5 - POSITIONING VICTORIA TO BE A GLOBAL LEADER IN CLEAN TECHNOLOGY

05

BUSINESS

OVER THE COMING DECADES, COUNTRIES AROUND THE WORLD WILL MAKE THE SHIFT TO A LOW CARBON FUTURE – AND VICTORIAN BUSINESSES NEED TO BE AHEAD OF THE GAME.

A strong investment environment will support the development and uptake of clean technologies and systems, reducing business exposure to future energy price increases and strengthening Victoria's leadership position in an international carbon-constrained economy.

Victoria's businesses are adaptable and innovative and have met many different challenges, including greater competition from newly emerging nations, the global economic downturn and changing consumer choices.

The Victorian Government has a long history of working in partnership with business and industry in preparing for a low carbon future. Leading partnership programs include: VECCI's *Carbon Down and Grow Me the Money*, which support small and medium enterprises to uncover opportunities that save money and reduce environmental impacts; and the *ResourceSmart Industry* partnership with the Australian Industry Group that helps manufacturing supply chains to increase energy efficiency, reduce waste and lower carbon emissions.

The Victorian Government will support our businesses to capture new opportunities – new jobs, technologies and markets – flowing from a low carbon economy.

Expanding the Energy Saver Incentive to include small and medium enterprises (SMEs)

Just as in our homes, there is a multitude of ways in which SMEs can make simple changes to their businesses to have a big impact on their energy use and lower their power bills. The Victorian Government will expand the *Victorian Energy Saver Incentive* to allow SMEs to participate. This will make it cheaper and easier for small businesses to implement these energy efficiency activities. This will provide direct support for businesses to cut costs and energy use.

Clean Business Fund

Through the *Climate Communities program*, the Government will set up a *Clean Business Fund* to support projects that would have been viable under a carbon price, but would be uncommercial otherwise. The *Clean Business Fund* will also be used to form partnerships with industry bodies, providing information, tools and networks to assist businesses respond to changes in the business environment and the potential impacts of climate change. Partnership projects through the Fund will also support projects that can deliver carbon emissions reductions across supply chains and boost businesses' bottom lines.

A ClimateTech strategy

To position Victoria as a 'top-5' global leader in clean technologies the Victorian Government will develop a strategy applying the successful approach we took in positioning Victoria to be a global leader in biotechnology.

Our strategy to develop international leadership in innovative climate solutions and a strong clean-tech sector will be released by the end of the year. The strategy will build on Victoria's competitive edge in clean technologies and our strong base in other areas such as design, ICT and biotechnology.

Expanding the Environment and Resource Efficiency Plan (EREPs) program

The EREPs program (and its predecessor the Industry Greenhouse Program) has led to business identifying and implementing expected savings of approximately two million tonnes of greenhouse gas emissions with combined annual cost reductions of \$104 million.

The Government is now seeking to expand the EREPs program and will undertake industry consultation to investigate the options to:

- increase the number of participating firms;
- have sites prepare new plans once their previous plan expires; and
- alter the mandatory implementation payback calculation to include such factors as a future carbon price.

Driving more efficient industry

The amended powers under the *Environment Protection Act* (part of the *Climate Change Bill*), will enable the Government to make provisions in licensing and works approvals processes for the highest emitting general industrial and commercial sites. This means that, when approving large capital projects and granting licences for emissions intensive activities, the Government will be able to require that inefficient long-lived technology is not 'locked in'.

Through consultation with industry and the community, the Government will investigate how any regulations can best be used to encourage the installation of best practice technology and help position Victorian businesses to prosper in a lower carbon economy. This consultation will occur through a Regulatory Impact Statement, or equivalent, and will ensure that any measures introduced are complementary to existing State and Commonwealth policies and that any regulatory burden is minimised.

ACTION 6 – CREATING NEW OPPORTUNITIES IN AGRICULTURE, FOOD AND FORESTRY

06

FARMS AND FORESTRY

THE GOVERNMENT WILL TAKE ACTION TO SUPPORT VICTORIA'S VITAL AGRICULTURE, FOOD AND FORESTRY SECTORS IN MAKING A SUCCESSFUL TRANSITION TO A LOW CARBON FUTURE, AND ADAPT TO THE IMPACTS OF CLIMATE CHANGE.

