



Independent
Review of the

Climate Change Act 2010



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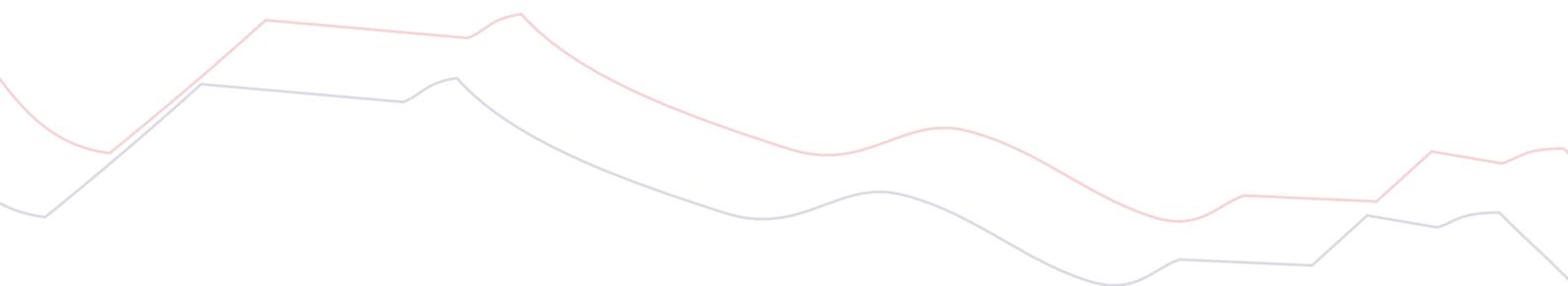
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Foreword

In the late 1980s, when the first calls went out from world leaders to halt potentially catastrophic warming of the planet, climate change was widely considered a future problem. Now, more than 25 years later, it is very much in the present: climate change is happening all around us.

Victoria's natural environment, the economy and individual communities are already experiencing challenging impacts from climate change. Average temperatures are higher, droughts have been getting longer and bushfire seasons more unpredictable. All are clear indicators of where we are heading if the world continues to drag its feet on tackling human-induced climate change. There has never been a more urgent time for strong, decisive action.

According to climate scientists, the next decade will be a critical period for current and future generations. The level of action taken to address climate change over this period – collective action by governments, businesses, communities and individuals around the world – will determine if the rise in global temperature can be held well below 2 degrees Celsius above pre-industrial temperatures. Communities are looking to governments to provide leadership, and the Victorian Government has committed to fulfil this leadership role under its 2014 *Our Environment, Our Future* statement.

The Victorian government referenced this leadership objective when appointing the Independent Review Committee (IRC) to review the *Climate Change Act 2010* (the Act).

When it comes to action on climate change, attention is inevitably focused on what national governments are doing and saying. However, states and other sub-national governments also have critical roles to play in climate change mitigation and adaptation, indeed, many of the sectoral policy responses are in state rather than federal powers. The commitments of all levels of government to tackle climate change has been front and centre of the negotiations at the recent 21st Conference of the Parties (COP21) to the *United Nations Framework Convention on Climate Change* (UNFCCC) in Paris.

The success of sub-national climate change action has been highlighted at COP21, where the Paris Agreement emphasised the need to hold the increase in the global average temperature to well below 2 degrees above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5 degrees,

including through initiatives such as the Global Climate Leadership Memorandum of Understanding.¹ The IRC believes that the trend for action at a sub-national level will continue to increase over time. The targets agreed to in Paris are now the minimum basis for action, and the Victorian Government should be adopting such targets as part of its commitment to be a leader on climate change.

We have long known that the costs of inaction on climate change will eventually far outweigh the costs of acting early. Timely, decisive government action to deal with climate change:

- ▲ Mitigates future impacts, thereby protecting communities and the environment, and avoiding costs to the economy;
- ▲ Positions states to deal with a changing climate, and to adapt and plan for natural disasters that are caused or exacerbated by climate change;
- ▲ Drives innovative solutions to complex problems, yielding social, economic and environmental benefits for states; and
- ▲ Competitively positions states to take advantage of emerging opportunities.

The IRC believes that an Act that deals specifically with climate change plays an important role and signals the serious commitment of the State Government to deal with climate change through a binding legislative instrument. While it sets a clear framework for dealing with climate change, it is not sufficient, on its own, to govern all aspects of Victoria’s response to climate change. However, it is critical that it is seen as one part of the Government’s broader

legislative and policy agenda to deal with climate change. It works alongside measures to support renewable energy, vehicle emission standards and electric vehicles, energy efficiency and other measures to achieve climate change mitigation and adaptation that are not directly covered by the Act.

In reviewing the Act and assessing its effectiveness, the IRC has been guided by the principles of best-practice regulatory design² and the need for Victoria to have a durable, fit-for-purpose legislative framework to deliver its policy objectives. Critically, the IRC envisages an Act that:

- ▲ Drives co-operation and collaboration across all government departments and provides a sound framework for government leadership;
- ▲ Sets long-term objectives for climate change mitigation and adaptation and disaster risk reduction;
- ▲ Co-exists with any national action without duplication or contingency or new national law;
- ▲ Provides a framework within which effective and efficient policy can be developed and implemented;
- ▲ Promotes decision making based on best-available science linked to clear objectives;
- ▲ Provides long-term policy certainty to enable businesses and communities to plan and invest;
- ▲ Drives linkages across government’s broader policy agenda – for example across economic, social, education, transport, agricultural, energy and emergency management policies;

1. Subnational Global Climate Leadership Memorandum of Understanding, *Under2MOU*, <<http://under2mou.org/>>. The Under2MOU aims to have sub-national governments to commit to reduce their greenhouse gas emissions by 80–95%, or to limit to 2 metric tons CO₂-equivalent per capita, by 2050.

2. Government of Victoria, *Victorian Guide to Regulation*, Department of Treasury and Finance (2014).

- ▲ Makes climate change relevant to the design and implementation of all government policy and programs;
- ▲ Provides a strong foundation for public participation; and
- ▲ Drives accountability and transparency for decision making, while providing processes for performance monitoring, evaluation and continual improvement.

The proposed changes to the Act provide a comprehensive framework in line with Victoria's objective to be a leader in climate change action. If adopted, the changes to the Act would:

- ▲ Set a long-term target in legislation implemented via interim five-year targets;
- ▲ Embed a strategic integrated response to climate change by the adoption of a *Victorian Climate Change Strategy*;
- ▲ Promote consideration of climate change across all government decision making, policies and programs;
- ▲ Embed strong monitoring and reporting requirements;

- ▲ Ensure transparency, accountability and access to justice; and
- ▲ Require reporting to assess climate change risks to Victoria and to monitor progress of responses to those risks.

In conclusion, as indicated by the Paris Agreement, most countries of the world are committed to a global decrease in greenhouse gas (GHG) emissions. Most are, or will be through the Paris Agreement commitments contained in their intended nationally determined contributions, investing in de-carbonisation and adopting comprehensive measures to deal with climate change. Action on climate change is fundamental to the long-term health of Victoria, its economy, its environment and its people. There is an obligation on the State Government to take action, including by adopting the framework provided by the Act.

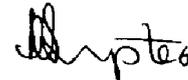
It has been our privilege to have undertaken this review for Victoria and we wish to thank the IRC secretariat for all of their invaluable assistance during the Review.



Martijn Wilder AM
Chair
30 December 2015



Anna Skarbek
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Professor Rosemary Lyster
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Independent Review Committee

Martijn Wilder AM (Chair)



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Anna Skarbek (Member)

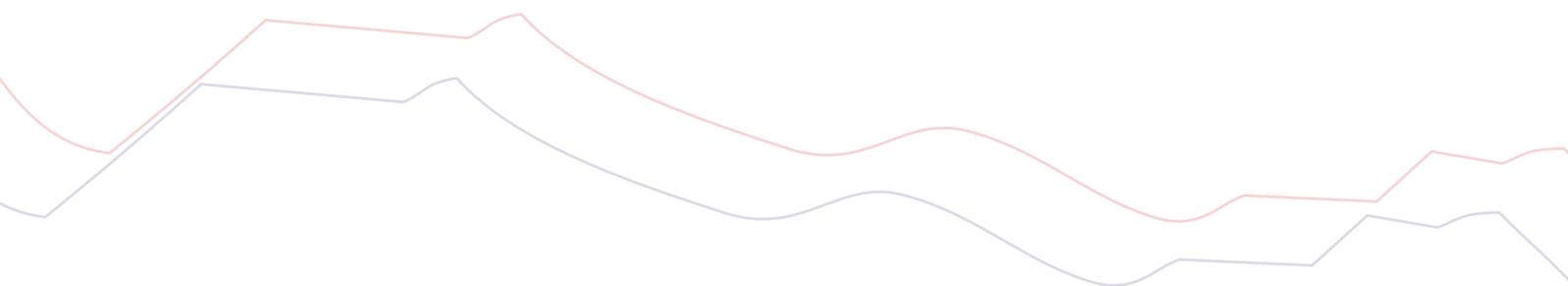


Anna is CEO of ClimateWorks Australia, leading the organisation's work in analysing emissions reduction opportunities and partnering with business and government on unblocking barriers to their implementation. Anna is also a Director of the Clean Energy Finance Corporation, a trustee of the Sustainable Melbourne Fund, member of the South Australian Government's Low Carbon Economy Expert Panel, and the Grattan Institute's Energy Program Reference Panel. She is a former Director of the Carbon Market Institute and of the Linking Melbourne Authority. She was a member of the Australian Government's Energy White Paper Reference Panel, Land Sector Carbon and Biodiversity Board and NGO Roundtable on Climate Change. Anna is an experienced investment banker, policy adviser and qualified lawyer.

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Rosemary is the Professor of Climate and Environmental Law at Sydney Law School, The University of Sydney. She is also the Director of the faculty's Australian Centre for Climate and Environmental Law. In 2013, Rosemary was appointed a Herbert Smith Freehills Visiting Professor at Cambridge Law School and was a Visiting Scholar at Trinity College, Cambridge in 2009 and in 2014. Rosemary is internationally recognised for her research in the area of climate law spanning almost two decades. She has published four books in the area of Energy and Climate Law with Cambridge University Press. Her most recent book is *Climate Justice and Disaster Law* (Cambridge University Press: 2015). Rosemary is a former consultant to PricewaterhouseCoopers Legal (2001–2006) and King & Wood Mallesons (2006–2013).



Executive summary

The *Climate Change Act 2010* (the Act)

The Act was passed by the Victorian Parliament in September 2010 and came into effect on 1 July 2011.

Review of the Act

The Act was reviewed in late 2011, triggered by the introduction of the *Clean Energy Act 2011* by the Commonwealth Government.

This, the second Independent Review of the Act, is required under section 18 of the Act. The Minister for Environment, Climate Change and Water appointed the Independent Review Committee (IRC) to undertake the Review in mid-2015. Terms of reference issued by the Minister require the IRC to consider the effectiveness of the Act in achieving its objectives and to identify options and make recommendations to strengthen the Act.

Public submissions were invited from 6 July to 10 August. More than 100 individual submissions were received, along with more than 1550 campaign submissions. Individual submissions can be viewed on the Department of Environment, Land, Water and Planning (DELWP) website.³

Context for the review of the Act

The review of the Act is occurring within the following context:

- ▲ The conclusion of the Paris Agreement at the 21st Conference of the Parties (COP 21), which emphasises the need to hold the increase in the global average temperature to well below 2 degrees Celsius above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5 degrees;

3. Department of Environment, Land, Water & Planning, *Climate Change*, <<http://www.delwp.vic.gov.au/climate-change-act>>.

- ▲ The Government's commitment to restore Victoria as a climate change leader, and what this means given the leadership demonstrated by other jurisdictions; and
- ▲ The increasingly important role of sub-national governments and non-state actors in taking action on climate change, such as the Under2MOU,⁴ which calls on sub-national governments to commit to reducing their greenhouse gas emissions (GHG) by between 80 per cent and 95 per cent, or to limit emissions to 2 metric tons CO₂-equivalent per capita, by 2050.

In undertaking the Review, the IRC analysed leading international approaches to climate change action and legislation at the national and sub-national levels. In developing its options and recommendations for improving the Act, the IRC was guided by the principles of best-practice regulatory design, drawing on the experiences of other jurisdictions, and the need for Victoria to have a durable, fit-for-purpose legislative framework to deliver its policy objectives.

Finally, the IRC also notes that this Review is taking place alongside a number of other reviews, including the Environment Protection Authority (EPA) Inquiry. These reviews may affect the role that such agencies are able to play, including in relation to this Act.

The science is clear

The international community has agreed to the aim of limiting global warming to well below 2 degrees Celsius above pre-industrial global temperatures and pursuing efforts to limit the temperature increase to 1.5 degrees. The Intergovernmental Panel on Climate Change (IPCC), in its Fifth Assessment Report, concluded that global emissions will need to be reduced by up to 72 per cent by 2050 compared with 2010 levels, and by up to 118 per cent by 2100, for it to be likely that global average temperatures increases can be kept below 2 degrees.⁵

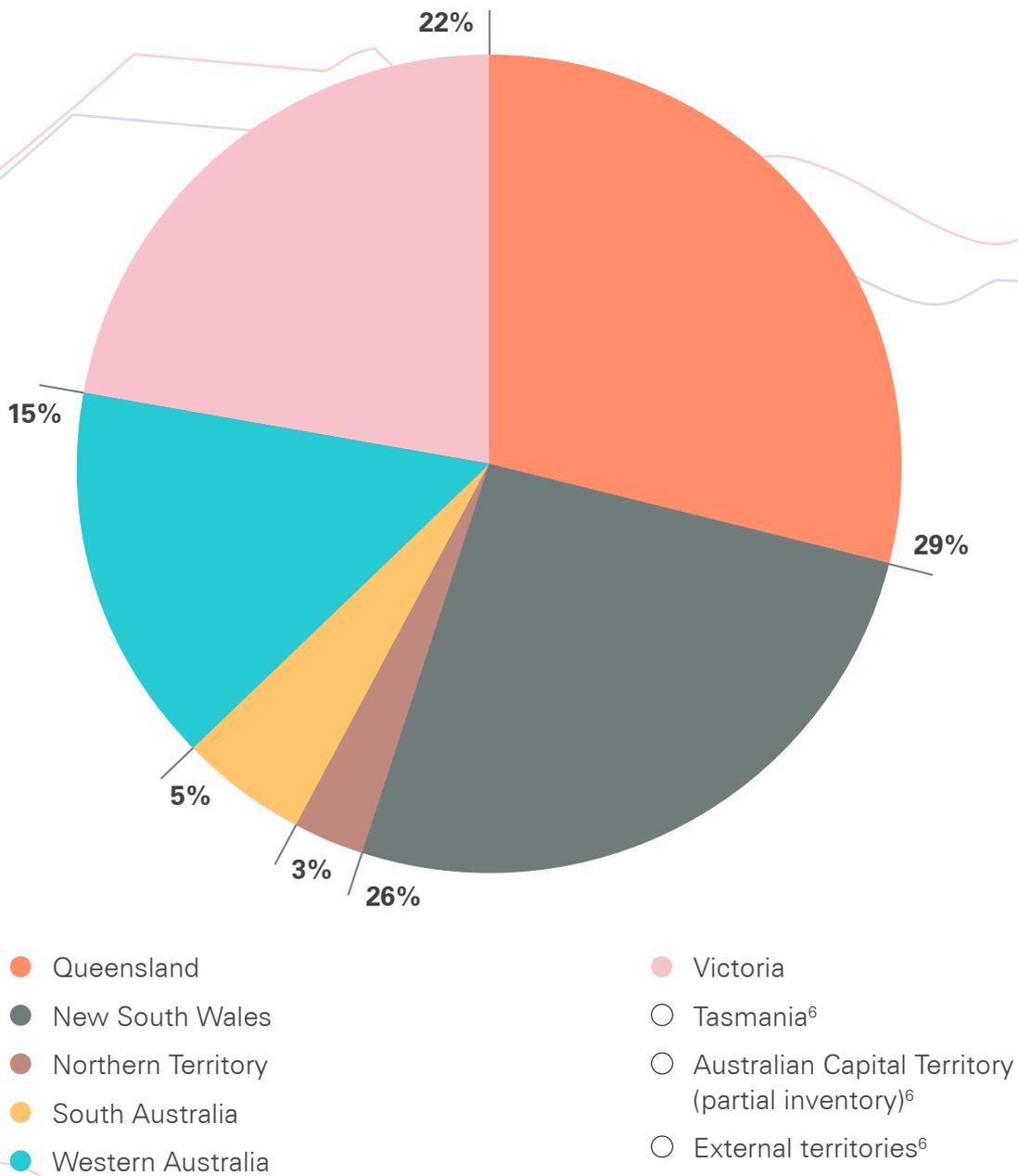
All jurisdictions will need to restructure and reduce their GHG towards net zero by the middle of this century. In addition to urgent, strong mitigation action, the international community has also recognised the need to adapt to, and minimise, the inevitable impacts of climate change, which we are already starting to experience.

State governments can provide a clear pathway for the transition to a low-carbon economy. A common theme, raised in the submissions to this Review, was that the Act should facilitate an integrated, whole-of-government response to climate change across all levels and areas of government.

4. Subnational Global Climate Leadership Memorandum of Understanding (Under 2 MoU), II (A).

5. IPCC, *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)] (IPCC, Geneva, Switzerland 2014). p13

Figure A: State and territory shares of national emissions, 2013



Source: Australian Greenhouse Emissions Information Systems

6. Emissions less than 0.5%.

Sub-national jurisdictions are raising the bar on climate change leadership

Globally, sub-national governments have been demonstrating strong leadership on climate change action. Three of Australia's states and territories – South Australia, Tasmania and the Australian Capital Territory (ACT) – have set targets to reduce their emissions,⁷ with South Australia most recently committing to net zero emissions by 2050.⁸

Victoria's GHG emissions are greater than South Australia's, Tasmania's and the ACT's combined, due to greater population and economic activity. Victoria also faces disproportionate risks, both from the direct impacts of climate change and from the fact that failing to decarbonise and develop new industries would expose its economy to more competitive decarbonised economies that are well down the path of transition. This is particularly relevant given the extent to which other economies are already decarbonising.

There is clear evidence that economic growth and emissions can be decoupled, and many states are well ahead of Victoria in positioning their economies for a low-carbon future. When viewed within the context of leadership, there is a big gap between where other jurisdictions are heading and where Victoria is currently positioned. If Victoria wants to capitalise on the opportunities from the inevitable transition to a carbon neutral world economy it needs to act quickly and decisively. A modern legislative framework is a critical building block for such action.

Aligning Victoria's legislative framework with international best-practice

In preparing this report, the IRC has based a number of its recommendations on the United Nations Framework Convention on Climate Change (UNFCCC) process, for example:

- ▲ Targets which are based on the best available scientific evidence;
- ▲ A bottom up pledge and review approach;
- ▲ A ratchet approach under which interim targets can be continually strengthened;
- ▲ Five yearly reviews to align with the UNFCCC reporting process; and
- ▲ Linking adaptation and disaster risk reduction.

By doing this, the IRC has provided the Victorian Government with an opportunity to deliver a best practice legislative framework for climate change action which would position Victoria to deal with the real challenges of climate change.

A Victorian emissions reduction target

The terms of reference for the Review included a requirement to examine 'whether legislation is the most appropriate mechanism for an emissions reduction target'.

Incorporating targets into legislation delivers:

- ▲ An *internal signal* to the rest of government about the priority a government is attaching to an issue. The political pressure to achieve them will be increased.
- ▲ An *external signal* of the seriousness of a government's intent.⁹

7. Tasmania has an emissions reduction targets of 60% below 1990 levels by 2050. ACT targets are 40% below 1990 levels by 2020, 80% below 1990 levels by 2050 and zero net emissions by 2060.

8. South Australian Government, *South Australia's climate change strategy 2015–2050. Towards low carbon economy* (2015).

9. Institute for Government, *Legislated Policy Targets: commitment device, political gesture or constitutional outrage?* (2012).

The IRC recommends that the Act include a long-term emissions reduction target that is based on the best available science and that can be adjusted in light of new information, but which at the very least places Victoria on a pathway to pursuing efforts to limit the temperature increase to 1.5 degrees, in line with the Paris Agreement of December 2015.

The Act should also support the development of a stable and long-term policy framework needed to facilitate the orderly transition to a low-carbon economy and a climate resilient Victoria.

A climate change charter

A key weakness of the Act is that it does not effectively promote the consideration of climate change in government decision making. Although the current principles are sound (with the exception of complementarity), only the Minister must have regard to them when developing the *Climate Change Adaptation Plan* and may have regard to the principles when issuing ministerial guidelines. Under section 14 (the decision-making framework) of the Act, there is no requirement on those making decisions under the Acts listed in Schedule 1 to consider the principles. Furthermore, no guidelines have been issued on how climate change should be considered when making decisions under the Acts listed in Schedule 1. The result is that climate change is poorly embedded across government decision making.