The impacts of climate change are already affecting agricultural production and food supply chains in Victoria and globally.

Many farm, food and forestry businesses will need to undergo significant transformation. They will need to manage the risks associated with climate change, reduce emissions, adopt more sustainable practices, meet market expectations and benefit from carbon sequestration. In particular, drought and extreme weather events will have an impact on the viability of some agricultural businesses and systems.

The \$205 million Future Farming strategy has rolled out new support services for Victorian farm businesses and communities to help them adjust to changing economic, industry and environmental conditions.

The strategy includes:

- a *Planning for Climate Change* program, which is developing information, techniques, tools and research for farm businesses about climate change, carbon and bioenergy markets;
- funding to provide dairy, lamb, grains and horticulture farmers with new technologies and strategies to adapt their farming systems and practices in the context of a changing climate; and
- the creation of *Farm Services Victoria* (a new division in the Department of Primary Industries) to deliver services

that are better targeted to meet the needs of farm businesses in changing circumstances.

Agriculture may also play an important role in reducing greenhouse gas emissions, with emerging domestic and international carbon markets offering significant potential opportunities for landholders. Participating in such carbon offset markets can be a win-win for farmers by reducing greenhouse gases, improving productivity and providing other ecosystem and biodiversity benefits.

Agriculture, food and forestry businesses will be eligible for many of the supports and opportunities outlined in Action 5. In addition, the Government will introduce new measures to help farmers and land managers to reduce emissions and sequester carbon, while capturing broader productivity and ecological benefits.

Victorian Carbon Exchange

The Government will establish the Victorian Carbon Exchange to enable the purchase of Victorian offsets. Building on our existing leadership in the development of eco-markets, we will enable the general public and businesses to voluntarily offset their carbon emissions and be confident in the ecological and social integrity of their purchase. In the absence of a CPRS this will create a market incentive for Victoria's landholders and forest operators

to create offsets through activities such as soil carbon sequestration, changed farming practices and new forest plantations.

To support the *Carbon Exchange* the Government will:

- establish legal rights for landholders who voluntarily engage in vegetation and soil sequestration through the *Climate Change Bill*;
- establish clear rules under which Crown land can be used for carbon sequestration purposes in the *Climate Change Bill*;
- provide relevant and up-to-date information on the carbon stored in Victorian ecosystems and its implications for carbon markets through the *LandCarbon* project;
- develop a Victorian agricultural offset scheme if no national offset standard is in place by July 2011;
- invest in improving agricultural mitigation, adjustment and adaptation techniques, developing reliable monitoring and measurement systems; and
- introduce a voluntary *Vehicle Registration Offset Program* to enable the purchase of offsets in Victoria (see Action 7).

Victoria's agriculture, food and forestry sectors - including the key sectors of grains, horticulture and dairy - make a substantial contribution to the State's economy and are vitally important to the prosperity of regional and rural communities. These sectors face difficult challenges as a result of climate change and the move to a low carbon global economy.

06



Improving our understanding of carbon storage

The Government recognises that the sustainable management of Victoria's forests must achieve a balance between the maintenance of forest ecosystems, carbon cycles, biodiversity and sustainable timber harvesting.

While increasing organic carbon in soil could help to reduce greenhouse gas emissions and improve soil health, there are many aspects of soil carbon sequestration that are unclear or unknown.

The Victorian Government is investing to better understand the science and practices involved in maintaining and enhancing the amount of carbon stored in natural systems.

This new investment will improve our understanding of the sequestration of carbon on private and public land.

The Government will also consider the results of the Parliament of Victoria's *Environment and Natural Resource Committee (ENRC)* inquiry into soil carbon sequestration, which will report its findings in August 2010.

A new food strategy

Our food system is one area where sequestration opportunities, as well as the potential to reorganise production and distribution systems, may make it possible to achieve significant emissions reductions.

As outlined in *Ready For Tomorrow: A Blueprint for Regional and Rural Victoria*, the new *Victorian Food Strategy* will recognise the implications of climate change adaptation, the transition to a low-carbon economy and a move towards the more sustainable use of resources across the whole food system.

The strategy will set a course for a food future that is healthier for the economy, the environment and our communities through four key objectives:

- increase the competitiveness of Victoria's food businesses in domestic and international markets;
- enhance Victoria's vibrant food culture;
- improve Victorians' healthy eating patterns; and
- ensure Victoria's food system is safe, secure, sustainable and resilient.

Targeted consultation is occurring now and the strategy will be released in 2011.

TRANSPORT

FURTHER ACTIONS ON ELECTRIC VEHICLES, FUEL EFFICIENCY AND LOW-EMISSIONS TRAVEL OPTIONS WILL BUILD ON THE VICTORIAN GOVERNMENT'S UNPRECEDENTED LEVELS OF INVESTMENT THROUGH THE *VICTORIAN TRANSPORT PLAN*.

There is no single, simple solution for reducing emissions from transport; it will require action across a number of areas, from how and where we build our homes to changing our travel choices, habits and behaviour.

The \$38 billion *Victorian Transport Plan* will make it easier for Victorians to get around using public transport, transforming Victoria's transport network with more frequent and reliable trains, trams and buses.

Melbourne is also becoming a multi-centre city with a focus on new Central Activities Districts in Box Hill, Broadmeadows, Dandenong, Footscray, Frankston and Ringwood. This will reduce congestion, reduce the distance people need to travel to and from work and assist in reducing Victoria's emissions.

In regional Victoria, fast rail and improved bus services have dramatically increased travel by public transport.

The Government's walking and cycling strategies will also help people reduce their individual transport emissions and promote more active and healthy ways of getting around.

However, even with a strong shift towards public transport, we will still need to improve the fuel-efficiency of Victoria's cars and trucks through new technologies such as hybrids and electric vehicles.

Leading on electric vehicles

Electric vehicles offer an opportunity to dramatically reduce emissions from transport – as long as they are powered by clean energy. Actively supporting these vehicles will also

create new opportunities for the Victorian automotive industry to develop new markets and make Victoria a leader in the design of clean technologies (see Action 5).

In the short term, electric vehicles will need some Government support to increase their penetration in the vehicle market. The Victorian electric vehicle trial is about to get underway and will include around 50 cars on Melbourne roads, which will provide early support for the electric vehicle market. **To become a leader in electric vehicles, we must do more, which is why the Victorian Government will:**

- **provide additional support to encourage local design and manufacture of innovative electric and low-emissions vehicle technologies; and**
- **continue working with Standards Australia to develop nationally consistent technical, regulatory and safety standards for electric vehicles and recharging infrastructure.**

Backing better fuel efficiency

The Victorian Government has a strong track record of working with the Victorian automotive industry to ensure their competitive long-term future in this State. In moving to position the industry for next-generation vehicles, the Government will work with the Commonwealth Government and the automotive industry through the Commonwealth's Regulatory Impact Statement process to develop a national vehicle fuel efficiency target that reduces

transport emissions, while also benefiting the Victorian economy. Ultimately, this will improve the overall efficiency of Victoria's car fleet and allow Victorians to reduce their weekly petrol bills by choosing a more efficient car that suits their needs.

The Government will lead the way with a target of reducing its overall fleet emissions by 20% by 2015, starting with the purchase of 2,000 Camry Hybrids built in Melbourne.

The focus on next-generation vehicles will create opportunities for the Victorian automotive industry to become one of the world's leading designers and producers of competitive, large, powerful, zero emissions passenger vehicles.

A new offset program

The Government will also establish a new voluntary program that provides the opportunity for road users to offset their vehicle emissions as part of the registration process. This will help balance out emissions from the transport sector as well as encourage consumer awareness of the impact their vehicle use has on the environment. Funds from this program will be directed towards the *Victorian Carbon Exchange* (see Action 6) where it will support offset activities such as tree planting and changes to farming practices.

Registration discounts for low-emissions vehicles

The Government will double the existing \$50 registration discount for hybrid vehicles and also make electric vehicles eligible for the discount.

Transport is the second largest producer of emissions in Victoria. To reduce our emissions from this sector we need to make our cars more efficient, move more people by public transport and increase walking and cycling.

08

GOVERNMENT

THE VICTORIAN GOVERNMENT WILL CONTINUE TO LEAD AUSTRALIA IN REFORMING ITS OWN OPERATIONS AND PRACTICES, SETTING A NATIONAL BENCHMARK FOR GREENER GOVERNMENT.