To address these deficiencies, a *Charter of Climate Change Objectives and Principles* (the Charter) should be introduced into the Act. The proposed Charter would define climate change objectives for Victoria and set out principles to guide the delivery of those objectives across the whole of government. All government policies, plans, programs and operational decision making such as government procurement must have regard to the Charter. In addition, all decisions relating

to the Acts listed in Schedule 1, should also have regard to the Charter, which will require section 14 to be updated as noted below. Finally the Act should also specifically require that the *Victorian Climate Change Strategy* and its subcomponents are consistent with the Charter (see Figure 4.2). The Charter would also signify to the public the importance that the Victorian Government places on responding to climate change.

Decision making

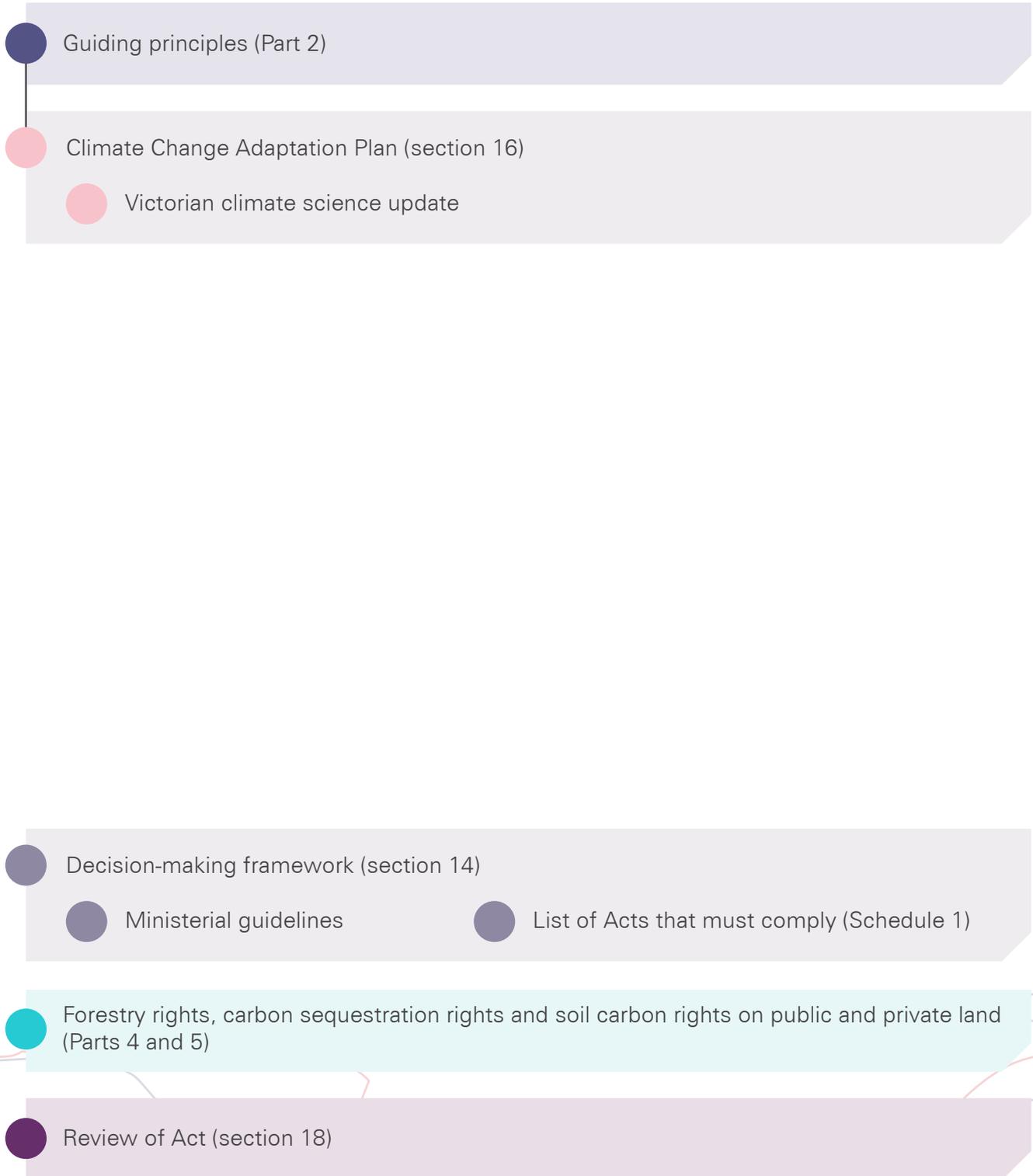
As noted above, section 14 of the Act establishes a decision-making framework with respect to various Acts listed in Schedule 1. This aims to facilitate the consideration of climate change issues into decisions listed in Schedule 1. The framework creates a legal obligation on decision makers to have regard to a range of climate change matters as specified in that section. It forms part of the mandatory relevant considerations to which the decision maker should have regard to in making a decision.

Schedule 1 of the Act lists the decisions or actions and Acts to which the decision-making framework applies. Although climate change was reported to have been considered in all the decisions, the IRC has found that the degree to which it was considered varied, as discussed later in this report.

To improve the efficacy of the decision-making provisions of the Act, section 14 should be updated to align with the Charter, for example by requiring consideration of how a decision will impact the achievement of the emissions reduction target. This would ensure that decision making is consistent with the long-term policy objectives of the Act. The Government should also review the decisions and actions currently listed in Schedule 1 to establish whether they are those most likely to require an assessment of climate change impacts or risks, or whether they will significantly impact the delivery of climate change mitigation and adaptation and disaster risk reduction outcomes.

The illustration below shows the minimal linkages in the operation of the current Act, compared with the integrated, self-reinforcing Act being proposed by the IRC. It describes the relationships between the Charter, the decision-making framework and the suite of tools proposed by the IRC.

Climate Change Act 2010



Proposed changes



Schedule 1 should also be expanded to include decisions or actions made under a broader range of Acts that are likely to require an assessment of climate change impacts or risks or whether they will significantly impact the delivery of mitigation and adaptation and disaster risk reduction outcomes.

To improve the operation of the Act, the Minister should also publish ministerial guidelines to assist decision makers to understand their statutory obligations under the Act.

To ensure robust and lawful decision making, the IRC recommends broadening legal standing to enable certain individuals and groups to challenge the legality of decisions to which the framework applies. This will improve statutory compliance and accountability, and ensure that government decisions are consistent with Victoria's best practice regulatory principles. The Government should also consider the possibility of merits reviews of specified Schedule 1 decisions in certain circumstances.

For Victoria the risks and liabilities that climate change presents can increasingly be quantified in terms of their economic cost. Growing numbers of companies, investors and governments are using different tools to assess their liability and exposure arising from carrying out activities that either emit greenhouse gases or contribute in some way to the climate change issues. Equally where climate change impacts are likely to affect the value of a business or investments, companies and investors are increasingly aware of how to quantify such exposure in economic terms.

To further support the consideration of climate change in decision making, the Government should introduce a requirement to consider, calculate and quantify, based on clear and transparent measures, the potential future liability arising from

government actions, decisions, procurement, and investments that will result in the emission of greenhouse gases or in some other way contribute to climate change, as well as the costs that could accrue to the state from a failure to manage current or future climate change risks. This may include measures such as shadow carbon pricing or costing climate mitigation measures that could be required with new infrastructure to protect it from floods, bushfires and sea level rises.

Conversely where climate change is a driver of government support for new low carbon industries such as renewable energy, electric vehicles or energy efficiency the State should also be able to measure the economic benefits to the Victorian economy such as from increased employment and investment inflows.

This initiative would:

- ▲ Drive the explicit consideration of the impacts of climate change and GHG emissions as a factor in decision making which leads to better informed decision making;
- ▲ Encourage the procurement of low-carbon goods and services;
- ▲ Get the best long-term and life-cycle value from assets;
- ▲ Assist in understanding the economic benefits of transitioning to a low carbon economy; and
- ▲ Demonstrate that the Government is leading by example.

Tools to embed climate change action

A climate change strategy

To effectively address climate change, the Government needs to clearly define the risks of climate change to Victoria and the desired

outcomes and objectives across mitigation and adaptation and disaster risk reduction, as well as to provide a framework for action.

For these reasons, the existing requirement to prepare a Climate Change Adaptation Plan should be replaced with the requirement to produce a five-yearly *Victorian Climate Change Strategy* (the Strategy) that addresses climate change mitigation and adaptation and disaster risk reduction.

To best achieve an integrated approach to dealing with climate change under the Act, as recommended by the IRC, all elements of the Strategy must be consistent with the Charter.

Tools for adaptation and disaster risk reduction

Extreme weather events such as heatwaves, storms and floods are having an increasing impact on the environment and human lives. Apart from the economic, physical and emotional toll that such events take on individuals, and the devastating impacts on the natural environment, the Victorian economy itself also faces a major and ongoing risk from an expected increase in the number and intensity of extreme weather events. Since 2003, the cost of extreme weather events in Victoria has been estimated at nearly \$8 billion.¹⁰ As we face the likelihood of further increases in extreme weather influenced by climate change, it is imperative that the Victorian Government becomes more active in adaptation planning and disaster risk reduction.

To this end, the Strategy should include a dedicated adaptation and disaster risk reduction component that:

- ▲ Specifies the risks and likely economic costs of climate change to Victoria;
- ▲ Articulates long-term and medium-term adaptation and disaster risk reduction objectives;

- ▲ Identifies the opportunities for private sector involvement; and
- ▲ Delivers a risk assessment and priorities for the five-year period.

The Act should also introduce a requirement for each lead department identified in the Strategy to develop an *Adaptation and Disaster Risk Reduction Action Plan* (ADRRAP).

ADRRAP

ADRRAPs should contain short-term and medium-term objectives for adaptation and disaster risk reduction. They should also contain proposals and actions (including timeframes) to address the risks and priorities identified in the Strategy, performance indicators, and an assessment of the relevant departments' disaster and adaptation readiness. It is important that the ADRRAP process is integrated with Victoria's Emergency Management Framework.

Tools to drive emissions reduction

The Strategy should contain an emissions reduction component that:

- ▲ Summarises the Government's policies and actions for meeting the state's interim target;
- ▲ Contains each department's pledge to meet its share of the state's interim target based on emissions under that department's control for the forthcoming five-year period including, if necessary, an explanation for any gap between the aggregated pledges and the state's interim target; and
- ▲ Includes each department's *Low Carbon Growth Plan* setting out the actions that they plan to take to meet the state's interim target.

10. Emergency Management Victoria, *Victorian Emergency Management Strategic Action Plan 2015–2018* (2015). Note from source: "All economic costs are estimates at the time of the event, and have not been normalised. Data has been compiled from a range of sources; please contact EMV for a full reference list."

Interim targets

To complement the long-term target, the IRC recommends setting a series of interim targets that are multi-year and limit emissions over a defined target period (five years). This would create a pathway towards the long-term target, effectively establishing a total sum or budget of emissions that can be produced in that period. When combined, the actual volume of emissions over successive interim target periods will aim to deliver the limit on emissions required to achieve the long-term target. Consistent with an emissions trajectory that phases out GHG emissions in the long term, the level of emissions aimed for in each interim target period must be lower than that for the previous period.

Pledge and review

To support the achievement of each interim target, the IRC recommends the bottom-up approach of the UNFCCC 'pledge and review' model, which required countries in the lead-up to COP21 in Paris to submit Intended Nationally Determined Contributions (INDCs), which publicly outlined what post-2020 climate actions they intend to take under a new international agreement. Building on this approach, the Government should require all departments and relevant agencies to commit, or pledge, an amount of emissions reduction they will deliver based on the emissions within their portfolios and the suite of policy tools available to them.

Requiring departments to pledge can help strengthen the integration of climate change into existing planning processes, and strengthen institutional cooperation and mutual accountability. Such an approach would help ensure that addressing climate change becomes a standard element of departmental operations and managerial responsibilities. It also invites further devolution and engagement of stakeholders outside government in each portfolio –

for example, by encouraging pledges (voluntary, perhaps) from external groups and communities. This builds skills, awareness and a sense of ownership.

The figure on page 20–21 illustrates the integration and timing of the tools described above. The timing has been developed to align with the IPCC's reporting process post-Paris as well as the five-yearly reviews under the UNFCCC.

The Government, through the department pledge approach, should explore which sectors it wishes to prioritise for emissions reduction and determine the most efficient and effective options to deliver these reductions. This analysis should include both regulatory and non-regulatory mechanisms.

Mitigation measures

The IRC believes that to be a leader in climate change, Victoria should, like many other jurisdictions, adopt measures that reduce emissions at their source. There are a suite of options for doing so, including imposing emissions limits under Environment Protection Authority (EPA) licences, establishing a state-based emissions trading scheme (which could include international linking), adopting carbon taxes or other targeted financial incentives or charges and even the accelerated phase-out or upgrade of high GHG emitting facilities. The IRC believes that the choice of actual measures to be adopted should be decided by the Government, but that the Act should provide the legislative power for adopting such measures in the future.

In particular, the IRC notes that while it is clear that the *Environment Protection Act 1970* provides the EPA with the power to regulate GHG, the provisions of the State Environment Protection Policy (Air Quality Management) limit the EPA's capacity to bring about significant reductions in emissions. For this reason, the Act needs to clearly remove any ambiguity around the EPA's authority to do so.

Forestry rights, carbon sequestration rights and soil carbon rights

The objectives of Parts 4 and 5 of the Act were to facilitate Victoria's participation in emerging national carbon markets or government-funded programs. Part 4 of the Act establishes a rights-based framework for carbon sequestered by vegetation and in soil on private land. Part 5 of the Act establishes rules for managing and using Crown land for carbon sequestration purposes.

Parts 4 and 5 of the Act have effectively created a legislative framework for forestry rights, soil carbon rights and carbon sequestration rights on public and private land in Victoria. In this regard, the Act has successfully enabled the commercial exploitation of carbon sequestration under GHG reduction schemes.

However, the provisions of the Act have not been well utilised primarily due to the absence of a carbon price, or any other regulatory mechanism that places a price on carbon.

The Victorian Government should consider making more Crown land available for carbon sequestration purposes, given that these projects have the potential to deliver multiple climate change and land management co-benefits.

Transparency and accountability

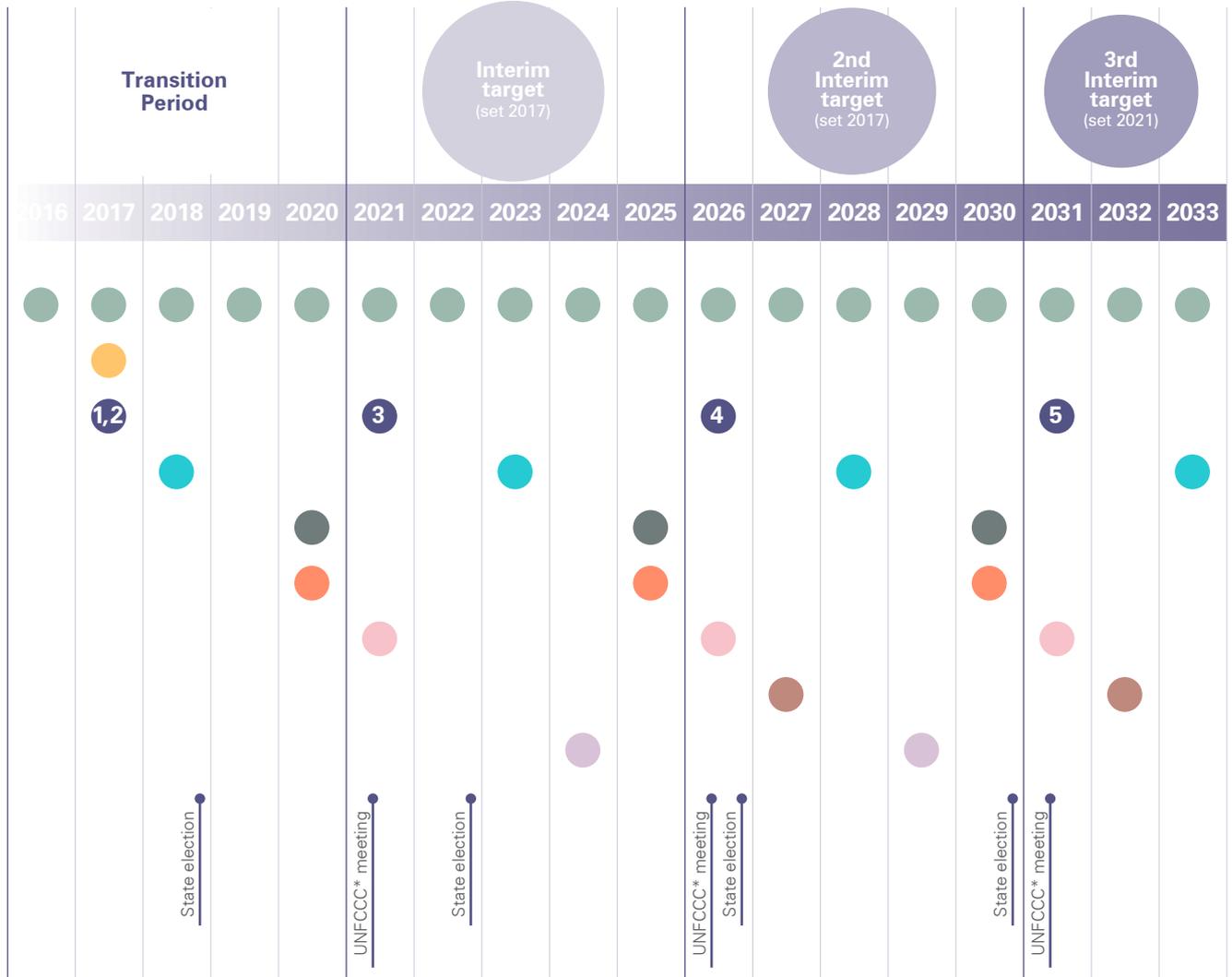
The IRC believes there is a need for the Act to embed a framework for monitoring, reporting and verification (MRV) of progress towards the Government's climate change objectives and outcomes. It is recommended that the framework should seek to drive continuous improvement, and that it be based on the principles of transparency and public accountability.

Publicly accessible data and information are important elements of an effective climate change response. The recommendations proposed in this chapter would enable this through:

- ▲ Reinstating regular GHG emissions reporting and stand-alone climate science updates;
- ▲ Undertaking regular assessments of ADRRAPs, *Low Carbon Growth Plans* and emissions reductions during interim target periods and ensuring transparency through independent audits of these assessments;
- ▲ Reporting on the significant decisions made under Schedule 1 of the Act; and
- ▲ The use of devolved voluntary emissions reduction pledges as part of a binding process with transparent reporting obligations.

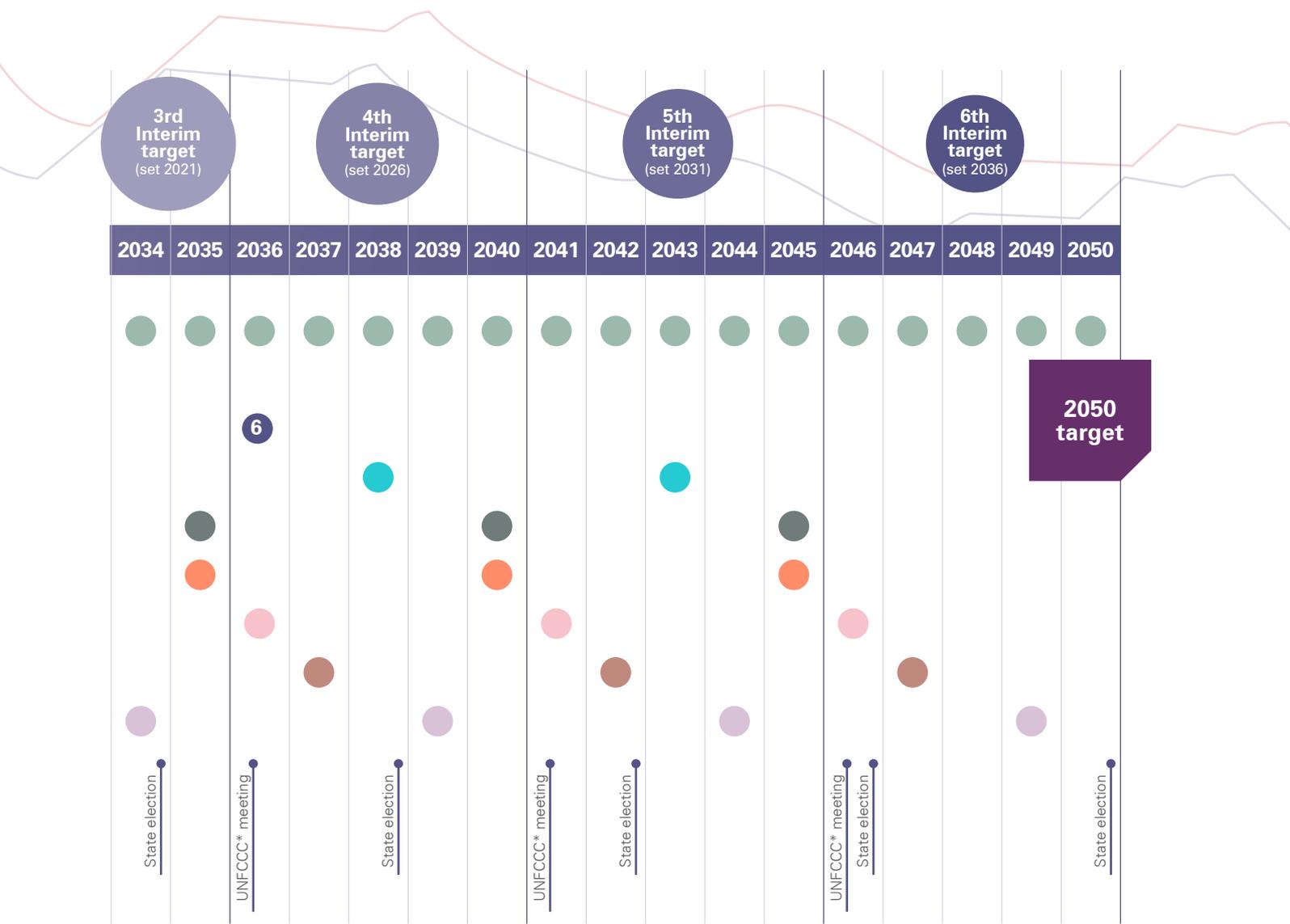
The illustration below shows the IRC’s recommended approach, including the long-term emissions reduction target using 2050 as the long-term target.

Climate Change Act implementation plan



- Annual greenhouse gas reporting
- Economic analysis of climate change risks to Victoria
- Set interim targets
- Government to issue guidance to departments
- *Victorian Climate Change Strategy*
- Government department *Low Carbon Growth Plans*
- Government department *Adaptation and Disaster Risk Reduction Action Plans*
- Interim target assessment
- *Adaptation and Disaster Risk Reduction Action Plan* assessment

* United Nations Framework Convention on Climate Change



Recommendations

The IRC notes that a number of other legislative and policy reviews are currently underway in Victoria and the recommendations made will need to be considered in the context of those reviews. The Act will also work alongside other related policies such as those dealing with renewable energy.

References to Minister in this report refer to the Minister responsible for administering the *Climate Change Act 2010* (Vic) (the Act).

The IRC makes the following recommendations for the Government to consider:

Recommendation	Page
Long-term emissions reduction target	
<p>1</p> <ol style="list-style-type: none"> 1. The Act should include a long-term emissions reduction target that is based on the best available science and that can be adjusted in light of new information, but which at the very least places Victoria on a pathway to pursuing efforts to limit the temperature increase to 1.5 degrees Celsius. 2. Progress towards this target should be managed in five-year periods, known as interim target periods, allowing performance to be tracked and adjustments to be made to ensure that the long-term target will be met. 3. The Government should seek and consider independent expert advice on the long-term target. 4. The Government must ensure that both the Premier and Minister are accountable for meeting the long-term target. 	<p>56</p>

Recommendation	Page
Charter of Climate Change Objectives and Principles (the Charter)	
6*	<p data-bbox="272 405 432 432">The Charter</p> <p data-bbox="272 450 1278 517">A <i>Charter of Climate Change Objectives and Principles</i> should be introduced into the Act to inform strategic decision making. The Charter:</p> <ul style="list-style-type: none"> <li data-bbox="272 539 1278 607">a. Should contain the amended guiding principles (Recommendation 2) and introduce climate change objectives; <li data-bbox="272 629 1278 696">b. Must be taken into account when preparing the <i>Victorian Climate Change Strategy</i> (the Strategy); and <li data-bbox="272 719 1305 786">c. Must be taken into account in all plans, policies, programs and operational decision making across government. <p data-bbox="272 808 1129 835">* This should be read in conjunction with Recommendation 12.</p>
2	<p data-bbox="272 891 520 918">Guiding principles</p> <p data-bbox="272 936 1294 1003">The existing guiding principles (Part 2) should be retained and included in the Charter and amended as follows:</p> <ul style="list-style-type: none"> <li data-bbox="272 1025 1118 1052">a. Section 11 <u>principle of complementarity</u> should be removed; <li data-bbox="272 1075 1214 1142">b. Section 12(d) <u>principle of equity</u> should be amended to also refer to medium-term consequences; and <li data-bbox="272 1164 1238 1272">c. Section 13 <u>principle of community engagement</u> should be amended to include access to information, access to environmental justice and public participation.
7	<p data-bbox="272 1328 632 1355">Climate change objectives</p> <p data-bbox="272 1373 1174 1400">The Charter should contain the following climate change objectives:</p> <ul style="list-style-type: none"> <li data-bbox="272 1422 1246 1489">a. To reduce GHG emissions consistently with the best available science and the long-term emissions reduction target; <li data-bbox="272 1512 1206 1619">b. To build the resilience of Victoria’s infrastructure, built environment and communities through effective adaptation and disaster preparedness action; <li data-bbox="272 1641 1222 1709">c. To manage Victoria’s natural resources, ecosystems and biodiversity to promote resilience; <li data-bbox="272 1731 1254 1861">d. To promote and support Victoria’s regions, industries and communities to maximise the opportunities that arise from a transition to a low-carbon economy through coordinated whole-of-government action and partnerships; and <li data-bbox="272 1883 1294 1944">e. To support vulnerable communities, and promote intergenerational equity and social justice.

Recommendation	Page	
Charter of Climate Change Objectives and Principles (the Charter) (continued)		
8	Guidance The Act should require the Minister to provide guidance on the application of the Charter to the Strategy and its components, and on its general application across government.	73
Preamble		
3	The Government should give consideration to amending the Preamble to the Act to reflect the current policy context.	62
Purposes		
4	The Government should review and update the stated Purposes of the Act (as required) to ensure they reflect the final structure and contents of the Act.	63
Legislative review		
5	There should be another legislative review in 2020 to examine the effectiveness of the new provisions. The Government should consider whether more appropriate review requirements need to be introduced such as: <ol style="list-style-type: none"> a. The effectiveness of the current operation of the Act in achieving its stated objectives and purposes; b. The extent to which additional legislative measures (if any) are considered necessary to achieve the targets and objectives of mitigation and adaptation and disaster risk reduction, set by this Act; and c. Other matters determined by the Minister to be relevant to a review of this Act. 	65
Decision-making framework and Schedule 1		
9	Schedule 1 decisions and actions The Government should review the existing decisions or actions listed in Schedule 1 to establish whether they are those most likely to require an assessment of climate change impacts or risks, or whether they will significantly impact the pursuit by Government of climate change mitigation and adaptation and disaster risk reduction.	76

Recommendation	Page	
Decision-making framework and Schedule 1 (continued)		
10	<p data-bbox="272 405 587 434">Broadening Schedule 1</p> <ol data-bbox="272 450 1318 1485" style="list-style-type: none"> <li data-bbox="272 450 1318 595">1. Schedule 1 should be expanded to include a broader range of Acts that are likely to require an assessment of climate change impacts or risks, or whether they will significantly impact the delivery of climate change mitigation and adaptation and disaster risk reduction outcomes. <li data-bbox="272 611 1318 1485">2. The Government should identify which Acts and which decisions or actions should be considered for inclusion. Preliminary analysis suggests that decisions and actions in the following additional Acts could be considered for inclusion in Schedule 1: <ul data-bbox="320 779 1098 1485" style="list-style-type: none"> <li data-bbox="320 779 727 808">▲ <i>Electricity Industry Act 2000</i> <li data-bbox="320 824 826 853">▲ <i>Emergency Management Act 2013</i> <li data-bbox="320 869 890 898">▲ <i>Essential Services Commission Act 2001</i> <li data-bbox="320 913 842 943">▲ <i>Flora and Fauna Guarantee Act 1988</i> <li data-bbox="320 958 791 987">▲ <i>Financial Management Act 1994</i> <li data-bbox="320 1003 730 1032">▲ <i>Local Government Act 1989</i> <li data-bbox="320 1048 954 1077">▲ <i>Major Transport Projects Facilitation Act 2009</i> <li data-bbox="320 1093 1098 1122">▲ <i>Mineral Resources (Sustainable Development) Act 1990</i> <li data-bbox="320 1137 839 1167">▲ <i>Planning and Environment Act 1987</i> <li data-bbox="320 1182 858 1211">▲ <i>Sustainable Forests (Timber) Act 2004</i> <li data-bbox="320 1227 759 1256">▲ <i>Transport Integration Act 2010</i> <li data-bbox="320 1272 922 1301">▲ <i>Urban Renewal Authority Victoria Act 2003</i> <li data-bbox="320 1317 927 1346">▲ <i>Victorian Energy Efficiency Target Act 2007</i> <li data-bbox="320 1361 683 1391">▲ <i>Water Industry Act 1994</i> 	77
11	<p data-bbox="272 1541 560 1570">Ministerial guidelines</p> <p data-bbox="272 1585 1318 1686">To improve the operation of the Act, the Minister should use his or her power to develop and publish ministerial guidelines (existing section 15) to assist decision makers to understand their statutory obligations under the Act.</p>	78

Recommendation		Page
Decision-making framework and Schedule 1 (continued)		
12	<p>An effective decision-making framework</p> <p>The existing decision-making framework should align with the Charter and include relevant decision-making criteria that give practical effect to each objective of the Charter.</p>	79
13	<p>Judicial review and standing</p> <p>The Act should broaden legal standing for the judicial review of administrative decisions listed in Schedule 1 to which the decision-making framework applies. Standing should be open to individuals and groups that satisfy an extended standing test similar to the model used under section 487 of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth).</p>	80
14	<p>Merits review</p> <p>The Government should examine the feasibility, appropriateness and effectiveness of merits review of specified administrative decisions to which the decision-making framework applies.</p>	80
15	<p>Land use planning</p> <p>The Government should investigate the most effective way to incorporate climate change considerations into statutory and strategic planning in Victoria – for example, the use of the Strategy as a Reference or Incorporated Document in planning schemes.</p>	81

Measuring real economic costs and benefits of climate change

16	<ol style="list-style-type: none"> 1. The Government should introduce into the Act a requirement to assess, based on clear and transparent measures, the real economic costs and benefits associated with climate change risks, liabilities and opportunities arising from government policies, plans, programs, operational decision making and under the decision-making framework in section 14. 2. The Minister should provide guidance on calculation of the metrics drawing on established methodologies such as those used under the <i>National Greenhouse and Energy Reporting Act 2007</i> (Commonwealth) or those used for assessing shadow carbon prices as adopted by business and carbon accounting calculations. 	83
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Recommendation	Page
Victorian Climate Change Strategy	
17	<p>Climate change risk assessment and economic analysis</p> <p>The Government should undertake a full analysis of the risks of climate change to Victoria, as well as an economic analysis of those risks, to serve as the platform from which to proceed with further strategic planning. This should be conducted prior to the development of the first Strategy.</p>
18	<p>The Strategy</p> <p>The existing requirement to prepare a <i>Climate Change Adaptation Plan</i> should be replaced with the requirement to produce a five-yearly <i>Victorian Climate Change Strategy</i> that addresses emissions reduction and adaptation and disaster risk reduction.</p> <ol style="list-style-type: none"> a. The Government must ensure that both the Premier and Minister are responsible for preparing the Strategy. b. The Act should outline the contents of the Strategy and the process to develop the Strategy. c. The Act should require that the Strategy is developed in consultation with local government, the community and business. d. The Act should require that the Strategy be tabled in Parliament.
19	<p>Adaptation and disaster risk reduction in the Strategy</p> <p>The Strategy should include an adaptation and disaster risk reduction component that:</p> <ol style="list-style-type: none"> a. Specifies the risks and likely economic costs of climate change to Victoria; b. Specifies long-term and medium-term objectives; c. Sets out roles and responsibilities of the state and local governments for addressing adaptation and disaster risk reduction; d. Identifies the opportunities for private sector involvement – including, for example, through insurance; and e. Delivers a risk assessment that: <ol style="list-style-type: none"> i. Identifies the state-wide priorities for the five-year period; and ii. Identifies the lead department (or agency) for each state-wide priority.

Recommendation	Page
Victorian Climate Change Strategy (continued)	

20	Emissions reduction in the Strategy	88
	The Strategy should contain an emissions reduction component that:	
	<ul style="list-style-type: none"> a. Summarises the Government’s policies and actions for meeting the state’s interim target for that period; b. Contains each department’s pledge to meet its share of the state’s interim target based on emissions under that department’s control for the forthcoming five-year period, including, if necessary, an explanation for any gap between the aggregated pledges and the state’s interim target; and c. Contains each department’s <i>Low Carbon Growth Plan</i>, setting out the actions they plan to take to help the state meet the interim target. 	

Tools for adaptation and disaster risk reduction

21	<i>Adaptation and Disaster Risk Reduction Action Plans (ADRRAP)</i>	93
	<ul style="list-style-type: none"> 1. In response to the adaptation and disaster risk reduction component of the Strategy, the Act should introduce a requirement for each lead department (or agency) identified in the Strategy to develop an ADRRAP. 2. The Act should include the following: <ul style="list-style-type: none"> a. ADRRAPs must be prepared for five-year periods in response to the Strategy and must contain the departments’ or agencies’: <ul style="list-style-type: none"> i. Short-term and medium-term objectives for adaptation and disaster risk reduction; ii. Proposals and actions (including timeframes) to address the risks and priorities identified in the Strategy; iii. Performance indicators; and iv. An assessment of the departments’ (or agencies’) own disaster and adaptation readiness. b. Each ADRRAP must be consistent with the Charter; c. The Minister may provide guidance on the development of the ADRRAPs; and d. There must be consultation with local government, the community and business during the development of the ADRRAPs. 	

Recommendation	Page
Tools to drive emissions reduction	
22 Interim emissions reduction targets	99
<ol style="list-style-type: none"> 1. The Act should introduce a process for rolling multi-year interim emissions reduction targets to support delivery of the long-term target. The process would indicate a maximum level of GHG emissions for Victoria, which the Government would aim to keep the state below. <ol style="list-style-type: none"> a. Interim targets should be five-yearly and set by the Government at least two target periods in advance to provide sufficient clarity and certainty for stakeholders and a clear medium-term pathway to the long-term target. b. The level of emissions for each interim target would have to be lower than that for the previous target period. c. The Government should seek and consider independent expert advice on the amount of each interim target and its relative contribution towards the long-term target. d. In setting each interim target, the Minister should provide a statement on how the independent advice has been taken into account. e. The Act should contain a method for reviewing interim targets if there are significant changes affecting the basis on which the targets were set. 2. The Government must ensure that both the Premier and Minister are accountable for meeting each interim target. 	
23 Department pledges	101
<ol style="list-style-type: none"> 1. Reducing emissions and meeting any interim target will require whole-of-government involvement. The Act should require each department to pledge its contribution to the state's interim targets and long-term target. These pledges would articulate each department's role in the Strategy, and demonstrate that responsibility for action on climate change is embedded across government and can be advanced by all departments. 2. Guidance may be issued by the Minister for the development of the department pledges. 	

Recommendation	Page
Tools to drive emissions reduction (continued)	
24 <i>Low Carbon Growth Plans</i>	101
<ol style="list-style-type: none"> 1. Each department's pledge must be detailed in a <i>Low Carbon Growth Plan</i> that outlines the sectors and emissions covered by their department (including emissions of stakeholders within the portfolio responsibility of the department) and the specific actions (including timeframes) it proposes to meet its pledge and reduce emissions. 2. Each Plan must be consistent with the Charter and should include the actions the department intends to take to reduce the emissions: <ol style="list-style-type: none"> a. That it directly controls, such as from buildings and operations (including wider operations such as purchasing and fleets) and through procurement; and b. Within sectors of the economy over which it has influence through policy interventions. 	
Clear measures to mitigate emissions including stronger powers to enable emissions reduction	
25 Emissions reduction measures	107
<p>The Act should vest in the Minister a clear legal power to implement measures to reduce GHG emissions at source, particularly from high emitting sectors, to achieve the long-term emissions reduction target. This would include the power to impose emissions limits under EPA licences, establishing a state-based emissions trading scheme (which could link to other state or international schemes), adopting carbon taxes or other targeted financial incentives or charges and the accelerated phase-out or upgrade of high GHG emitting facilities.</p>	
26 Environment Protection Authority (EPA)	107
<ol style="list-style-type: none"> 1. The Government should reinstate the EPA's power to regulate GHG emissions from those facilities that the authority regulates for the purposes of achieving a long-term emissions reduction target for Victoria. 2. The Government should make it clear that the EPA's ability to regulate waste would include GHG emissions through a state-based emissions trading scheme which could be linked to other states in Australia or internationally. 3. The Government should revisit the 2012 statement on the <i>Effective regulation in the context of the national carbon price: Environment Protection Authority Victoria</i>. 4. The Government should consider: <ol style="list-style-type: none"> a. Amending the State Environmental Protection Policies framework; and b. Enabling the EPA to use its powers to issue and amend licences to achieve significant reductions in GHG emissions. 	

Recommendation	Page	
Forestry rights, carbon sequestration rights and soil carbon rights		
27	To reduce barriers to utilising Part 4 agreements and optimise alignment with the Commonwealth Government's Emissions Reduction Fund, amend Part 4 of the Act to improve the flexibility of Forestry and Carbon Management Agreements – for example, by enabling parties to vary the date on which the agreements end.	110
28	The Government should provide greater access to public land for the purposes of carbon sequestration, particularly to those areas of public land that can be used to deliver complementary outcomes and co-benefits across a range of values.	111
Transparency and accountability		
29	<ol style="list-style-type: none"> 1. The Act should retain the requirement to produce regular climate science updates, which should be stand-alone publications. 2. The climate science updates should be published at a frequency that best enables the development of the Strategy, ADRRAPs and <i>Low Carbon Growth Plans</i>. 3. The Act should require the Government to introduce compulsory reporting of GHG emissions from all sectors annually. 	114
Progress monitoring and continuous improvement		
30	<p>The Charter</p> <p>The Act must require the Government to specify how the Charter is taken into account when:</p> <ol style="list-style-type: none"> a. Setting the long-term emissions reduction target, including interim targets; b. Developing the Strategy; c. Developing ADRRAPs; d. Developing <i>Low Carbon Growth Plans</i>; and e. Developing all plans, policies, programs and operational decision making across government. 	115
31	<p>Schedule 1 reporting</p> <p>The Act should introduce additional reporting requirements for 'significant decisions' to which the decision-making framework applies in order to promote transparency and accountability.</p>	116

Recommendation	Page
Progress monitoring and continuous improvement (continued)	
<p>32 Adaptation and disaster risk reduction assessment</p> <ol style="list-style-type: none"> 1. The Government should develop a robust methodology and guidance to enable consistent and effective monitoring, reporting and verification (MRV) of progress towards achieving adaptation and disaster risk reduction objectives and outcomes. 2. The Act should contain a requirement to assess and report on whether the actions identified in the ADRRAPs: <ol style="list-style-type: none"> a. Were delivered; and b. Were effective at reducing the risks identified in the Strategy. 3. An independent audit and analysis of the ADRRAP assessment should be conducted and should be tabled in Parliament. 	116
<p>33 End of interim target period assessment</p> <p>The Act should require preparation of a final assessment report at the end of each interim target period. This report must:</p> <ol style="list-style-type: none"> a. State the total volume of Victoria’s emissions over the period; b. State whether the interim target has been met and, if not, explain why; c. Evaluate the effectiveness of the actions in the <i>Low Carbon Growth Plans</i> at delivering the pledges of each department; d. Be completed no later than the second year following the end of the period to which it relates; e. Be followed by an independent audit and analysis of the target period; and f. Be tabled in Parliament. 	117

1

Establishing the Review

1.1 The *Climate Change Act 2010* (the Act)

The Act was passed by the Victorian Parliament in September 2010 and came into effect on 1 July 2011.

The Act provides key statutory tools to support climate policy, including the state's adaptation planning framework. The Act requires:

- ▲ The Victorian Government to develop a Climate Change Adaptation Plan every four years;
- ▲ Decision makers in government to take climate change into account when making specified decisions under other acts; and
- ▲ The completion of an independent review of the Act before the end of 2015.

The Act also includes arrangements for the ownership, registration and transfer of forestry and carbon rights for carbon sequestration projects.

The Act was reviewed in late 2011, triggered by the introduction of the *Clean Energy Act 2011*

by the Commonwealth Government. This, the second Independent Review, is required under section 18 of the Act and must be completed before 31 December 2015.

1.2 Scope and approach of the Review

An Independent Review Committee (IRC) was appointed by the Honourable Lisa Neville MP, Minister for Environment, Climate Change and Water, to undertake the 2015 Review. The individual IRC members were appointed on the basis of their skills and expertise. The Department of Environment, Land, Water and Planning (DELWP) provided secretariat services to the IRC as they undertook the Review.

In undertaking the Review, the IRC referred to international examples of where national and state governments have taken the lead on climate change. It also took advice on the general law and policy-making frameworks that operate in Victoria to ensure that their recommendations fall within the range of approaches adopted in the state. The IRC also

sought input from a broad range of stakeholders, including the community, business, government and non-government sectors. Public submissions were invited from 6 July to 10 August 2015. More than 100 individual submissions were received long with more than 1550 campaign submissions. Individual submissions are available for viewing on DELWP's website.¹¹

In developing its options and recommendations for improving the Act, the IRC was guided by the principles of best-practice regulatory design from many jurisdictions; the need for Victoria to have a durable, fit-for-purpose legislative framework to deliver its policy objective; and the Victorian Government's stated aim of taking a leadership role on addressing climate change.