Government services, such as hospitals and schools, create significant greenhouse gas emissions through the use of energy in buildings and vehicle fleets. Recognising its responsibility to lead by example, the Government will continue to reduce its environmental footprint.

A new target for energy efficiency

The Government has already achieved a 15% improvement in energy efficiency in Government buildings between 2000 and 2006, with an additional 5% efficiency improvement expected to be achieved by the end of 2011. The Government will now seek to improve energy efficiency by a further 20% across all government buildings and facilities including hospitals, schools and offices by 2018.

To achieve this goal the Government will:

- **invest a further \$100 million in the next stage of the Greener Government Buildings Program** (in addition to the \$60 million announced in *Jobs for the Future Economy*) to upgrade schools, hospitals and government buildings to reduce energy use and greenhouse gas emissions in government operations. This program will also create new jobs and stimulate the energy efficiency industry;
- **investigate the potential to install up to 50 MW of cogeneration in Victoria's existing hospitals.** This has the potential to reduce Victorian hospitals' emissions by around 14% if all opportunities can be realised; and
- **improve energy efficiency in our schools and fully incorporate climate change into our schools' curriculum** (see Action 10).

Committing to GreenPower

The Government is a proud supporter of the *GreenPower* scheme, which allows households, businesses and governments to reduce emissions through the purchase of renewable energy.

The Government will progressively increase its GreenPower commitment from the current 25% to 35% by 2015 and 50% by 2020.

This means that by 2020 half the electricity consumed by major departments and agencies will come from renewable sources, equivalent to the energy produced by a 100 MW wind farm.

Leadership by local government

Victorian local governments play a vital role in the response to climate change and have for many years provided leadership in taking practical, localised action on climate change. They are best placed to help their communities prepare for and respond to climate change impacts and to enable them to contribute to the broader response.

The *Victorian Local Sustainability Accord*, now in its second phase, has led directly to a number of local actions being taken to respond to climate change and environmental concerns, including the development of regional environment strategies, renewable energy projects, biodiversity projects and joint initiatives between councils. To promote further collaboration between the Victorian Government and local governments, **the Premier will host a Local Government Climate Change Summit in October 2010. Priorities for the Summit will include:**

- working with local government and energy distribution businesses to develop finance options to upgrade public lighting infrastructure with low carbon technologies, ensuring that this transition can be undertaken effectively, at low cost and in the shortest possible timeframe; and
- developing climate change adaptation plans at a regional level which will enable small towns to take charge of their futures by building partnerships to increase community participation and investment.

A good example of governments working together is the City of Melbourne's 1200 Buildings program, which aims to retrofit 1200 commercial buildings in the City to improve their energy performance and reduce emissions. Through the program, the Victorian Government is partnering with the City of Melbourne and CBD building owners, tenants, finance institutions and traders to deliver cost effective energy retrofitting that benefits owners and tenants, as well as the environment.

Embedding climate change in decision-making

The Government will ensure that climate change becomes a part of the mainstream business of government and is firmly embedded in public sector decision-making. Such an approach will improve policy making in Victoria by ensuring that the impacts of climate change are considered systematically at all relevant points of government decision-making and planning, and that climate change-related policies are integrated across government and between State and local government.

ADAPTATION

THE GOVERNMENT RECOGNISES THAT IT MAKES GOOD ECONOMIC AND ENVIRONMENTAL SENSE TO TAKE ACTION NOW TO ADAPT TO CLIMATE CHANGE.

Adaptation can take many forms: from upgrading buildings and critical infrastructure to changing agricultural practices and developing new ways to keep cool during a heatwave. Effective adaptation requires knowledge of climate change risks and likely impacts, as well as the capacity and ability to act on that knowledge.

To facilitate such adaptation, the Government has a clear role in providing accurate and accessible information to individuals, businesses and communities, and providing the right market, regulatory and institutional arrangements to enable private adaptation to occur. The Government can also assist particularly vulnerable groups of people and regions, and manage risks to public assets (such as roads and hospitals) and risks to goods and services.

A range of important sectors and systems will need to adapt to climate change in Victoria:

- Our natural environment and ecosystems will be affected by warmer temperatures.
- Buildings and critical infrastructure, such as our train and tram networks, roads, and bridges, will be affected by a range of climate impacts.