The IRC has taken this to mean an approach:

- ▲ Where climate change legislation, policy and program development is based on the best available scientific evidence;
- ▲ Where policy objectives are clearly defined and where progress towards those objectives is transparently monitored, evaluated and reported on to the community;
- ▲ Under which the state uses the full range of regulatory and non-regulatory mechanisms to deliver policy objectives;
- ▲ That drives early and decisive action to mitigate climate-related risks based on the knowledge that the financial costs of inaction are greater;
- ▲ That addresses the needs of vulnerable communities;
- ▲ That builds partnerships and knowledge sharing across government, the private sector, the education sector and not-for-profits. This is based on the recognition that climate change cannot be effectively addressed by any one sector;

- ▲ Where the opportunities for addressing climate change are well understood across all government departments, and where climate change is a central feature of government decision making; and
- ▲ Whereby government leads by example – for instance, via its procurement choices and long-term decision making.

The IRC firmly believes that in order to make the Act more effective and enduring, and to make it better serve the interests of Victorians, it must be clearly separated from the Commonwealth's approach to climate change. However, the recommended approach has been designed to co-exist with national action. If adopted, the recommendations in this report would create a durable and flexible Act that would support Victoria to meet its leadership aspirations while allowing for consistency with national action. If there were to be action at the national level, the recommendations would support that action without duplication. For example, if the Commonwealth adopted a science-based trajectory approach, the interim target periods in this Act could be aligned to the national trajectories. If the Commonwealth were to adopt measures that effectively regulate GHG emissions at source from facilities, then any similar Victorian measures could be adjusted, if the Commonwealth measures are more stringent than Victoria's. This occurs in the United States. It would not be necessary to review the Act in the event of the future introduction of a national carbon price or emissions trading scheme.

Finally, the IRC wishes to note that:

- ▲ This Review is taking place alongside a number of other reviews such as the EPA Inquiry, which may affect the role that such agencies play including in relation to the Act; and

11. Department of Environment, Land, Water & Planning, *Climate Change*, <<http://www.delwp.vic.gov.au/climate-change-act>>.

- ▲ This Review has been conducted in accordance with the Terms of Reference (refer to Box 1.1). It is not a review of Victoria's broader climate policy, and in this regard the IRC notes that many of the submissions addressed issues far broader than the scope of the Review. The IRC has, in the final section of the report (Chapter 7), noted some of those key matters raised in submissions, but they do not form part of the Review or its recommendations.

1.3 The 2011 Review of the Act

The first Review of the Act was triggered three months after the Act first came into effect. A summary of the key recommendations and changes resulting from the necessarily limited 2011 Review is provided in Appendix 1.

The 2011 Review noted that, given the Act had only been operational for six months at the time the Review was undertaken, the next Review would be an opportune time to assess its operational impacts.

The Review made two findings which it recommended should be considered in the 2015 Review:

- ▲ If the national carbon price/emissions trading scheme was substantially amended or removed, the Victorian Government should review the merits of a state-based target.
- ▲ Because there has been limited application of these decision-making provisions since the inception of the Act, their ongoing effectiveness should be closely monitored and assessed in the legislated Review in 2015. If their application proves effective, the potential for such provisions to be applied more widely to other relevant Acts could be considered.

The current IRC has had regard to these findings. Consequently, and consistently with its Terms of Reference, the IRC has considered the operation of the Act throughout the Review; an emissions reduction target is discussed in Chapter 3, and decision making is discussed in Chapter 4.

Box 1.1: Terms of reference: Review of the Climate Change Act 2010 (2 June 2015)

1. Introduction

The Victorian Government recognises that climate change is one of the most critical issues facing Victoria. The Government is committed to positioning Victoria as a leader in responding to climate change; by mitigating risks and adapting to its impacts.

The Minister for Environment, Climate Change and Water is driving action to achieve this by reviewing climate change legislation, policies and programs. The independent Review of the *Climate Change Act 2010* ('Act') is one of the first steps in this process. Legislation can provide a strong framework for climate change action.

It is important that the Act is robust and effective, and contains the right powers and tools to tackle climate change now and into the future. Climate change policy continues to evolve globally and nationally. By the end of 2015 there will be progress in international agreements under the United Nations Framework Convention on Climate Change. The Australian Government's climate change policies will also continue to be refined in the lead up to the Paris Climate Change Conference in November 2015. Developments in technology; climate science; and the changing structure of the Victorian economy and its energy systems are also factors that will continue to influence Victoria's response to climate change.

The Minister for Environment, Climate Change and Water is required under section 18 of the Act to ensure that an independent Review of the Act is completed before 31 December 2015.

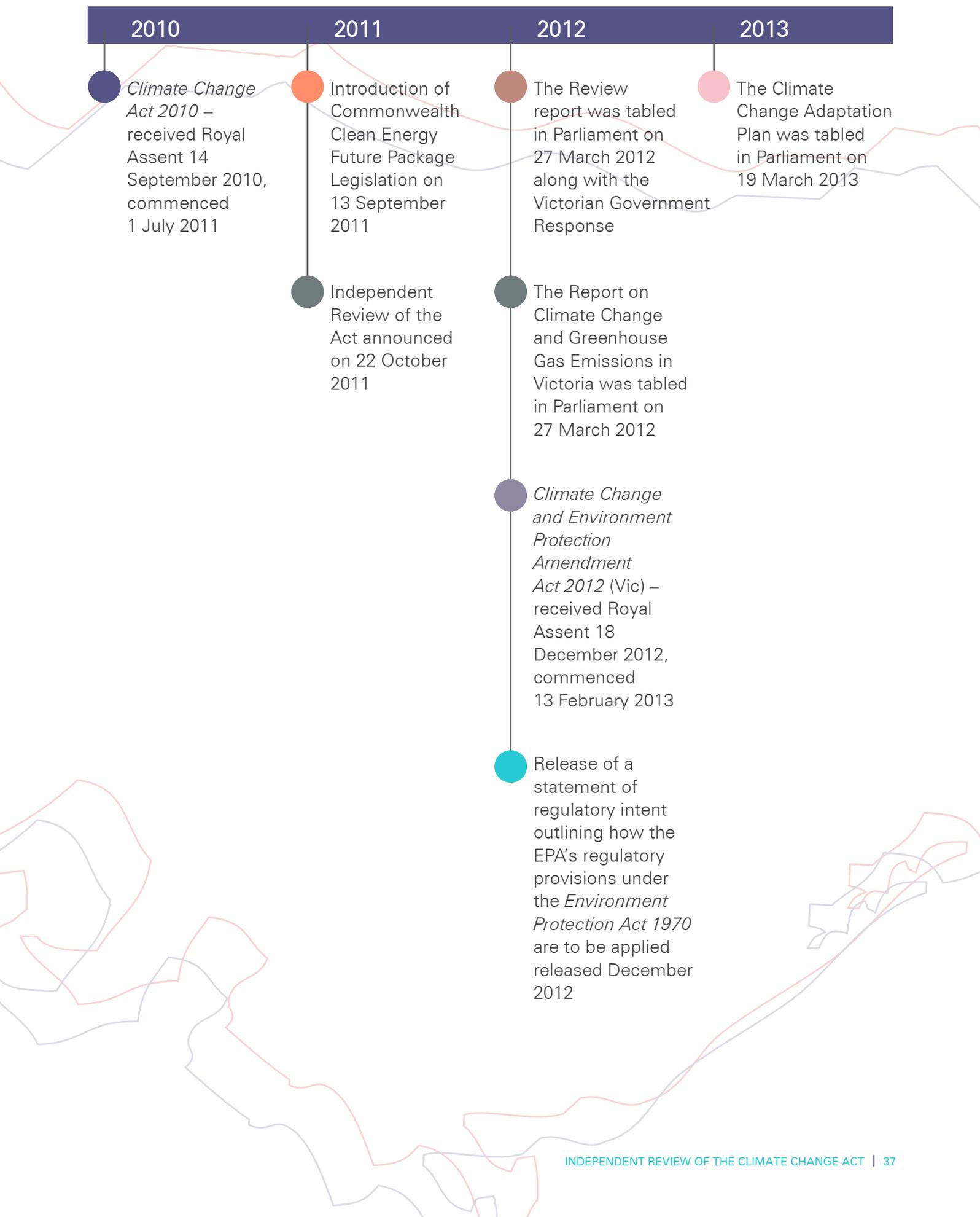
Box 1.1: Terms of reference: Review of the Climate Change Act 2010 (2 June 2015)**2. Scope of Review**

- 2.1 Pursuant to section 18 of the Act, the Independent Review Committee will Review and produce a written report containing recommendations and options to the Government before 31 December 2015 that:
- a. Examines the effectiveness of the current operation of the Act in achieving its stated purposes.
 - b. Examines whether the Act provides a sound foundation for action (by Government, business and community) on both climate change mitigation and adaptation.
 - c. Examines whether the Act is sufficiently robust to deal with changes over time in the range of factors that impact on Victorian Government climate change policy.
 - d. Identifies options to improve the Act to achieve the Government's commitment to action on climate change mitigation and adaptation.
 - e. Examines whether legislation is the most appropriate mechanism for an emissions reduction target.
 - f. Identifies the most appropriate mechanism to monitor and report on progress in accordance with the Act.
- 2.2 Pursuant to section 18(3) of the Act, in developing the options for improving the Act and its operation, the Independent Review Committee may have regard to:
- a. Other Victorian law relating to climate change and any other law or policy relating to climate change.
 - b. Developments in climate change technologies and best practice in response to climate change.
 - c. Any plan prepared under section 16 (the Victorian Climate Change Adaptation Plan).
 - d. Whether the Act needs to be amended to include new purposes, policy objectives or programs.
- 2.3 In undertaking the Review, the Independent Review Committee should:
- a. Consider climate change legislation and policies in sub-national jurisdictions in Australia and overseas.
 - b. Consider any relevant State or national inquiries that Review the efficacy and efficiency of climate change legislation.
 - c. Consider the known costs and benefits to businesses, households and government where relevant.

The Independent Review Committee may directly seek the views of the community, business, and non-government sector representatives in conducting the Review. The Review will also include a public submissions process.

The Independent Review Committee must provide the Minister a written report in accordance with these Terms of Reference and section 18(4) of the Act before Thursday 31 December 2015.

In accordance with section 18(5) of the Act, a copy of the report must be tabled in both Houses of Parliament within 10 sitting days after the completion of the Review.

Figure 1.1: Timeline of Victoria's *Climate Change Act 2010*

2

Context

2.1 International context

2.1.1 Scientific basis for climate change action

Since the 1950s, warming of the climate has resulted in changes to the earth's atmosphere, oceans, snow and ice that are unprecedented.¹² The period 2011–2015 has been the warmest five-year period on record, and 2015 is likely to be the hottest year on record – with average global temperatures likely to reach 1 degree above the pre-industrial era.¹³ October 2015 was the most abnormally hot month since 1880, when the US National Oceanic and Atmospheric Administration began its monitoring of global weather.¹⁴ Mean maximum temperatures in Victoria in October 2015 were almost 6 degrees higher than the long-term average, the biggest departure from the norm for any Australian state.¹⁵

The Intergovernmental Panel on Climate Change (IPCC), in its Fifth Assessment Report, concluded that global emissions will need to be reduced by up to 72 per cent by 2050 compared with 2010 levels, and by up to 118 per cent by 2100, for it to be likely that global average temperatures increases can be kept below 2 degrees.¹⁶

... stabilizing temperature increase to below 2 degrees Celsius relative to pre-industrial levels will require an urgent and fundamental departure from business as usual – IPCC 2014.¹⁷

12. IPCC, above n 5.

13. World Meteorological Organization, *WMO: 2015 likely to be Warmest on Record, 2011-2015 Warmest Five Year Period* (25 November 2015) <<https://www.wmo.int/media/content/wmo-2015-likely-be-warmest-record-2011-2015-warmest-five-year-period?>> (accessed 27 November 2015).

14. National Centers for Environmental Information, *State of the Climate: Global Analysis for October 2015* (November 2015) National Oceanic and Atmospheric Administration <<http://www.ncdc.noaa.gov/sotc/global/201510>> (accessed 26 November 2015).

15. Bureau of Meteorology, *Special Climate Statement 52 (update) – Australia's warmest October on record*, (3 December 2015).

16. IPCC, above n 5.

17. Ibid.

2.1.2 United Nations Framework Convention on Climate Change

International agreement on restraining global warming is managed under the 1992 *United Nations Framework Convention on Climate Change* (UNFCCC). In 1997, the Kyoto Protocol to the UNFCCC placed legally binding emissions reduction targets on developed countries. The target of 5 per cent emissions reduction below 1990 levels, imposed under the first commitment period (2008–2012), as well as the targets imposed on some developed countries under the second commitment period (2013–2020), will not achieve the necessary reduction in emissions. Under the 2010 Cancun Agreements, developed and developing countries made voluntary emissions reduction targets to 2020. Despite these efforts, global warming is on track to increase by 4 degrees by the end of this century.¹⁸

The UNFCCC held the 21st Conference of the Parties (COP21) in Paris in December 2015. The purpose of COP21 was to develop a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties.¹⁹

In the lead-up to COP21, national and sub-national governments pledged their commitments to reduce emissions to meet the 2 degree goal. Each country was asked to nominate an emissions reduction target (including a base year and periods for implementation), and provide a rationale on how it 'considers that its intended... contribution is fair and ambitious, in light of its national circumstances'.²⁰

Pledges to take action to address climate change were also voluntarily made by companies, cities, regions, investors and civil society organisations. The Non-State Actor Zone for Climate Action (NAZCA) has facilitated and compiled these pledges.²¹ Nearly 11,000 commitments have been registered with NAZCA, including pledges from nearly 2500 companies and investors.²²

At the conclusion of COP21, 195 countries agreed to keep a global temperature rise this century well below 2 degrees and to pursue efforts to limit the temperature increase even further to 1.5 degrees above pre-industrial levels. The main outcomes included:

- ▲ Mitigation – reducing emissions fast enough to achieve the temperature goal;
- ▲ A transparency system and global stock-take – accounting for climate action;
- ▲ Adaptation – strengthening ability of countries to deal with climate impacts;
- ▲ Loss and damage – strengthening ability to recover from climate impacts; and
- ▲ Support – including finance, for nations to build clean, resilient futures.²³

For a brief summary of COP21 outcomes, refer to Appendix 3.

The current degree of warming is projected to be 2.7 degrees above pre-industrial levels if the pledges to COP21 are implemented and followed with further consistent action.²⁴ The Paris Agreement recognises the 'urgent need to address the significant gap' between the current pledges and the emissions pathways consistent with the long term

18. Climate Change Authority, *Reducing Australia's GHG emissions: Targets and Progress Review* (2014).

19. Conference of the Parties, United Nations Framework Convention on Climate Change, *Report of the Conference of the Parties on its Seventeenth Session, held in Durban from 28 November to 11 December 2011* (UN Doc FCCC/CP/2011/9/Add.1, 15 March 2012), Decision 1/CP.17, CCC/CP/2011/9/Add.1. (accessed 8 November 2015).

20. United Nations Framework Convention on Climate Change, *Intended Nationally Determined Contributions (INDCs)* <http://unfccc.int/focus/indc_portal/items/8766.php>.

21. NAZCA was launched following COP20 in 2014, and together with the Lima Paris Action Agenda, worked to build momentum in support of a universal climate agreement in the lead up to COP21 in Paris.

22. United Nations Framework Convention on Climate Change, *Climate Action: NAZCA*, <<http://climateaction.unfccc.int/>> (accessed 7 December 2015).

23. UN Climate Change Newsroom, *Historic Paris Agreement on Climate Change: 195 Nations Set Path to Keep Temperature Rise Well Below 2 Degrees Celsius* <<http://newsroom.unfccc.int/unfccc-newsroom/finale-cop21/>> (accessed 15 December 2015).

24. Conference of the Parties, United Nations Framework Convention on Climate Change, *Synthesis report on the aggregate effect of the intended nationally determined contributions, Twenty-first session Paris, 30 November to 11 December 2015 Item 4(a) of the provisional agenda Durban Platform for Enhanced Action (decision 1/CP.17) Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action* (UN Doc FCCC/CP/2015/7, 30 October 2015) (accessed 15 December 2015).

temperature goal.²⁵ In order to address this gap, the Agreement contains a mechanism to review and strengthen successive pledges every five years.²⁶

Concerns about climate change have also been raised at the international level through the recently adopted United Nations Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction. These are further reinforced in the Paris Agreement itself.

To act responsibly, even without taking on a leadership role, Victoria will have to reduce its emissions significantly to contribute towards the goal to remain well below 2 degrees, given it has one of the highest emissions profiles in Australia for the utilities and residential sectors.²⁷ The Victorian Government, like all governments around the world, has a duty to protect its citizens by engaging in effective climate change adaptation and disaster risk reduction, given the current and future risk of climate change to people, ecosystems and the economy.

2.1.3 Sustainable Development Goals

The Sustainable Development Goals (SDGs) were adopted by United Nations Member States on 25 September 2015. The SDGs represent a new sustainable development agenda for the next 15 years to 'end poverty, protect the planet and ensure prosperity for all',²⁸ and provide a significant opportunity to reinforce and drive climate change action. There are 17 goals, each accompanied by a set of targets that seek to balance the economic, social and environmental dimensions of sustainable development.²⁹

In broad terms, the SDGs involve:

- ▲ Ending poverty;
- ▲ Ending hunger through food security, improved nutrition and sustainable agriculture; and
- ▲ Ensuring health, education, access to water and sanitation and modern energy systems, as well as full productive employment and decent work for all.

In addition, there is a requirement to take urgent action to combat climate change and its impacts (SDG 13 – refer to Box 2.1 for details) including through building resilient infrastructure, and making cities and human settlements safe, resilient and sustainable.

2.1.4 Sendai Framework for Disaster Risk Reduction

On 3 June 2015, the United Nations General Assembly adopted the Sendai Framework for Disaster Risk Reduction 2015–2030 (SF). This replaced and extended the Hyogo Framework for Action (HFA) in significant ways. The SF acknowledges that during the currency of the HFA 2005–2015, the economic losses from disasters were more than US\$ 1.3 trillion and that many of these disasters were exacerbated by climate change. Weather-related disasters are increasing in frequency and intensity and significantly impeding progress towards sustainable development. Overall, more than 1.5 billion people have been affected by disasters with more than 700,000 human lives lost, more than 1.4 million people injured and approximately 23 million made homeless.

25. Conference of the Parties, United Nations Framework Convention on Climate Change, *Twenty-first sessions, Paris, 30 November to 11 December 2015, Agenda item 4(b), Durban Platform for Enhanced Action (decision 1/CP.17) Adoption of a protocol, another legal instrument, or an agreed outcome with legal force under the Convention applicable to all parties*. (UN Doc FCCC/CP/2015/L.9/Rev.1, 12 December 2015), <<http://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>>.

26. *ibid*, Article 4.

27. Department of the Environment, Australia's *National Greenhouse Accounts: National Inventory by Economic Sector 2013*, (2015) 7.

28. United Nations, *Sustainable Development Goals*, <<http://www.un.org/sustainabledevelopment/sustainable-development-goals/>>.

29. United Nations, *Sustainable Development Knowledge Platform*, <<https://sustainabledevelopment.un.org/>>.

Box 2.1: UN Sustainable Development Goals³⁰

Goal 13. Take urgent action to combat climate change and its impacts*

- ▲ Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
 - ▲ Integrate climate change measures into national policies, strategies and planning
 - ▲ Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
 - ▲ Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilising jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalise the Green Climate Fund through its capitalisation as soon as possible
 - ▲ Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small-island developing states, including focusing on women, youth and local and marginalised communities.
- * Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change

The Sendai Framework for Disaster Risk Reduction 2015–2030, to which Australia is a signatory, requires the following goal to be pursued: ‘Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience.’³¹ Seven global targets have been agreed to for achieving this goal, which will be measured at the global level and complemented by appropriate indicators as well as national targets and indicators (refer to Box 2.2 for details).

2.2 National context

The Australian Government has made an international commitment to reduce GHG emissions by 26 to 28 per cent below 2005 levels by 2030. It is expected that over time, Australia’s commitments will be increased. In the interim, to meet the existing target, emissions reduction will need to double from its historical annual average of 2.6 per cent to 4.4 per cent.³² Ratification of the Paris Agreement signals major changes to domestic climate policy and regulation. Given that Australia’s international commitments will be delivered in cooperation with all states and territories, these changes will necessarily extend to sub-national policy and regulation, particularly given that many of the measures required to reduce our national emissions fall within the control of state governments.

30. United Nations, Goal 13: *Take urgent action to combat climate change and its impacts*, <<http://www.un.org/sustainabledevelopment/climate-change-2/>>

31. The United Nations Office for Disaster Risk Reduction, *Sendai Framework for Disaster Risk Reduction 2015–2030*, <<http://www.unisdr.org/we/inform/publications/43291>> (Accessed 11 November 2015).