- Our water supply will need to cope with lower average rainfall.
- Agriculture and food systems will need to prepare for potentially longer, drier periods and changes in weather patterns.
- Health care and social services will need to assist vulnerable communities cope with heatwaves and other impacts.
- Emergency services will need to respond to more extreme weather events.
- Our cities, towns and regional areas will have to cope with more intense storms and floods.

Statewide Adaptation Plan

Through a statewide *Climate Change Adaptation Plan*, which will be required by the *Climate Change Bill*, the Government will work with the community to assess, at regular intervals, the risks to these key sectors and the priorities for climate change action across the State.

This will help to ensure climate change is built into the decision-making of government across the board.

Climate Change Preparedness Program

To assist local communities to adapt to the impacts of climate change the Government will create a *Victorian Climate Change Preparedness Program* to provide local industries and communities with tailored support and advice on how they can best manage their climate change-related risks.

The program will provide targeted assistance including up-to-date information and advice on appropriate risk management strategies, giving community access to successful examples of adaptation in industries and communities across Victoria and best-practice models internationally.

The process of adaptation is not new to Victorians, who are used to coping with our variable climate. Successful adaptation to more extreme weather events such as bushfires, drought, heatwaves and sea level rise will help Victorians manage the impacts on our homes, industries and landscapes. It will also help us create resilient and diverse communities capable of flourishing under a range of climate scenarios.

09

Further adaptation actions

In managing some of the major risks of climate change across Victoria, and to support communities and businesses build capacity to adapt to climate change, the Government, through a combination of initiatives in this *Action Plan* and *Ready For Tomorrow: A Blueprint for Regional and Rural Victoria*, will:

- expand Community Registers to ensure that local health providers are able to support the most vulnerable individuals in times of heatwave or climate-related events (and to complement the existing Heatwave Plan for Victoria);
- review the capacity of our emergency services sector to cope with the challenges of climate change, with the aim of improving the capacity of the sector to cope with the likelihood of more extreme events;

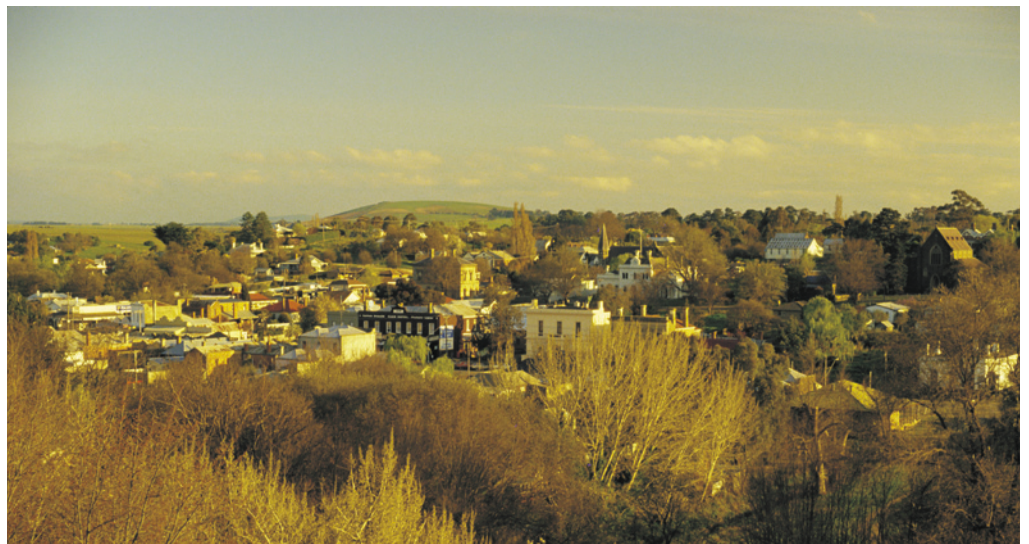
- prepare Victorians to anticipate, understand and respond to the adverse effects of future floods by investing in flood risk management measures;
- encourage small towns to work together to develop Community Adaptation Action Plans that will help them identify their risks and priorities for climate change adaptation;
- ensure that considerations of climate change are built into the risk assessments around all new infrastructure projects in Victoria; and
- plan for the coastal impact of climate change.