32. PwC Australia, *Conscious Uncoupling? Low Carbon Economy Index 2015* (October 2015).

Box 2.2: The Sendai Framework for Disaster Risk Reduction 2015–2030³³

Seven Global Targets

- a. Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality rate in the decade 2020–2030 compared to the period 2005–2015.
- b. Substantially reduce the number of affected people globally by 2030, aiming to lower average global figure per 100,000 in the decade 2020–2030 compared to the period 2005–2015.
- c. Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030.
- d. Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030.
- e. Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020.
- f. Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this Framework by 2030.
- g. Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.

Priorities for action

Priority 1: Understanding disaster risk.

Priority 2: Strengthening disaster risk governance to manage disaster risk.

Priority 3: Investing in disaster risk reduction for resilience.

Priority 4: Enhancing disaster preparedness for effective response and to 'Build Back Better' in recovery, rehabilitation and reconstruction.

33. The United Nations Office for Disaster Risk Reduction, *Sendai Framework for Disaster Risk Reduction*, <<http://www.unisdr.org/we/coordinate/sendai-framework>>.

The Australian Government actively participated in the negotiations for the SDGs and the SF, and as a UN Member State, is a signatory to both agreements.

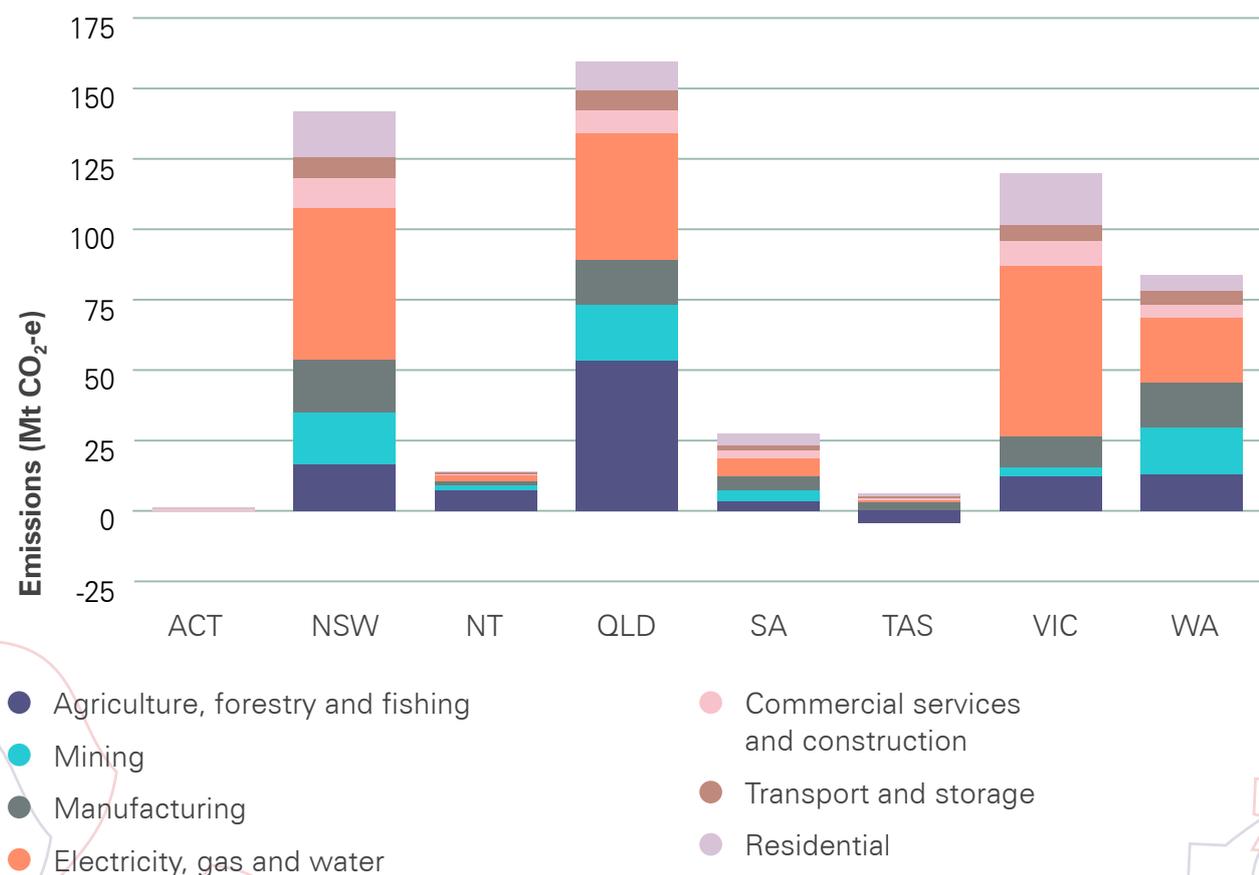
2.3 Victorian context and the role of sub-national governments

2.3.1 The Victorian context

The Victorian Government has committed to re-establish itself as a leader on climate change action. Policies to achieve this aim are, in the opinion of the IRC, dependent on clear guidance from effective climate change legislation – the subject of this Review.

Within Australia, ambitious targets to reduce emissions have been set by South Australia, Tasmania and the ACT,³⁴ with South Australia recently committing to net zero emissions by 2050.³⁵ Victoria's proportion of the national emissions profile is greater than all of these jurisdictions combined, due to its large population and economic activity. Victoria therefore shoulders a much greater responsibility to help achieve the national emissions reduction target, as well as to set its own independent state-based target, as has occurred elsewhere in the world.

Figure 2.1: Direct state and territory emissions by economic sector, 2013

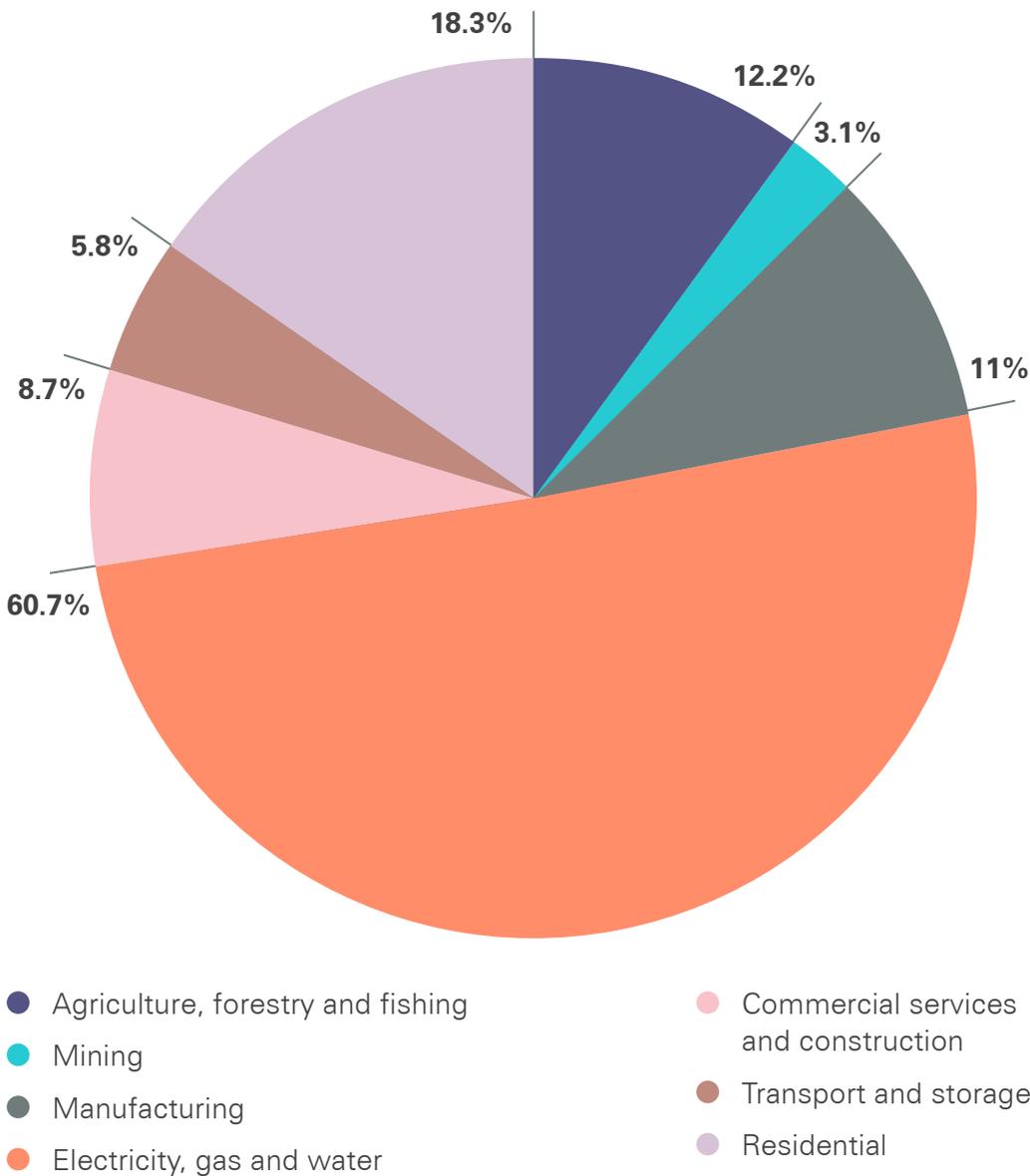


Source: Australian Greenhouse Emissions Information Systems

³⁴ SA and Tasmania have emissions reduction targets of 60% below 1990 levels by 2050. ACT targets are 40% below 1990 levels by 2020, 80% below 1990 levels by 2050 and zero net emissions by 2060.

³⁵ South Australian Government, above n 8.

Figure 2.2: Victoria – emissions by economic sector, 2013



Source: Australian Greenhouse Emissions Information Systems

The scientific consensus is clear on whether there will be an impact, and on the likely extent of the impact. The question of uncertainty relates to the... average outcome.

The case for action is strengthened, rather than diminished, by the fact that outcomes could turn out far worse (or better) than we expect. With strong mitigation, we at least rule out, or reduce to low probabilities, the potential for catastrophe – Ross Garnaut, 2011.³⁶

³⁶ Ross Garnaut, *Garnaut Climate Change Review 2011: Update Paper 1: Weighing the costs and benefits of climate change action* (2011) 22.

As Figure 2.1 (on page 43) illustrates, Victoria has the highest emissions in the country for the utilities and residential sectors.³⁷ The importance of these sectors to power generation, employment and Victoria's economy should not be underestimated. Consequently, climate policy must ensure that a transition to a less carbon-intensive economy occurs following a responsible and well considered strategy. Nonetheless, there are clear opportunities for Victoria to show domestic leadership by reducing emissions in the areas of electricity, transport and energy efficiency, among others.

Like all jurisdictions, Victoria has unique vulnerabilities when it comes to responding to the challenges posed by climate change, both from a mitigation and adaptation perspective. Victoria's emissions profile is largely shaped by its brown coal endowment, while agricultural production contributes significantly to its export economy.

In this regard, Victoria faces disproportionate risks to its economy – both from the direct impacts of climate change, and from the potential for competition from more decarbonised economies that are further down the transition path than Victoria. In addition, as many other economies become less carbon intensive, there will be shifts in their preferences for low-carbon goods and services, and Victoria's economy needs to be responsive to future demand trends. There is therefore a compelling case to demonstrate international leadership and to embrace economic opportunities in the transformation from an emissions-intensive Victorian economy to a low-emissions economy.

Strong action to reduce emissions must be viewed as an investment...If these investments are made wisely, the costs will be manageable, and there will be a wide range of opportunities for growth and development along the way. For this to work well, policy must promote sound market signals, overcome market failures and have equity and risk mitigation at its core – Nicholas Stern, 2006.³⁸

Inaction would leave Victoria exposed to a range of risks, including:

- ▲ High-emitting assets becoming stranded;
- ▲ A reduction in employment opportunities and skill shortages;
- ▲ Missed opportunities for new business;
- ▲ A sudden impact if a carbon price is introduced at the national level;
- ▲ Greater impacts and costs of climate change (including harm to ecosystems, human health, and food and water security);
- ▲ Higher eventual costs of transition to a low-emissions economy; and
- ▲ Reputational risk to Victoria and the Victorian Government.

37. Department of the Environment, above n 27, 7.

38. Nicholas H. Stern, *The economics of climate change: the Stern Review* (Cambridge University Press, 2007) 1.

2.3.2 Benefits of transitioning to a low-carbon economy

Increasingly, the transition to a low-carbon economy is seen as a driver of future economic value and a business opportunity, not just a fair contribution to dealing with a global problem.³⁹

There are many good reasons for strong and timely action to be taken at a state level, including:

- ▲ Avoiding the additional costs and disruption of delaying the transition to a low-carbon economy;
- ▲ Many of the policy action areas required are within state government responsibility;
- ▲ Well-designed and implemented state action increases investor confidence;
- ▲ Stimulation of innovation and the likely spread of new technologies in the market;
- ▲ Mitigation of Victoria’s reputational risk – for example, where consumers and investors increasingly demand sustainable products and services; and
- ▲ The opportunity to promote more ambitious national commitments and proactively manage what is now inevitable, in light of the need to achieve global carbon neutrality within 40 to 55 years.

Early global action is cheaper than delayed action. Every year of delay adds to the eventual cost of action as it locks in more emission-intensive industry and infrastructure, and defers new investment in low-emission technology, industry and jobs. [...] For economies with high levels of carbon pollution per unit of output every year of deferring action on climate change will lead to higher long term costs – Australian Government Treasury, 2011.⁴⁰

The IPCC Synthesis Report highlights the need for mitigation action to be undertaken in conjunction with adaptation action if nations and states are to mitigate the risks of future climate change and prepare for climate change impacts, some of which Victoria is already experiencing (for some examples of possible future climates, refer to Box 2.3).

Box 2.3: Possible future climates for Melbourne and Mildura⁴¹

	With warming of between 0.5 to 1.5 degrees	With warming of between 1.5 and 3.0 degrees
Melbourne’s climate will be more like the current climate of...	Wangaratta (VIC)	Cowra (NSW)
Mildura’s climate will be more like the current climate of...	Menindee (NSW)	Mount Magnet (WA)

³⁹ World Business Council for Sustainable Development, <<http://lctpi.wbcsdservers.org/>>; Rafeale Cayuela, Corporate Chief Economist at The Dow Chemical Company, summarised at Renewable Matter, *The New Chemistry is Worth \$80 Trillion*, <http://www.renewablematter.eu/art/88/The_New_Chemistry_Is_Worth_80_Trillion>.

⁴⁰ Australian Government Treasury, *Strong Growth, Low Pollution: Modelling a Carbon Price* (2011) 3.

⁴¹ Climate scenarios sourced from: Timbal, B. et al., *Murray Basin Cluster Report, Climate Change in Australia Projections for Australia’s Natural Resource Management Regions: Cluster Reports*, eds. Ekström, M. et al., CSIRO and Bureau of Meteorology, Australia (2015) and Grose, M. et al., *Southern Slopes Cluster Report, Climate Change in Australia Projections for Australia’s Natural Resource Management Regions: Cluster Reports*, eds. Ekström, M. et al., CSIRO and Bureau of Meteorology, Australia (2015).

The Climate Council's *Angry Summer 2013/2014* report notes that 'the annual number of record hot days in Australia has doubled since 1960' and that over the past decade, record hot days have occurred three times more often than record cold days.⁴²

The report states that 'Victoria experienced its hottest four days on record from 14–17 January, and Melbourne set a record for four consecutive days at 41 degrees and above (14–17 January) and two nights in a row at 27 degrees or above (15–16 January)'.⁴³ 2015 is likely to be the hottest year on record, both globally and in Australia. There is significant evidence supporting the case for strong state and local adaptation action; indeed, in some countries, state governments lead national governments in promoting and implementing adaptation.⁴⁴

State action on climate change will also deliver no regrets co-benefits including:

- ▲ Fostering new industries and jobs;
- ▲ Reduced air pollution and improved health outcomes;
- ▲ Increased productivity;
- ▲ Lower mortality;
- ▲ Reduced vulnerability to price shocks;
- ▲ More sustainable forests, food and farming;
- ▲ Safer and more secure energy and water supplies;
- ▲ Less waste;
- ▲ Reduced impact of extreme weather events and disasters; and
- ▲ A greater ability to plan for and manage climate change risks and rapidly respond to emergencies caused by climate change.

Globally, sub-national governments and agencies have been showing strong leadership on climate change policy in recent times. Victoria has many examples to draw on to develop a model of sub-national leadership.⁴⁵ With this in mind, the state has already begun cultivating strong relationships with global leaders such as California.

It is now clear that economic growth and growth in GHG emissions can be decoupled. For example:

- ▲ In South Australia between 1989–90 and 2012–13, emissions decreased by 9 per cent while gross state product grew by 60 per cent (see Figure 2.3);⁴⁶
- ▲ Over the past five years, Organisation for Economic Cooperation and Development (OECD) countries have grown on average by 13 per cent while GHG emissions have reduced by 7 per cent;
- ▲ In 2014, China's emissions dropped for the first time by 2 per cent, while its economy grew by 7.3 per cent; and
- ▲ Over the past five years, California's gross domestic product (GDP) has grown by 5 per cent while GHG emissions have decreased (see Figure 2.4).

All national, sub-national and local governments, and all sectors of the economy, must progressively decrease emissions, working towards net zero. As described earlier, there is a strong role for state governments in guiding the inevitable transition to a low-emissions economy.

42. The Climate Council, *Angry Summer 2013/2014*, (2014) <<http://www.climatecouncil.org.au/uploads/ff37af7492b4b698420c1aebdaed54a0.pdf>>.

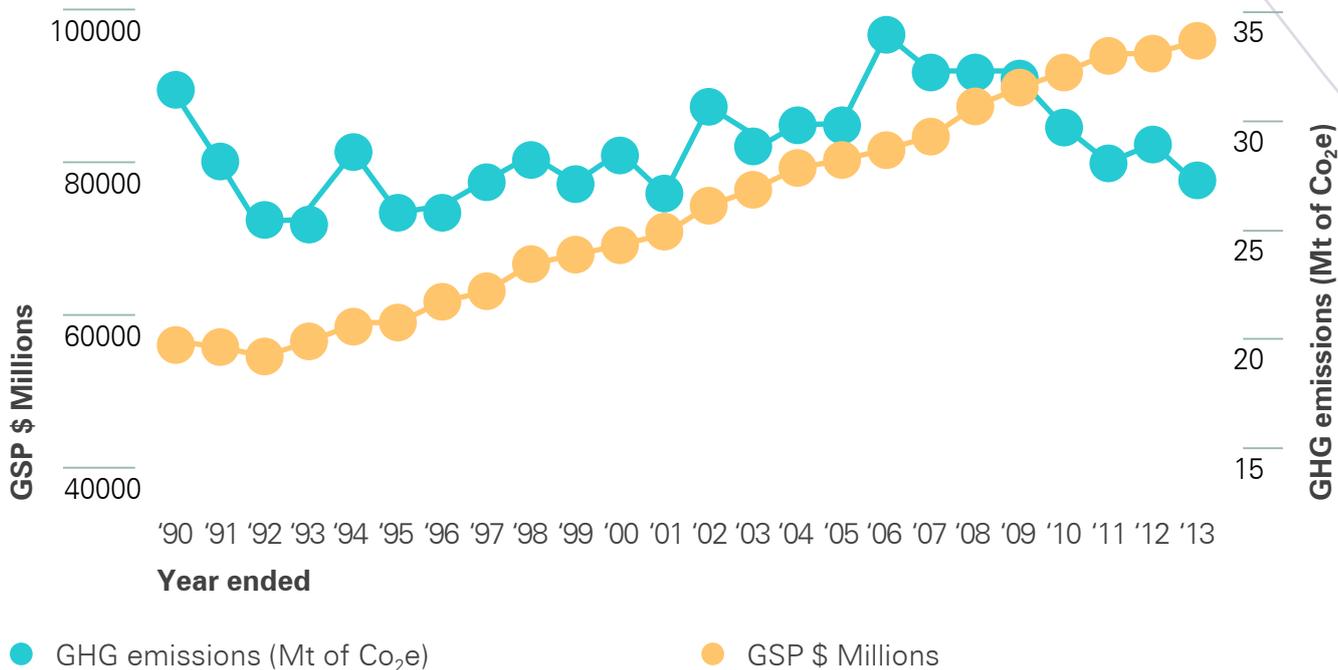
43. *Ibid.*

44. IPCC, 2014: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1132 pp, Chapter 14, Adaptation Needs and Options.

45. Carbon Disclosure Project, *The State of Play: Emissions reporting and climate change action at the sub-national level* (2014) 8.