To better inform decision-makers about the potential impacts of climate change and adaptation options, the Government has established the *Victorian Centre for Climate Change Adaptation Research (VCCCAR)*. Recently, the first round of VCCCAR research priorities was announced along with over \$900,000 in funding.

National action

Action to help Australian communities prepare for the unavoidable impacts of climate change is a national priority requiring cooperation across all levels of government. Leadership by government to prepare and assist the community to respond to the effects of climate change is essential; however, at present the roles and responsibilities for climate change adaptation are not clearly defined.

Recognising this, Victoria has been helping to drive work through COAG to examine the role of government in addressing climate change adaptation and to identify principles for determining roles and responsibilities across the three tiers of government. This work will better enable governments to develop policies and programs that suit the adaptation priorities of all Australians.



CLIMATE COMMUNITIES

VICTORIA'S GROUND BREAKING *CLIMATE COMMUNITIES* PROGRAM WILL BE EXPANDED TO HELP LOCAL COMMUNITIES AND BUSINESSES ACROSS THE STATE TO ACT ON THEIR OWN SOLUTIONS AND IDEAS TO ADDRESS CLIMATE CHANGE.

Across Victoria, much local and community action is already underway with the support of the Victorian Government, including:

- the development of a low energy display home by the Mount Alexander Sustainability Group, who worked with a local builder to design, construct and then 'lease' the house as an education centre and the basis of a sustainable living education program;
- the Hepburn Community Wind Park, a community owned wind farm, which will ultimately produce enough electricity for almost all households in Daylesford and Hepburn Springs; and
- the E.W. Tipping Foundation's Sustainability Stars program, a practical, accessible program for people with disabilities, empowering them to make their own choices for a more sustainable lifestyle.

In early 2010 the Government allocated \$23 million to the *Climate Communities* program to fund regional facilitators and provide grants to support more Victorians to take action on climate change at home and within their communities. This program provides grants of up to \$50,000 to community groups to undertake action on climate change and is now being expanded to include small businesses.

Actions eligible for a *Climate Communities* grant range from relatively small initiatives (such as installing light bulbs in low

income households or promoting walking or cycling) to larger projects (such as partnering with local businesses to cut emissions) and will focus on one of three key objectives:

- *reduce emissions* – for example, through retrofitting a community hall to reduce energy use or establishing a shared transport scheme;
- *build community resilience* to adapt to climate change, through projects that educate the community on sustainable practices or by supporting a community leader, or volunteer, to undertake sustainability training in order to support their community to adapt; and
- *trial and/or promote new ideas* to help tackle climate change, such as a pilot program on reducing waste at a local sports club or assisting in the establishment of a new energy cooperative that will trial a new, clean technology.

To ensure that *Climate Communities* groups are linked up and able to share resources, the program has funded nine *Climate Communities Facilitators*. These facilitators will work with local communities across the State to encourage voluntary action by providing expert advice, research, information and assistance with grant applications.

To support Victorians reduce energy use at home, and within the broader community, the Government is expanding the *Climate Communities* program.

This expansion will deliver a broader range of initiatives across four 'streams': households, businesses, community groups and schools (see overleaf).

The expanded *Climate Communities* program also includes a statewide behaviour change program. This program will build on the successful Black Balloons - *You have the power*; *Save Energy* - campaign. Through this campaign, Victorians will be encouraged to adopt a personal energy savings target, similar to the Target 155 water campaign, which has been successful in harnessing community action to create substantial water savings across Victoria.

A new *Climate Communities* web portal will provide access and information on the full range of programs, services and incentives for taking action on, and responding to, climate change.

In our schools, the *Climate Communities* program will build on the AuSSI Vic program to ensure a holistic approach to sustainability in education that is implemented through curricula, infrastructure, operations and school-community partnerships.



Many Victorians are already taking positive action to respond to climate change and improve the liveability of their communities with a focus on reducing energy and water use, accessing renewable energy and making the most of new opportunities.