46. South Australia's Low Carbon Economy Experts Panel, *Findings and Recommendations* (2015).

Figure 2.3: South Australia’s economic growth and GHG emissions 1989–90 to 2012–13



Source: Australian Bureau of Statistics, 2014 'Australian National Accounts: State Accounts, 2014–15'; and Commonwealth of Australia, 2015 'State and Territory Greenhouse Gas Inventories 2013'

2.3.3 The role of the State Government in climate change mitigation

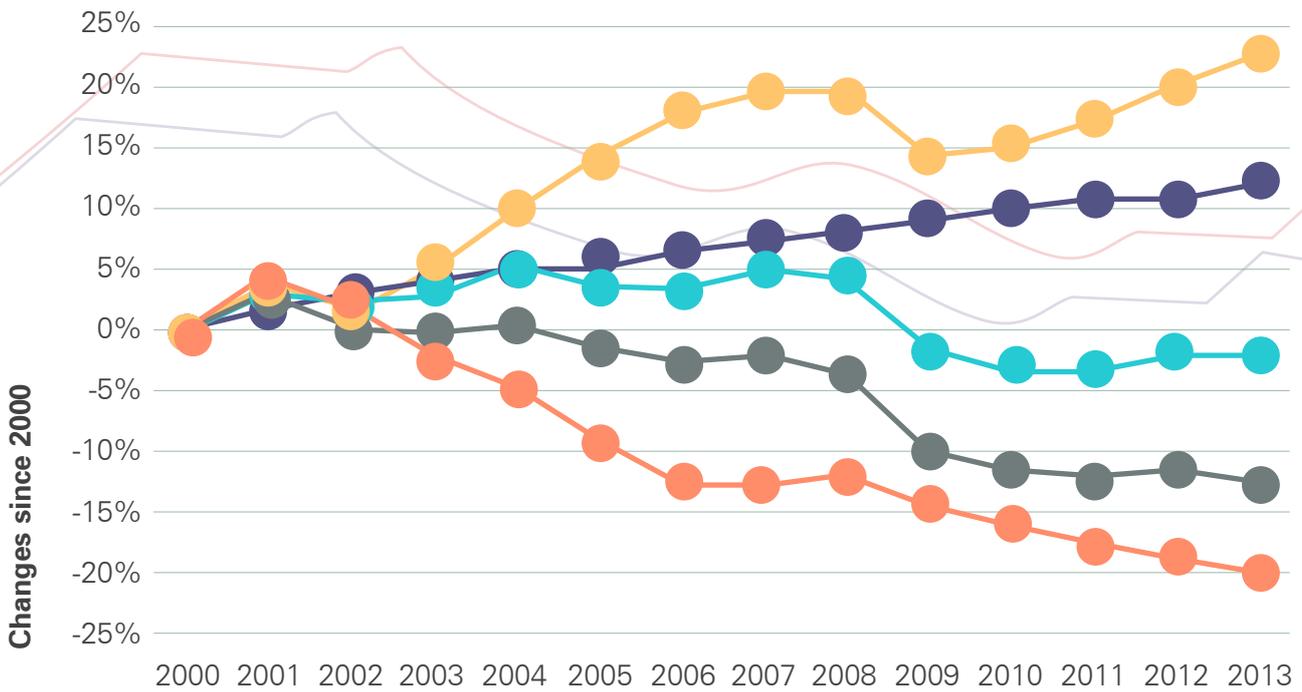
It is often argued that mitigation action at a state level can contribute to achieving a national target but will not deliver additional abatement regardless of the mechanism by which a national target is pursued (for example, through carbon pricing, the current Australian Government’s Direct Action Plan or any other future approach). This lack of ‘additionality’ is cited as a reason for states not to take more ambitious action on climate change in the absence of national leadership. However, this fails to take into account the fact that in order to meet a national target, many of those reductions must occur within the state and many of the levers to reduce emissions are in fact under state government control.

Some consistent themes emerged in business sector submissions to this Review’s public consultation process that indicated broad support for emissions reductions.

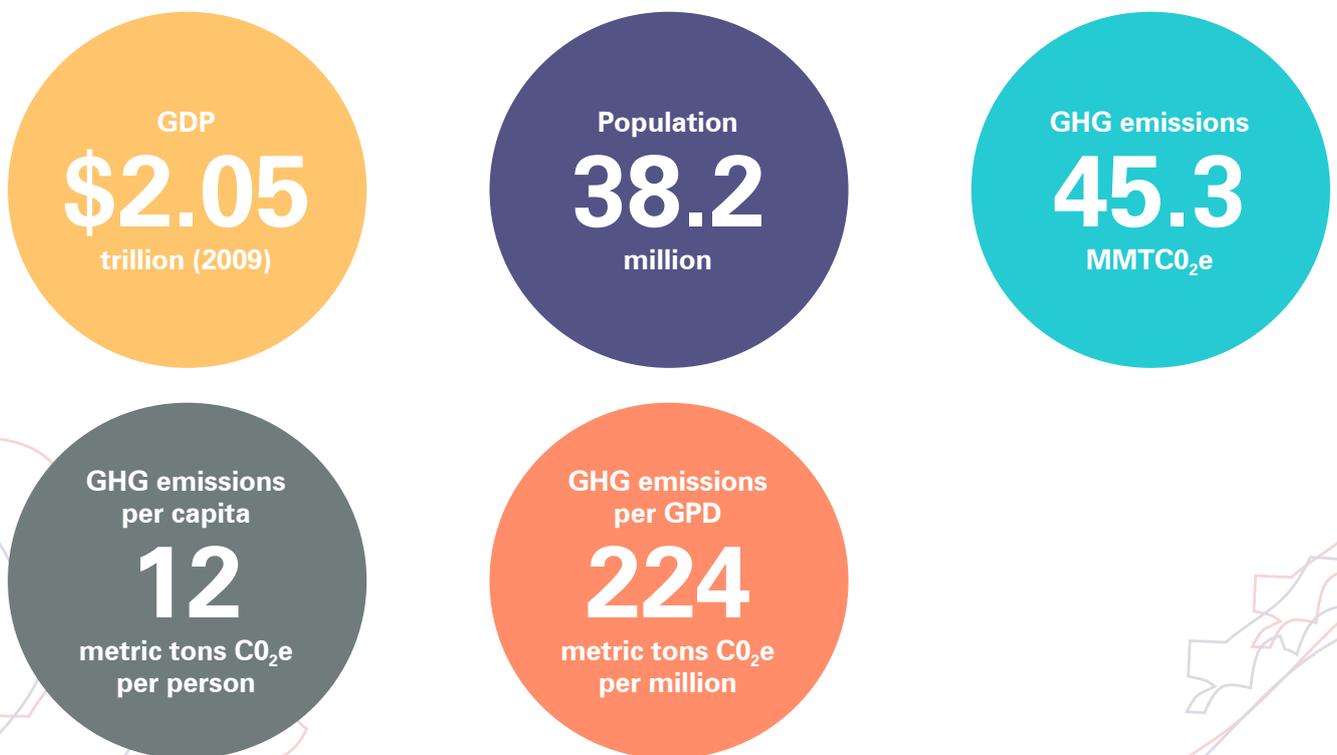
Businesses and business groups suggested that in order to be more effective, the Act needed to:

- ▲ Develop a framework to transition Victoria to a low-carbon economy over a reasonable timeframe in a way that maximises the state’s growth and globally competitive position;
- ▲ Articulate the importance and economic benefits of reducing GHG emissions;
- ▲ Define a broader range of emissions reduction measures;
- ▲ Provide long-term policy certainty;
- ▲ Include measures to assist the transition of industry and the community to a low-carbon future, including supporting the development of energy efficient products, facilitating investment into renewable and low-carbon technologies, supporting the growth of low-carbon technologies and fostering collaboration between research bodies, industry and government.

Figure 2.4: Change in California GDP, population and GHG emissions since 2000.



Associated 2013 value (metric)



Source: Adapted from California Environmental Protection Agency, Air Resources Board 2015, Greenhouse Gas Inventory Data – Graphs.

However, other business sector submissions suggested that:

- ▲ The Commonwealth Government should take the primary role in developing policy and regulation on climate change;
- ▲ The role of state governments should be limited to implementing activities and programs that contribute to, and align with, federal policy or objectives; and
- ▲ Victorian business should not be exposed to more onerous requirements than those in other states.

The approach recommended by the IRC enables these issues to be addressed within the state-based framework.

2.4 The need for a Climate Change Act

The IRC believes that it is important to consider the extent to which a climate change Act is necessary for achieving climate change outcomes. The IRC believes that an Act that deals specifically with climate change plays an important role and signals the serious commitment of the

Government to deal with climate change through a binding legislative instrument.

It is worth noting that a number of other jurisdictions, such as Mexico, the United Kingdom, and the Philippines, have comprehensive framework climate change legislation.⁴⁷ In the case of the Philippines, this Act enabled the mainstreaming of climate change into government policies, plans, strategies and programs; the creation of Climate Change Commission and Climate Change Office; and the establishment of a framework strategy and program on climate change.⁴⁸

While a Climate Change Act can set a clear framework for dealing with climate change, on its own it is not sufficient to govern all aspects of Victoria's response to climate change. It is absolutely critical that the Act is seen as one part of the broader legislative and policy agenda of the Government to deal with climate change matters, and that it works alongside measures to support renewable energy, electric vehicles, energy efficiency and other climate change measures not covered by the Act.

'Many state and regional governments have authority over key aspects of climate and energy policy such as power generation, supply and distribution of electricity, the regulation of the built environment, waste management, transport and land use planning. These governments provide a critical link in the vertical integration of climate policies and benefit from working at a level and scale that allows for quicker action and greater experimentation. As a result, states and regions play an essential role as policy innovators.'⁴⁹

47. REDD+ Law Project Indonesia, *Paper 3: Comparative Approaches to National Climate Change Laws and Policy* (April 2014).

48. *Philippines Climate Change Act 2009* (Republic Act No. 9729) < <http://climate.gov.ph/> > (Accessed 14/12/2015).

49. Carbon Disclosure Project, above n 45, 8.

3

A Victorian emissions reduction target

The Terms of Reference for this Review included a requirement to ‘examine whether legislation is the most appropriate mechanism for an emissions reduction target’. This chapter recommends that the Act include an emissions reduction target that is in line with the best available science.

The Act should also support the development of a stable and long-term policy framework needed to facilitate the transition to a low-carbon economy and a climate resilient Victoria.

The majority of submissions to the Review said the Act should provide a clear pathway for the transition to a low-carbon economy. A common theme was that the Act should facilitate an integrated, whole-of-government response to climate change across all levels and areas of government.

When the Act came into effect in 2011, it contained a GHG emissions reduction target of 20 per cent by 2020, against 2000 levels. The 2011 Review found that there was no compelling case to maintain that target after the introduction of the Clean Energy Future Package.⁵⁰ It also said that it lacked enforceability and concrete measures in

legislation to achieve it.⁵¹ *The Climate Change and Environment Protection Amendment Act 2012* (Vic) implemented the commitments made in the Government response to the Review, repealing the target and references to the target in the *Environment Protection Act 1970*. The IRC’s view is that the Act must contain stand-alone provisions that stand the

50. The Australian government’s Clean Energy Futures package (2011) introduced a national carbon price and provided support for energy efficiency, clean energy innovation and land-based carbon sequestration programmes.

51. Dr Lynne Williams, *Review of the Climate Change Act 2010* (December 2011) 4.

test of time and that should be maintained irrespective of any change in government.

In its November 2014 *Our Environment, Our Future* election policy, the current Victorian Government committed to 'review legislation and programs to commit to an achievable carbon emissions reduction target'. Development of advice and options for a state emissions reduction target is currently being undertaken by the Department of Environment, Land, Water & Planning (DELWP).

The IRC was asked to examine whether legislation is the most appropriate mechanism for an emissions reduction target in section 3.1. Given the Victorian Government's commitment to re-establish itself as a leader in climate change, and the specific reference to this in the Terms of Reference, the IRC provides further advice in sections 3.2 and 3.3 on what level of emissions reduction is in line with best practice and leadership.

3.1 Rationale for legislating a target

Targets can incentivise action on issues that had previously been given less attention.⁵² They can also function as a political statement, where the Government is accountable to the Parliament (and through it to the public) for the performance of this obligation.

Incorporating targets into legislation delivers:

- ▲ An *internal signal* to the rest of government about the priority a government attaches to an issue. The political pressure to achieve them will be increased.
- ▲ An *external signal* of the seriousness of a government's intent.⁵³

It is the IRC's view that embedding an emissions reduction target in legislation:

- ▲ Sets the context within which emissions will be reduced over time;
- ▲ Sends a clear signal of a government's intention, commitment and level of ambition;
- ▲ Provides certainty and confidence for businesses and civil society, which influences investor confidence;
- ▲ Drives low-carbon investment and innovation across technologies, services and business models;
- ▲ Influences national policy settings;
- ▲ Provides an example for other like-minded states to follow;
- ▲ Lowers the cost of transition to a low-carbon economy;
- ▲ Can deliver positive economic and social benefits; and
- ▲ Does not impose unnecessary costs on the state, recognising that the policy actions to achieve the target will be subject to due government processes and the sanction for not meeting the target is limited to public reporting.

Submissions from individuals, local government and non-government sectors stated that Victoria should have its own emissions reduction targets (although there were a smaller number of submissions that used words such as measures, incentives and goals rather than targets). However, some sectors of the business community stated that the Commonwealth Government alone should have the responsibility of setting targets in a national and international context.

⁵². See more discussion in: Institute for Government, *Legislated Policy Targets: commitment device, political gesture or constitutional outrage?* (2012).

⁵³. *Ibid.*

The Melbourne Sustainable Society Institute noted in its submission:

‘Legislation is the most appropriate mechanism for defining an emissions reduction target and for nominating the mechanisms by which it will be articulated and reviewed, and progress towards it reported and enforced. Even where a state-based target is not strictly enforceable – and it should be – it provides an overarching goal and public benchmark for concerted action by the Victorian Government, local governments and the private sector.’⁵⁴

A small number of stakeholders raised an argument against state-based emissions reduction targets. Their argument is that states cannot control all emissions, particularly given the structure of Australia’s energy markets, under which energy is traded between states.

Notwithstanding interstate energy markets and trade, the IRC believes state emissions targets are useful and justifiable based on the scientific evidence and the UNFCCC Paris Agreement, Australia will have to achieve net zero emissions to contribute to international efforts to stabilise global warming. It is extremely unlikely that other states in Australia would allow Victoria to continue emitting while they did more to keep

Australia at overall emissions neutral. Thus setting a state-based target based on the science is simply publicising the inevitable outcome, and planning for it.

Also, clear state targets send an important signal to the economy, indicate the desired pace of change, provide certainty to businesses and promote transparency.

State targets and progress towards those targets are an important way of measuring the effectiveness of policy interventions.

3.2 Sub-national emissions reduction targets

A target consistent with the global goal of limiting warming to well below 2 degrees and pursuing efforts to limit the temperature increase to 1.5 degrees, as provided for in the Paris Agreement, would demonstrate Victoria’s commitment to leadership. It is worth noting that a number of sub-national jurisdictions in Australia and elsewhere have adopted ambitious emissions reduction targets.⁵⁵ A number have also made commitments through the Global Climate Leadership Memorandum of Understanding (Under2MOU) (Figure 3.1).

The Under2MOU’s goal is to limit global warming to below 2 degrees and to limit GHG emissions to below 2 metric tons per capita by 2050. All signatories agree to reduce their GHG emissions by 80 per cent to 95 per cent, or limit emissions to 2 metric tons CO₂-equivalent per capita, by 2050.⁵⁶

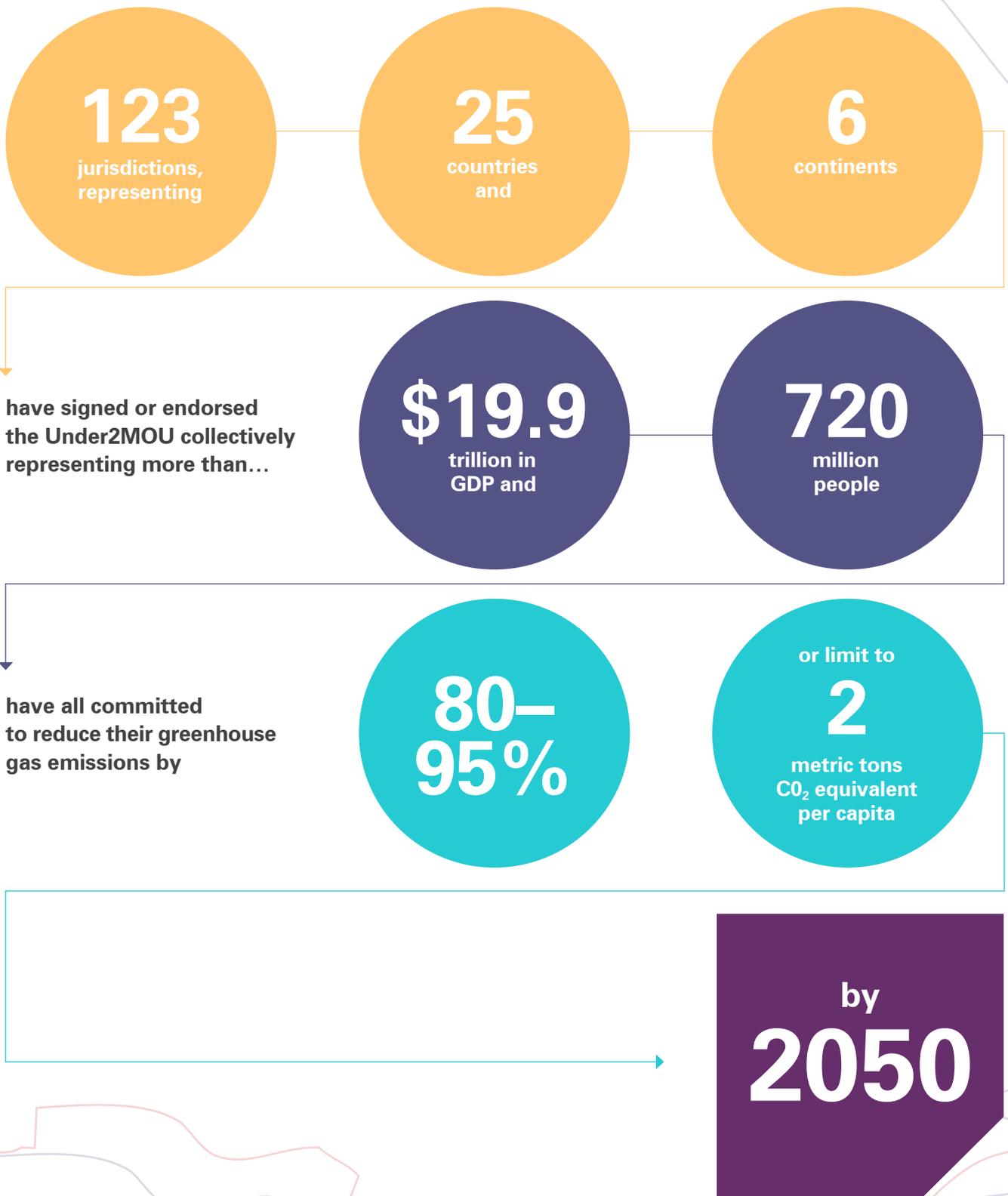
The IRC believes that Victoria should look to the ambitious actions of other sub-national jurisdictions when determining any target and take into account the Paris Agreement objective of pursuing efforts to limit the temperature increase to 1.5 degrees.

54. Melbourne University, Melbourne Sustainable Society Institute, *Submission to the Review of the Climate Change Act* (2015) 18.

55. ACT (Australia); Baden-Wurttemberg (Germany); Baja California (Mexico); Basque Country (Spain); British Columbia (Canada); California (USA); New York State (USA); Ontario (Canada); Oregon (USA) Quebec (Canada); Rhone-Alpes (France); Rio de Janeiro (Brazil); Sao Paulo (Brazil); Scotland (UK); South Australia (Australia); Tasmania (Australia); Vermont (USA); Wales (UK); Washington (USA).

56. Subnational Global Climate Leadership Memorandum of Understanding (Under 2 MoU), II (A).

Figure 3.1: The Under2MOU



Source: Subnational Global Climate Leadership Memorandum of Understanding, Under2MOU, <<http://under2mou.org/>>

3.3 A long-term, science-based target

A long-term target should be based on the best available science. Currently that means in line with the level of decarbonisation required to keep global temperature increases below 2 degrees above pre-industrial temperatures, as described in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

Long-term targets embedded in legislation provide a predictable planning framework for decision makers and a clear signal to businesses about political commitment to the low-carbon transition. This, in turn, should help to trigger investment in the decarbonised economy and drive down costs. Further, the IRC believes that a target consistent with leadership and current best practice should translate to net zero emissions by 2050. Research has shown this to be feasible technically and economically in Australia. Similar research for 15 other major emitting countries on energy emissions shows near zero emissions by 2050 is achievable.⁵⁷ The IRC also finds the language of net zero effective, as it signals to business, investors and the community what is required both by the science on climate change and the international climate change agreements.

The IRC finds that a long-term target is appropriate when coupled with short-term goals such as five-year interim targets (see section 5.3).

'...Long term targets are particularly important as they show a commitment to mitigation action that is intended to extend beyond changing political contexts and turnovers of governments. This can help shape private-sector decisions on long-term investments and can influence government departments in redirecting resources towards the target.'⁵⁸

'In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty' – Article 4, Paris Agreement

57. ClimateWorks Australia, *Pathways to Deep Decarbonisation in 2050: How Australia can prosper in a low carbon world* (2014), Deep Decarbonization Pathways Project, *2015 Synthesis Report: pathways to deep decarbonization*, SDSN – IDDRI (2015).