CLIMATE COMMUNITIES

CLIMATE COMMUNITIES - EMPOWERING COMMUNITIES TO CHANGE

Households	Businesses	Community Groups	Schools
<p>Empowering Victorian households</p> <p>Climate Communities will strive to change the behaviour of Victorian households through a mix of information and advice, labelling, financial incentives and more convenient services.</p> <p>Initiatives will include:</p> <ul style="list-style-type: none"> • Expansion of the Black Balloons program to motivate all Victorian households to reduce energy use and access energy efficiency programs • A single web portal providing access to all Victorian Government programs, services and rebates relating to climate change and sustainability • Programs promoting sustainable food and transport choices • Home assessment, retrofit, information and advice services to complement existing measures to improve the energy performance of Victoria's housing stock 	<p>Driving climate change opportunities and adjustment</p> <p>Climate Communities will highlight leading business efforts on sustainability and encourage businesses to undertake sustainable improvements that will underpin increased competitiveness and profitability.</p> <p>Initiatives will include:</p> <ul style="list-style-type: none"> • Support for small and medium enterprises undertaking projects that will improve energy efficiency, boost productivity, lower operating costs and reduce carbon emissions • Providing business with coordinated information, tools and education activities, including the rollout of 5 Star Sustainability Tools for business and industry, that will help with planning for the future. Programs will also be delivered through partnerships, networks and forums with business associations to promote sustainability and long term behaviour change • Access to innovative technologies and practices, and identification of new industry opportunities • Programs that encourage efficient use of resources along supply chains to help businesses increase profitability and lower carbon emissions 	<p>Enabling change in Victorian communities</p> <p>Climate Communities will provide new opportunities for community groups and clubs to undertake climate change and sustainability initiatives. It will also promote community sustainability leaders and 'champions' and showcase local projects to encourage a broader range of people to take part in community responses to climate change.</p> <p>Initiatives will include:</p> <ul style="list-style-type: none"> • Local leadership programs, which will use local leaders and identities to encourage voluntary action on climate change • Precinct-based facilitators – a program in which facilitators will help residents and workers in sustainable precincts to develop local solutions that go beyond buildings • Support for existing local sustainability and climate change networks to continue building knowledge and capacity within communities 	<p>Education for sustainability – ResourceSmart AuSSi Vic</p> <p>Climate Communities will promote behaviour change through the formal education sector by extending the existing ResourceSmart AuSSi Vic program to all Government primary and secondary schools, and selected early childhood and tertiary facilities.</p> <ul style="list-style-type: none"> • This will continue the education of young people about sustainability as they move from their early years to adulthood. It will also provide the wider Victorian community with access to education and behaviour change programs through universities, TAFEs and other training organisations. • AuSSi Vic modules encourage awareness raising, strategic planning, practical action and environmental leadership within schools and their wider communities.

ACTION PLAN FUNDING

CLIMATE CHANGE FUNDING

Program	Total 2010-2015 \$m
New funding announced since November 2009	
Climate Communities - Stage 1	23
<i>Securing Our Natural Future: A White Paper for land and biodiversity at a time of climate change</i>	105
<i>Jobs for the Future Economy</i>	175
<i>Ready for Tomorrow: A Blueprint for Regional and Rural Victoria</i>	19
Subtotal	322
New funding earmarked over 4 to 5 years	
Budget funds	52
Sustainability fund	106
CarbonNet funding from Budget	30
ETIS pilot scale funds	41
Greener Government Buildings - (TCV loans)	100
Subtotal	329
TOTAL	651