58. REDD+ Law Project Indonesia, above n 47.

3.4 Features of the target in the Act

Any target should be set by the Government on the advice of suitably qualified experts in climate science, mitigation and adaptation and disaster risk reduction. Section 6.2.1 discusses the role of independent monitoring and oversight, including the provision of expert advice.

The Act should enable the target to be revised (made stronger) on the basis of scientific evidence and advice from experts. Reviewing any target in light of new information will ensure it remains appropriate and relevant.

Relevant factors could include:

- ▲ Updates or new developments in climate science (new science could imply stronger action);
- ▲ The level and pace of national and international action on climate change; and
- ▲ Economic factors.⁵⁹

The IRC recommends that this mechanism should not be used to weaken targets.

Recommendation 1

1. The Act should include a long-term emissions reduction target that is based on the best available science and that can be adjusted in light of new information, but which at the very least places Victoria on a pathway to pursuing efforts to limit the temperature increase to 1.5 degrees Celsius.
2. Progress towards this target should be managed in five-year periods, known as interim target periods, allowing performance to be tracked and adjustments to be made to ensure that the long-term target will be met.
3. The Government should seek and consider independent expert advice on the long-term target.
4. The Government must ensure that both the Premier and Minister are accountable for meeting the long-term target.

⁵⁹ These were factors considered by the Climate Change Authority as appropriate to consider when reviewing any national targets. Climate Change Authority, above n 18, 105.

3.5 Any target must be accompanied by other measures

Having a target in legislation alone is insufficient to drive strong climate change action across all government departments and sectors of the economy. For this reason, the target must be supported by robust and transparent processes that:

- ▲ Communicate the Government's approach to achieving the emissions reductions required to deliver the long-term target (through strategies, plans and monitoring reports);
- ▲ Embed a whole-of-government response;
- ▲ Provide sufficient lead time for sectors to prepare and evolve to significantly reduce their emissions;
- ▲ Devolve responsibility and drive engagement with business, the community and other levels of government to ensure successful integration of effort; and
- ▲ Provide the Government with sufficient flexibility to deliver policy priorities and drive an orderly and strategic transition to a low-emissions future for Victoria.

The Government has a range of policy tools it can use to take appropriate steps on mitigation. Most of these are policy measures that would be contained in the *Low Carbon Growth Plans* proposed in the Act rather than prescribed in the Act itself. There are some measures the Government could consider adopting that are likely to require separate legislation. For example, these could include an accelerated phase-out or upgrade of high GHG emitting facilities, introducing a state-based emissions trading scheme, using the licensing powers of the EPA to reduce GHG emissions, or amending building standards or planning codes. These may require legislation outside the Act or be best dealt with under the principal legislation of the EPA.

This is discussed further in Chapter 5.

4

Embedding the consideration of climate change

A key weakness of the Act is that does not effectively promote the consideration of climate change across whole-of-government decision making. The recommendations proposed in this chapter can enable this through:

- ▲ Introducing a Charter that defines climate change objectives for Victoria and principles to guide the delivery of those objectives across the whole of government;
- ▲ Expanding the ambit of the Act's decision-making framework to include critical decisions made under other legislation;
- ▲ Driving greater accountability and transparency across decision making by broadening legal standing for the judicial review of Schedule 1 decisions; and
- ▲ Introducing a requirement to assess, based on clear and transparent measures, the real economic costs and benefits associated with climate change risks, liabilities and opportunities arising from government policies, plans, programs and operational decision-making.

4.1 Guiding principles

The guiding principles (Part 2 of the Act) provide a framework to assist decision makers to appropriately and consistently consider climate change. They guide decision making during uncertainty and are flexible to support a range of decision-making activities. Including the principles in legislation supports an integrated approach to climate change action.

The 2011 Review found that the principles were ‘well formulated and relevant to climate change decisions’ but that the Act did not specify decisions to be made by government. It stated that the ‘guiding principles could more effectively support decision making if they were applied: 1) when preparing ministerial guidelines (section 15); and 2) when implementing the Climate Change Adaptation Plan (section 16).’ It recommended that the guiding principles be incorporated into the ministerial guidelines (section 15).

The Victorian Government supported the Review’s findings and recommendations in relation to the guiding principles, stating that they ‘provide a basis for managing climate risks and are a key input to the development of the Climate Change Adaptation Plan.’ The Government also committed to clarifying the relationship between the guiding principles and the Climate Change Adaptation Plan. The guiding principles now apply to the following two sections of the current Act:

- ▲ Section 15 ministerial guidelines – ‘The Minister may have regard to incorporating any of the principles set out in this Division in making or issuing ministerial guidelines under section 15 if the Minister considers the principle is relevant in the circumstances.’
- ▲ Section 16 Climate Change Adaptation Plan – ‘The Minister must have regard to each of the principles set out in this Division in making a decision in the course of preparing a Climate Change Adaptation Plan under section 16.’

4.1.1 Ministerial regard to guiding principles

No guidelines have been issued under section 15. Therefore, the principles have not been used in this case.

4.1.2 Use of the principles

The principles have been used in the following ways:

- ▲ The principles are in the *Victorian Climate Change Adaptation Plan* and were used to guide its development;
- ▲ The principles were actively considered and applied by the former Department of Environment and Primary Industries in the development of the *Climate Change Adaptation Memorandum of Understanding* (MoU) with local government, prepared in 2014;
- ▲ The design of programs and initiatives to support local government on climate change has been guided by the principles; and
- ▲ The 2015 Statement of Obligations (General) under the *Water Industry Act 1994* requires water corporations to directly have regard to the guiding principles of the *Climate Change Act 2010*.

DELWP advised that the extent to which the principles have been applied to decision making has varied across the Government in relation to the *Victorian Climate Change Adaptation Plan*. They were found to be most relevant in the former Victorian departments of Environment and Primary Industries (DEPI), Health (DoH) and Human Services (DHS) portfolios. The variability suggests that the principles were not well integrated into departmental adaptation planning decisions.

4.1.3 Effectiveness

In developing and implementing the *Victorian Climate Change Adaptation Plan*, DELWP found the principles were broadly appropriate, but there were a number of barriers that led to difficulties in applying them, including:

- ▲ A lack of familiarity with the principles;
- ▲ The absence of mandatory reporting or a requirement to provide evidence of their use;
- ▲ Uncertainty over the relevance of the principles in some portfolios; and
- ▲ A lack of detailed guidance or practice notes that explain the principles.

The IRC notes that the principles are consistent with those in the IPCC's Fifth Assessment Report and finds that most of the principles remain relevant and appropriate. Two of the principles could be strengthened to ensure they provide a sound foundation for mitigation and adaptation action.

Submissions to the Review supported the principle of community engagement, but recognised that the principle needs strengthening. Respondents were keen for the community and relevant stakeholders to be consulted over the action taken in their communities and industries.

Recommendation 2

The existing guiding principles (Part 2) should be retained and included in the Charter and amended as follows:

- a. Section 11 principle of complementarity should be removed;
- b. Section 12(d) principle of equity should be amended to also refer to medium-term consequences; and
- c. Section 13 principle of community engagement should be amended to include access to information, access to environmental justice and public participation.

The IRC finds that the principle of complementarity is no longer relevant and should be repealed. The principle of complementarity states:

'A decision of the Government of Victoria in response to climate change should complement any actions of the Commonwealth Government relating to climate change including, but not limited to, an emissions trading scheme and any targets or caps on greenhouse emissions fixed by the Commonwealth Government or the Parliament of the Commonwealth.'

The inclusion of complementarity as a principle may be seen to limit the role of the State Government in pursuing mitigation measures beyond those outlined in the *Principles for Jurisdictions to Review and Streamline their Existing Climate Change Mitigation Measures* that were agreed by the Council of Australian Governments (COAG) in 2008.

The Act would be strengthened by decoupling it from the presence or absence of a national emissions reduction target or carbon price. It should be drafted in such a way that it provides the framework for action by Victoria while allowing the flexibility to contribute to action undertaken at the national level. The IRC's recommendations would not duplicate the roles of other levels of government in addressing climate change. The IRC's approach has been designed to co-exist with national action while providing a platform for effective state-based action. In the event that a national carbon price or carbon trading scheme was introduced in the future, this Act should not require amendment.

As described in section 2.3, some stakeholders argue that the role of state governments should be limited to implementing activities and programs that contribute to, and align with, federal policy or objectives. Similarly, it is argued that mitigation action at a state level can contribute to achieving a national target but will not deliver additional abatement. Thus, the mitigation of climate change has often been described as a classic global collective action problem; a 'tragedy of the commons'.⁶⁰ The underlying assumption is that taking action on climate change is not in the state's economic interest. In the IRC's opinion, this assumption is now thoroughly contested.

The science is clear that all jurisdictions need to reduce their emissions towards net zero by mid-century to remain well below 2 degrees.

'Delaying action is a false economy: for every \$1 of investment in cleaner technology that is avoided in the power sector before 2020, an additional \$4.30 would need to be spent after 2020 to compensate for the increased emissions.'⁶¹

There is considerable evidence that the sooner jurisdictions reduce GHG emissions, the greater the economic benefits. When using economic efficiency as a measure, the majority of mitigation action can be done in ways that are net-beneficial.⁶² It has been noted by the United Nations that 'improving economic performance and pursuing low-carbon, climate resilient growth is not only compatible, but indeed one and the same objective'.⁶³ The transition to a low-carbon economy and ambitious climate action is also said to be the biggest opportunity for business.⁶⁴ In fact, *not* acting on climate change now represents a risk to economic performance.

The IRC finds that the guiding principles are sound, but their application within the Act is insufficient to drive the mainstreaming of climate change considerations in government decision making.

60. Fergus Green, *Nationally self-interested climate change mitigation: a unified conceptual framework* (July 2015) Centre for Climate Change Economics and Policy Working Paper No. 224, Grantham Research Institute on Climate Change and the Environment, Working Paper No. 199.

61. International Energy Agency, *The world is locking itself into an unsustainable energy future*, <<https://www.iea.org/newsroomandevents/pressreleases/2011/november/the-world-is-locking-itself-into-an-unsustainable-energy-future.html>> (Accessed 11/12/2015).

62. *Ibid.*

63. United Nations, *Climate Summit 2014: The Economic Case for Climate Action*, <<http://www.un.org/climatechange/summit/2014/08/economic-case-climate-action/>> (accessed 11/12/2015).

64. World Business Council for Sustainable Development, <<http://lctpi.wbcsdservers.org/>>; Rafeale Cayuela, Corporate Chief Economist at The Dow Chemical Company, summarised at Renewable Matter, *The New Chemistry is Worth \$80 Trillion*, <http://www.renewablematter.eu/art/88/The_New_Chemistry_Is_Worth_80_Trillion>.

4.2 Preamble

Preambles are no longer common in Victorian legislation. They are still used occasionally for principal Acts of historic significance. Their purpose is primarily to communicate background information as to why the Act was introduced and why it was important at that time. In legislation that does contain a Preamble, it appears before the enacting words and explains the background to the Act or the reasons why its enactment is considered desirable.⁶⁵ A Preamble is part of an Act and may be used as an aid in its interpretation.^{66,67}

The 2011 Review recommended retaining the Preamble.

Although the international, national and state policy context has evolved since the creation of the Act, most of the Preamble remains relevant. It states that:

- ▲ The overwhelming scientific consensus is that human activity is causing climate change;
- ▲ Responsibility for action is shared by all levels of government, industry communities and the people of Victoria, and those actions need to be coordinated;
- ▲ Early action will enable a more effective response and reduce any economic and social impacts... and ease the task of long term transition to an environmentally sustainable economy; and
- ▲ Some climate change is inevitable, and early consideration of future adaptation is desirable.

The Act's preamble was cited in a Victorian Civil and Administrative Tribunal matter – Review of EPA works approval for the Dual Gas Demonstration Project, involving use of coal gasification technology.⁶⁸

...The Tribunal notes the existence in Victoria of the Climate Change Act 2010 (CC Act). The CC Act contains a legislative recognition in Victoria of 'the overwhelming scientific consensus that human activity is causing climate change', and that 'responding to climate change is a responsibility shared by all levels of government, industry, communities and the people of Victoria'. The preamble to the CC Act further notes that: 'Early action to reduce greenhouse gas emissions will ease the task of long-term transition to an environmentally sustainable economy.' To the extent the CC Act is relevant in this proceeding, the EPA, Dual Gas and the objectors all acknowledged this legislated position on climate change (albeit leading to different views on the outcome for this proceeding), as does the Tribunal.

While the Preamble was cited, the two most relevant parts of the Act were the emissions reduction target in section 5, and the decision-making requirements in section 14.

The Preamble remains broadly relevant but it omits the concept of disaster risk reduction introduced in this Review.

The IRC understands that it is unusual to amend a Preamble to an Act given the role of the Preamble is a statement as to why the Act was introduced. Nevertheless, the IRC considers an updated preamble warrants consideration to reflect the current climate change policy context and circumstances.

Recommendation 3

The Government should give consideration to amending the Preamble to the Act to reflect the current policy context.

65. Office of the Chief Parliamentary Counsel (Victoria), *The Legislative Process* (July 2015).

66. *Ibid.*

67. In *Wacando v Commonwealth* (1981) 37 ALR 317 at 333 Mason J said: "It has been said that where the enacting part of a statute is clear and unambiguous it cannot be cut down by the preamble. But this does not mean that a court cannot obtain assistance from the preamble in ascertaining the meaning of an operative provision. The particular section must be seen in its context; the statute must be read as a whole and recourse to the preamble may throw light on the statutory purpose and object."

68. *Dual Gas Pty Ltd & Ors v Environment Protection Authority* (includes Summary) (Red Dot) [2012] VCAT 308 (29 March 2012).

4.3 Purposes

In Victorian legislation, a Purposes clause serves the primarily technical function of informing the Parliament, decision makers and a reviewing court about the nature of a Bill and its scope. If significant amendments are made to an act, the purposes will need to be updated to reflect the final structure and contents of the Act.

Following the 2011 Review, minor amendments were made to the Purposes clause to reflect the removal of the emissions reduction target and the requirement for consideration of the guiding principles in the development of the Climate Change Adaptation Plan.

The Purposes clause should be updated to reflect final structure of the Act.

Recommendation 4

The Government should review and update the stated Purposes of the Act (as required) to ensure they reflect the final structure and contents of the Act.

4.4 Future reviews of this Act

Section 18 of the Act describes requirements of this Review. The timing requirements are:

- ▲ That an independent review of this Act is completed before 31 December 2015; and
- ▲ The Minister must cause a copy of a review to be laid before each House of the Parliament within 10 sitting days of that House after the completion of the review.

The review provisions in the Act are time bound and non-recurring. Governments can amend legislation at any time. However, introducing a built-in recurring review clause is useful given the evolving nature of climate change policy.

The Act also describes who should conduct the review (section 18(2)) and the scope of the reviews. Section 18(3) of the Act states that 'the persons conducting a review of the Act may have regard to:

- a. Other Victorian law relating to climate change and any other law or policy relating to climate change;
- b. Developments in climate change technologies and best practice in response to climate change;
- c. Any plan prepared under section 16; and
- d. Whether the Act needs to be amended to include new purposes, policy objectives or programs.'

The current provisions do not explicitly require the Government to assess the efficiency or effectiveness of the Act in driving the consideration of climate change and climate change action through government strategies, policies and actions. The Terms of Reference developed by the Minister for this Review expanded significantly on these requirements. The IRC notes that other jurisdictions, such as South Australia, Tasmania and the United Kingdom, have review provisions that appear to be more explicit and focused on assessing the effectiveness of their respective legislation (See Figure 4.1 and Box 4.1).

Box 4.1: Review requirements in other jurisdictions

South Australia

Section 21 of the South Australian *Climate Change and Greenhouse Emissions Reduction Act 2007* states that the review must include a specific report on:

- a. The extent to which the objects of this Act are being achieved;
- b. The extent to which additional legislative measures (if any) are considered necessary to achieve the targets set by this Act within the periods contemplated by this Act, including by the introduction of performance standards and other mandatory requirements; and
- c. Other matters determined by the Minister to be relevant to a review of this Act:
 - ▲ This section also requires that the Minister must take reasonable steps to ensure that, in the conduct of the review, there is consultation with the Premier's Climate Change Council and other relevant business, environment and community groups and organisations.
 - ▲ The report must be tabled in both houses of Parliament.
 - ▲ Frequency: every 4 years.

Tasmania – *Climate Change (State Action) Act 2008* – legislated review

Section 18 of the *Climate Change (State Action) Act 2008* requires that an independent review of the operation of the Act be carried out on a four-yearly basis. It requires that 'reasonable steps must be taken to ensure the review is carried out in consultation with the Tasmanian Climate Action Council and relevant business, scientific, environment and community bodies'. Tasmania's legislation contains the same review provision as SA.

United Kingdom

Mitigation

Section 36 of the *Climate Change Act 2008* requires reports on progress that has been made towards meeting the carbon budgets and the target for 2050 by the Committee on Climate Change. Section 59 requires that each report under section 36 contain an assessment of the progress made towards implementing the objectives, proposals and policies set out in the National Adaptation Program.

Adaptation

Section 62 gives the Secretary of State the power to direct reporting authorities (organisations with functions of a public nature and statutory undertakers) to produce reports detailing:

- ▲ The current and future predicted impacts of climate change on their organisation;
- ▲ Proposals and policies for adapting to climate change; and
- ▲ An assessment of progress towards implementing the policies and proposals set out in previous reports.

This power is used as the primary legislative lever to ensure climate change impacts are considered by key sectors. It can ensure that organisations responsible for important services and infrastructure are assessing the risks and impacts of climate change as part of their risk management processes.

Review of this Act by the Minister (repealed)

Section 19 of the original Act contained the following provisions:

1. *If a Bill is introduced into a House of the Parliament of the Commonwealth for an enactment to provide for a national emissions trading scheme in Australia, the Minister must undertake a review of this Act without delay.*
2. *The Minister must cause a copy of a review to be laid before each House of the Parliament within 10 sitting days of that House after the completion of the review.*

The 2011 Review stated that 'Clean Energy Future Package legislation may be repealed if the current Federal Opposition wins office'.

The 2011 Review concluded that if the Clean Energy Future Package 'is repealed, it would be desirable for the Victorian Government to re-examine its approach to mitigation, accounting for climate change science at that time, national and international policy, and alternative state mitigation policies'.

As stated above, this Review has sought to provide a robust and independent legislative framework for Victoria. The IRC believes that the Act should be flexible and enduring. This would ensure that the state can meet its current leadership aspirations while allowing for consistency with national action. For this reason, it would be neither necessary nor desirable to review the Act in the event of the future introduction of a national carbon price or carbon trading scheme.

Recommendation 5

There should be another legislative review in 2020 to examine the effectiveness of the new provisions. The Government should consider whether more appropriate review requirements need to be introduced such as:

- a. The effectiveness of the current operation of the Act in achieving its stated objectives and purposes;
- b. The extent to which additional legislative measures (if any) are considered necessary to achieve the targets and objectives of mitigation and adaptation and disaster risk reduction, set by this Act; and
- c. Other matters determined by the Minister to be relevant to a review of this Act.

4.5 Charter of Climate Change Objectives and Principles

4.5.1 Effectively shaping government decision making

A key weakness of the Act is that it does not drive the consideration of climate change impacts across government policies, programs, plans and operational decision making.