SUMMARY OF KEY ACTIONS IN TAKING ACTION FOR VICTORIA'S FUTURE

TAKING ACTION FOR VICTORIA'S FUTURE VICTORIAN CLIMATE CHANGE WHITE PAPER - THE ACTION PLAN

1 Legislating to cut Victoria's greenhouse pollution by at least 20%	<ul style="list-style-type: none"> • Reduce greenhouse gas emissions in Victoria by at least 20% by 2020 • Introduce the <i>Climate Change Bill</i> into Parliament, legislating Victoria's target, establishing frameworks for measuring and reporting on climate change actions and embedding climate change considerations into Government programs and decisions • Enable the setting of a greenhouse gas trigger for large emitters
2 Moving towards a cleaner energy future	<ul style="list-style-type: none"> • Reduce emissions from Victorian brown coal-fired generators by up to four million tonnes over the next four years • Prohibit new approvals for conventional brown coal-fired power stations • Fund further development of the CarbonNet 'CCS hub' Project • Support the Latrobe Valley to transition to a low carbon economy
3 Making Victoria the Solar State	<ul style="list-style-type: none"> • Introduce a new Large Scale Solar Feed-in Tariff • Provide more support for medium scale solar facilities • Establish 10 Solar Energy Hubs to deliver community-based solar power • Streamline planning decisions to support gas and renewables projects • Share the benefits of renewable energy through adoption of a 'shared benefits' approach to investment • Establish a new grants program for sustainable energy research and development
4 Supporting cleaner and more efficient homes	<ul style="list-style-type: none"> • Set a target of 5 Star equivalent energy rating across existing homes by 2020 • Double the current target of the <i>Victorian Energy Saver Incentive</i> • Introduce a comprehensive household retrofit program • Offer more rebates for solar hot water installation • Require mandatory disclosure of home energy performance at point of sale or lease
5 Positioning Victoria to be a global leader in clean technology	<ul style="list-style-type: none"> • Develop a new ClimateTech Strategy to position Victoria as a top-5 global leader in clean technologies and climate solutions • Establish a new Clean Business Fund • Expand the <i>Environment and Resource Efficiency Plans</i> program for business • Allow SMEs to participate in the <i>Energy Saver Incentive</i> to reduce emissions and cut costs for business • Enable a greenhouse trigger to drive industry best practice through licensing of sites above a threshold of emissions

6 Creating new opportunities in agriculture, food and forestry	<ul style="list-style-type: none"> • Establish the <i>Victorian Carbon Exchange</i> to drive the creation and purchase of Victorian offsets • Set the course for a sustainable food future through the Victorian Food Strategy • Invest more in understanding carbon storage in natural systems
7 Delivering innovative transport solutions	<ul style="list-style-type: none"> • Support for the electric vehicles market • Establish a new voluntary emissions offset program for road users • Reduce emissions from the Government vehicle fleet by 20% by 2015 • Advocate for a national fuel efficiency target
8 Greening Government	<ul style="list-style-type: none"> • Improve energy efficiency by a further 20% through the next stage of the Greener Government Buildings Program • Investigate the potential for cogeneration power plants to be established in hospitals • Increase Government GreenPower commitment from 25% to 50% by 2020 • Support local government leadership in climate change, through the Victorian Local Sustainability Accord and the Streetlight Replacement Program • Introduce education on climate change into the curriculum of even more schools through the expanded AuSSI Vic program • Embed climate change considerations into government decision making
9 Helping Victorians adapt to climate change	<ul style="list-style-type: none"> • Implement a <i>Statewide Climate Change Adaptation Plan</i>, and community-based <i>Climate Change Preparedness Programs</i> to ensure Victoria is prepared for the challenges of climate change • Establish Community Registers to ensure support for more vulnerable members of our community • Ensure climate change considerations built into risk management programs and planning for coastal areas
10 Strengthening our Climate Communities	<ul style="list-style-type: none"> • Expand <i>Climate Communities Grants</i> program, with regional facilitators to support local action • Introduce a new Statewide behaviour change campaign • Ensure access to comprehensive information, advice and support for action on climate change, through the new <i>Climate Communities Web Portal</i>

NEXT STEPS FOR IMPLEMENTATION OF *TAKING ACTION FOR VICTORIA'S FUTURE*

Since the Climate Change Summit in 2008, the Government has consulted widely about possible policies and actions to include in Victoria's climate change response. The Government has also received many submissions from members of the public, expressing their concerns about the impacts of climate change and putting forward their ideas and suggestions. These consultations and submissions have been considered by the Government in preparing this *Climate Change White Paper Action Plan*.

The Victorian Government is now moving into a more targeted consultation process, which will focus on how we implement these actions.

Over the coming months we will be conducting Regulatory Impact Statements on key initiatives and

seeking direct input from groups and individuals directly affected by these new initiatives, to ensure we have a smooth transition. We will take on board the views of business and community groups on the best way to implement *Taking Action for Victoria's Future* together. Critical amongst these will be discussions with the Commonwealth Government and Victoria's brown coal generators to reduce emissions from brown coal-fired plants by up to four million tonnes by 2014.

We will also introduce the *Climate Change Bill* and establish the Premier's Leadership Forum on Climate Change, which will have representatives from business, unions and community, to ensure Victoria is able to meet our 20% emissions reduction target by 2020.

**For more information and updates
visit the Victorian Government's
climate change website at
www.climatecommunities.vic.gov.au**