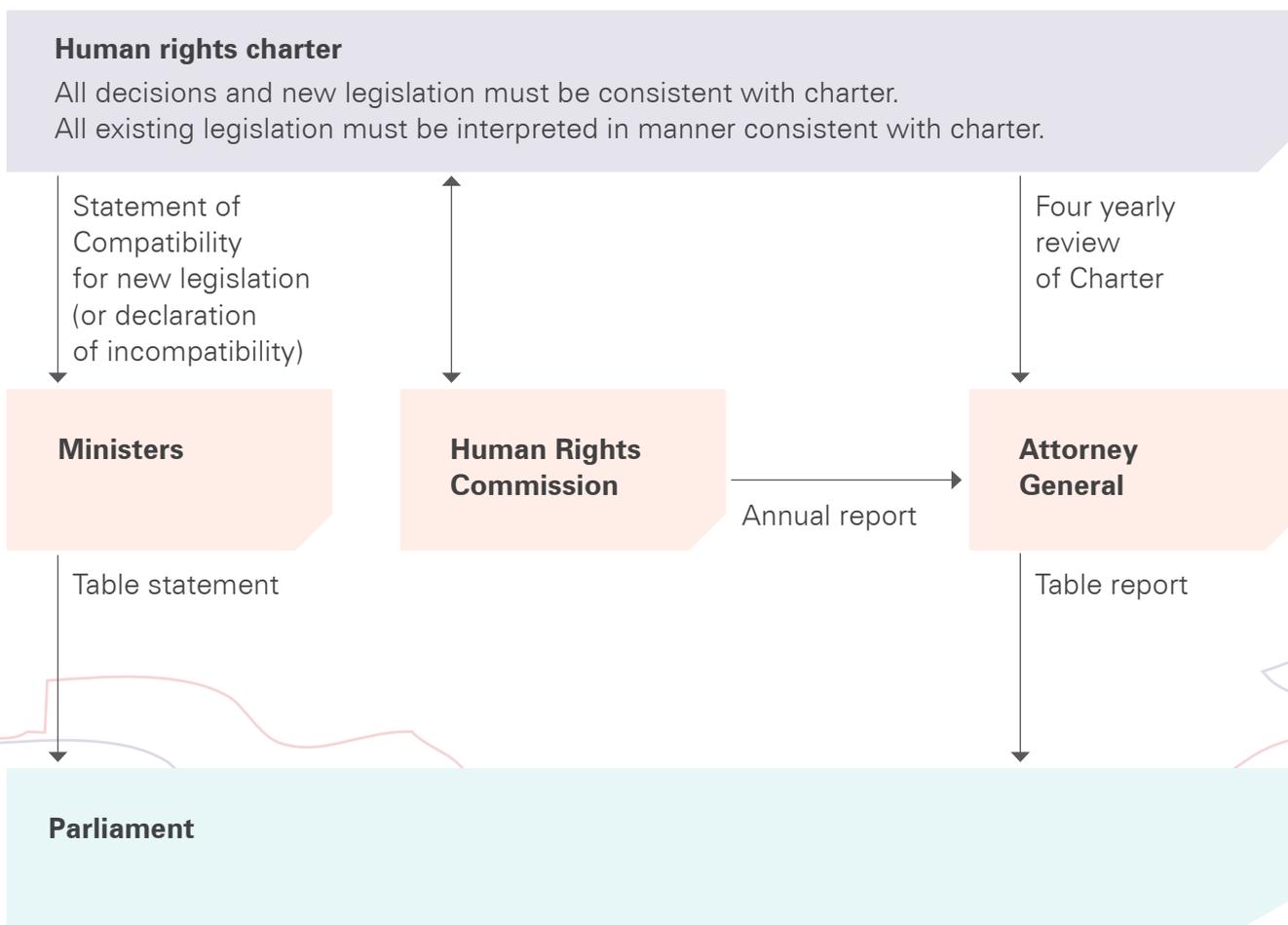
In particular, there is no requirement under the Act for strategic, long-term government planning to consider all aspects and impacts of climate change. The following factors have contributed to this:

- ▲ The guiding principles only apply to the development of ministerial guidelines and the Climate Change Adaptation Plan;

- ▲ A lack of integration between the guiding principles and the decision-making framework in the Act; and
- ▲ The absence of clear policy objectives.

An effective, mainstreamed approach integrates climate change mitigation and adaptation and disaster risk reduction considerations into all stages of policy making and decisions made across the whole of government. To understand how this approach may work in legislation, the IRC reviewed existing legislative mechanisms for embedding considerations into the decision-making process. The Victorian *Charter of Human Rights and Responsibilities Act 2006* provides a useful example (Box 4.2).

Figure 4.1: Operation of the Charter of Human Rights and Responsibilities Act 2006 (Vic)



Box 4.2: Key features of the Charter of Human Rights and Responsibilities

- ▲ Sets out the human rights that Parliament specifically seeks to protect and promote;
- ▲ Requires that all statutory provisions are interpreted so far as possible in a way that is compatible with human rights;
- ▲ Imposes an obligation on all public authorities to act in a way that is compatible with human rights;
- ▲ Requires statements of compatibility with human rights to be prepared for all bills introduced into Parliament and enables the Scrutiny of Acts and Regulations Committee to report on the compatibility;
- ▲ Confers jurisdiction on the Supreme Court to declare that a statutory provision cannot be interpreted consistently with a human right and requires the relevant Minister to respond to that declaration;
- ▲ Complaints may be lodged with the Victorian Ombudsman (or the Independent Broad-Based Anti-Corruption Commission in relation to Victoria Police);
- ▲ The Victorian Auditor-General's Office can undertake a review to explore whether the practice of a public authority complies with the Charter;
- ▲ The Victorian Equal Opportunity and Human Rights Commission has educative, reporting, reviewing and intervention functions under the Charter;
- ▲ Unique and complementary functions are performed by different entities including courts, Victorian Ombudsman, Victorian Equal Opportunity and Human Rights Commission, government departments, Parliament; and
- ▲ Checks and balances are built into the approach
 - i. Limitations to human rights can only be imposed after consideration as to their reasonableness, necessity and proportionality.
 - ii. There may be reasonable and justifiable grounds for infringing human rights, but these need to be articulated and independently evaluated.

Key lessons:

- ▲ The Charter ensures that protection of human rights is a mandatory and systematic part of government decision making;
- ▲ Legislating these rights sends a powerful signal about the value we place on those rights as a community, and clearly defines the scope and application of those rights;
- ▲ The requirements in the Charter have encouraged and enabled public authorities to undertake organisational and cultural change to embed human rights in their work; and
- ▲ The Charter seeks to achieve appropriate consideration of human rights in all aspects of government activity. It drives a systematic and co-ordinated approach to considering and upholding those rights.

A number of other jurisdictions use legislative tools to mandate consideration of certain issues such as climate change. Examples of requirements to consider climate change in other jurisdictions include:

- ▲ Environmental impact statements for major government actions, and evaluating the environmental effects of a wide range of actions and projects that receive government funding or permits;⁶⁹
- ▲ Incorporating climate change considerations into all aspects of the jurisdiction's activities, including (but not limited to) decision making, planning, permitting, remediation, rulemaking, grants administration, natural resource management, enforcement, land stewardship and facilities management, internal operations, contracting, procurement, and public outreach and education;⁷⁰ and
- ▲ Impact Disclosure Statement for most government bills, outlining the likely implications of the legislation.⁷¹

Another example of embedding climate change is the work undertaken by Transport for NSW. Box 4.3 illustrates the multiple tools developed by the organisation.

4.5.2 Proposed Charter

The IRC recommends that the a *Charter of Climate Change Objectives and Principles* (the Charter) be introduced into the Act to effectively mainstream climate change considerations into government decision making. The proposed Charter would define climate change objectives for Victoria and mandate principles to guide the delivery of those objectives across the whole of government.

Box 4.3: Lessons from Transport for NSW⁷²

Transport Project's Sustainability Framework

Developed to ensure the transport system is sustainable over time. Contains a set of indicators and targets to drive, monitor and report on sustainable performance.

NSW Sustainable Design Guidelines

Seeks to deliver sustainable development practices by embedding sustainability initiatives into the design and construction of transport infrastructure projects.

Carbon Estimate and Reporting Tool

Transport for NSW's Carbon Estimate and Reporting Tool and accompanying guidelines have been designed to assist with the measurement and reporting of Greenhouse Gas (GHG) Emissions in line with Transport for NSW's Sustainable Design Guidelines requirements.

The Charter would also signify to the public the importance that the Victorian Government places on taking a lead on climate change and would serve to embed action on climate change in legislation. The Charter could also be used to raise the profile of climate change and promote action by the broader Victorian community.

69. *National Environmental Policy Act*, 42 U.S.C. §4321 et seq. (1969).

70. *Community Risk Reduction and Resiliency Act*, A06558 (2014).

71. *Legislation (Climate Impact Disclosure Statement) Amendment Bill*, Member's Bill, James Shaw (NZ).

72. Transport for NSW, *Environment and Assessment – Sustainability*, <<http://www.transport.nsw.gov.au/projects/Planning-and-assesment/sustainability>> (accessed 14/12/2015).

4.5.3 Contents of the Charter

The proposed Charter contains the amended guiding principles from the Act, along with a set of objectives. The objectives identify five key elements of effective climate change action. The objectives are to:

- ▲ Reduce GHG emissions consistently with the best available science and the long-term emissions reduction target;
- ▲ Build the resilience of Victoria's infrastructure, built environment and communities through effective adaptation and disaster risk preparedness action;
- ▲ Manage Victoria's natural resources, ecosystems and biodiversity to promote resilience;
- ▲ Promote and support Victoria's regions, industries and communities to maximise the opportunities that arise from a transition to a low-carbon economy through coordinated whole-of-government action and partnerships; and
- ▲ Support vulnerable communities, and promote intergenerational equity and social justice.

The Act originally contained policy objectives that were broad in scope. The 2011 Review found that they did not 'influence the practical operation of the CC Act and their inclusion may unfairly raise stakeholder expectations without concrete measures in legislation to achieve them.'⁷³ The Victorian Government accepted the Review's finding that the 'Policy Objectives do not specifically apply to any section of the *Climate Change Act* nor influence its practical operation.'⁷⁴ The objectives were repealed.

The proposed objectives differ from the objectives that were repealed in two key ways. First, they are more focused and measurable and, second, they have direct application within the Act.

4.5.4 Application of the Charter

The introduction of the Charter into the Act should guide the development of policies, programs, plans and operational decision-making across the whole of government. In addition, The *Victorian Climate Change Strategy* (the Strategy), *Low Carbon Growth Plans*, ADRRAPs and the climate change decision-making framework under section 14 should also be required to be consistent with the Charter. See section 4.6 (decision making) for more detail.

Figure 4.2 on pages 70–71 shows the minimal linkages in the operation of the current Act and the integrated, self-reinforcing Act being proposed by the IRC.

The 2011 Review discussed the potential for combining the guiding principles and decision-making considerations. It stated that it is for 'decision makers to interpret and account for the existing principles-based guidance about climate change embedded in Victorian legislation'.⁷⁵ The Review concluded that 'uniformly applying another layer of principles-based guidelines to decisions made under Schedule 1 of the CC Act risks duplicating existing obligations'.⁷⁶

The Charter approach recommended in this Review avoids this issue by focusing the decision-making requirements on the objectives rather than the principles. The additional detail included in the decision-making framework gives practical effect to the Charter (see section 4.6).

To address key issues associated with the implementation of the current Act, a provision should be inserted that requires the provision of guidance on the application of the Charter to the Strategy and its components as well as its general application across government.

73. Dr Lynne Williams, above n 51.

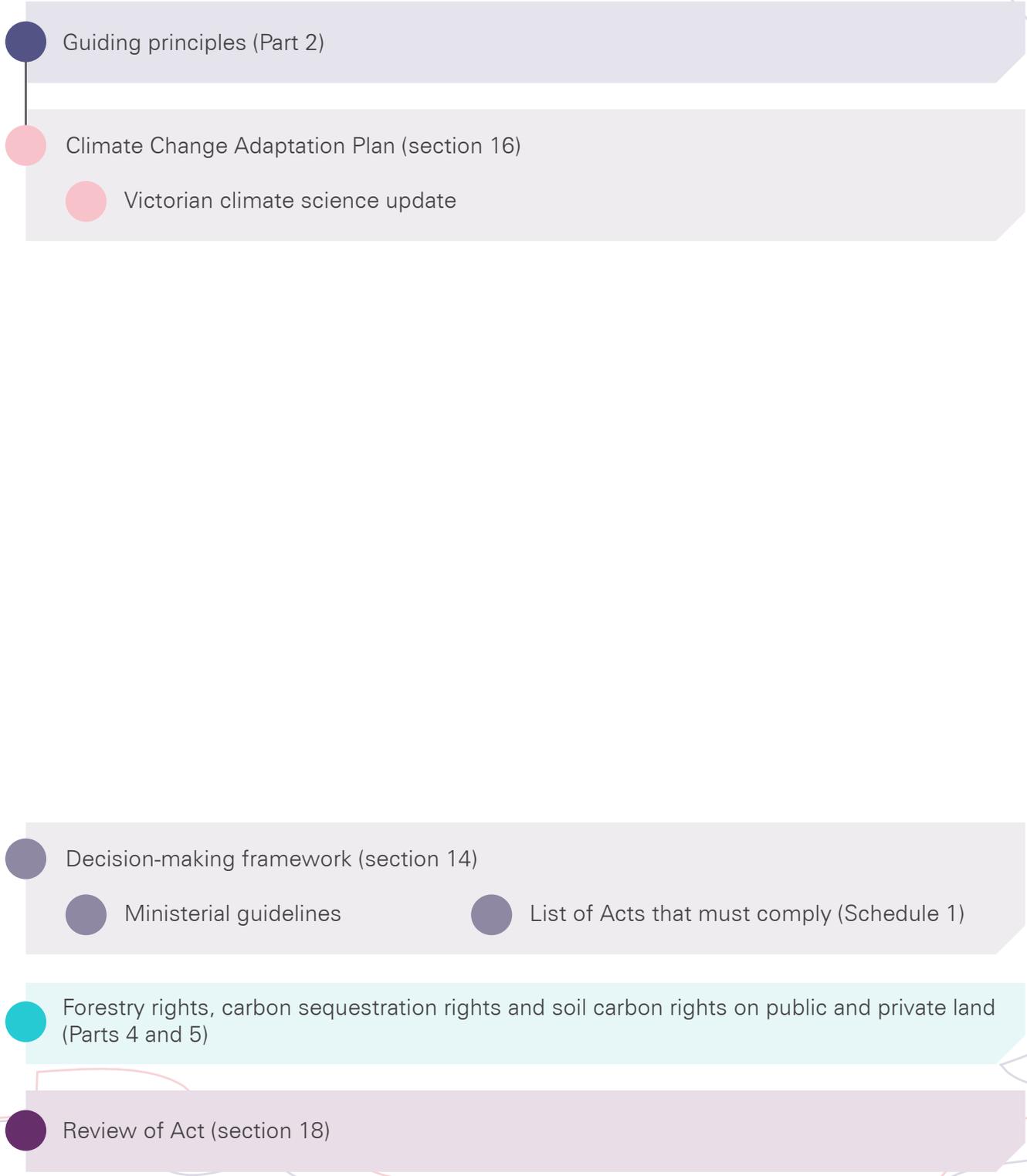
74. Victorian Government, *Victorian Government response to the Climate Change Act Review* (March 2012).

75. Dr Lynne Williams, above n 51.

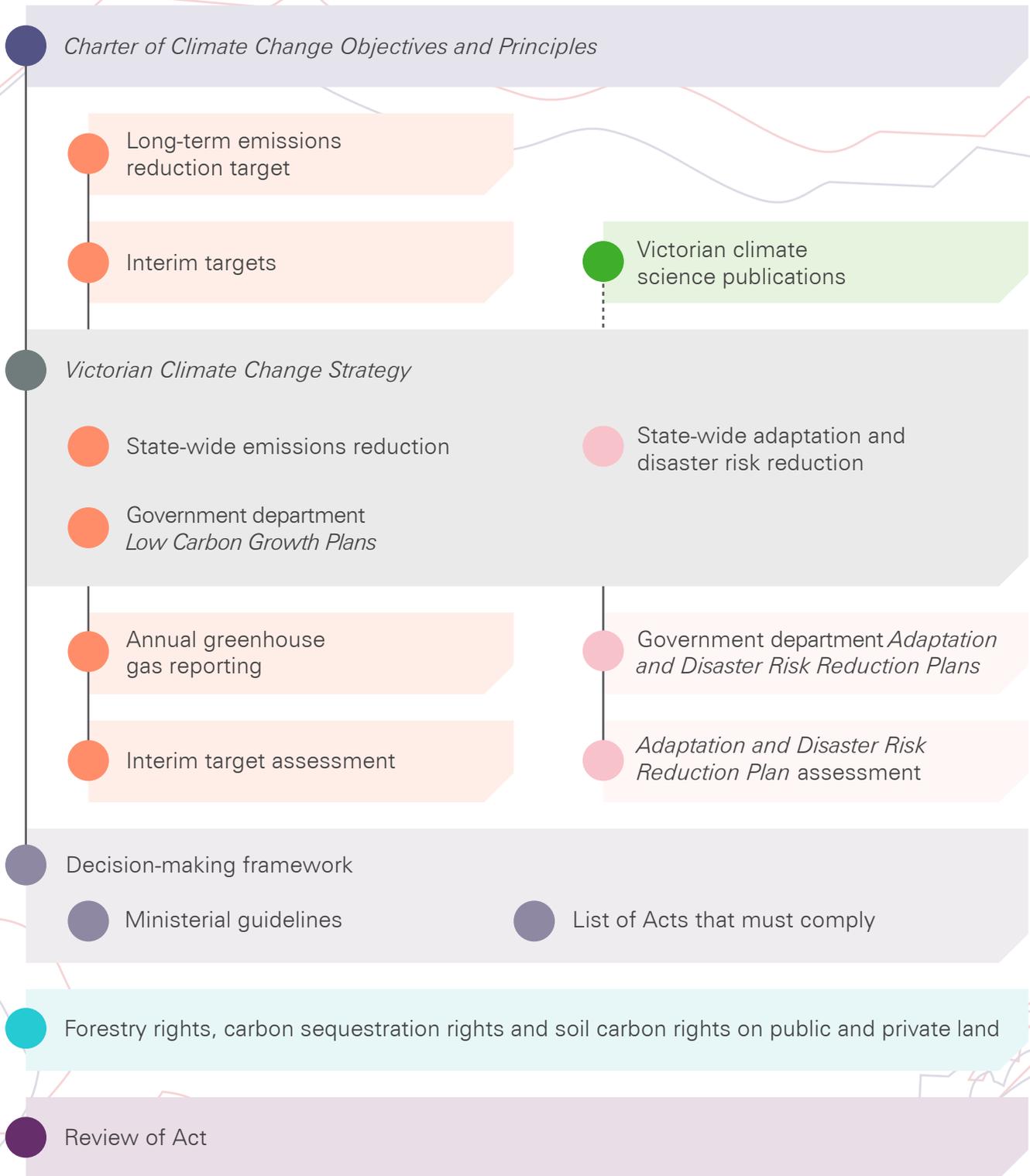
76. *Ibid.*

Figure 4.2: Creating a new integrated climate change Act

Climate Change Act 2010



Proposed changes



Environmental Justice Australia developed a Proposal for a Victorian Climate Charter, which was submitted to the Review as part of its public consultation process. Within the proposal it states:

'Australian Conservation Foundation, Environment Victoria, Friends of the Earth and Environmental Justice support the Climate Charter as world-leading legislation for Victoria and urge the Victorian Government to adopt it as part of improved climate change laws'.

Submissions to the review from Port Phillip Ecocentre, the Victorian National Parks Association and two individuals also supported the Proposal for a Victorian Climate Charter. A further 1556 submissions received from campaigns coordinated by Environment Victoria and Friends of the Earth also supported the adoption of Environmental Justice Australia's Charter.

Environmental Justice Australia's Charter was 'inspired by the Victorian Charter of Human Rights and Responsibilities and other legislative frameworks around the world ... (and makes) Victoria a leader in climate change'. It included climate principles, an emissions reduction target, a 'climate test' and a requirement that all Victorian legislation and policy be interpreted consistently with the principles. It also required the development of a climate change strategy, the establishment of a Victorian Climate Authority, and proposed legal standing – the capacity to bring a court action – for Victorian citizens in relation to these issues.

The Charter proposed by the IRC differs from the Charter advocated for in the submissions. This Charter has been tailored to the Victorian Government context and has a reduced administrative burden. Through linking the existing decision making framework to proposed Charter, it aims to provide a greater level of detail to guide decision-makers. It also includes environmental justice and social equity as an objective.

Recommendation 6*

A *Charter of Climate Change Objectives and Principles* should be introduced into the Act to inform strategic decision making. The Charter:

- a. Should contain the amended guiding principles (Recommendation 2) and introduce climate change objectives;
- b. Must be taken into account when preparing the Strategy; and
- c. Must be taken into account in all plans, policies, programs and operational decision making across government.

* This should be read in conjunction with Recommendation 12.

Recommendation 7

The Charter should contain the following climate change objectives:

- a. To reduce GHG emissions consistently with the best available science and the long-term emissions reduction target;
- b. To build the resilience of Victoria's infrastructure, built environment and communities through effective adaptation and disaster preparedness action;
- c. To manage Victoria's natural resources, ecosystems and biodiversity to promote resilience;
- d. To promote and support Victoria's regions, industries and communities to maximise the opportunities that arise from a transition to a low-carbon economy through coordinated whole-of-government action and partnerships; and
- e. To support vulnerable communities, and promote intergenerational equity and social justice.

Recommendation 8

The Act should require the Minister to provide guidance on the application of the Charter to the Strategy and its components, and on its general application across government.

4.6 Decision-making framework and Schedule 1

4.6.1 Description

Section 14 of the Act requires government decision makers to consider climate change where it is relevant and where decisions are being taken under legislation specified under Schedule 1. These Acts are the *Catchment and Land Protection Act 1994*, *Coastal Management Act 1995*, *Environment Protection Act 1970*, *Flora and Fauna Guarantee Act 1988*, *Public Health and Wellbeing Act 2008*, and the *Water Act 1989*. The objective is to ensure that climate change is considered across a range of government decisions.

The Act requires that, when making specified decisions or taking specified actions listed in Schedule 1, decision makers must take into account the following:

- ▲ The potential impacts of climate change that are relevant to the decision or action; and
- ▲ The potential contribution of the decision or action to Victoria's GHG emissions.

The Act then sets out relevant considerations for decision makers in taking these matters into account (sections 14(3)–(4)).

4.6.2 Objective of the framework

The purpose of the framework was to facilitate the consideration of climate change issues in specified areas of decision making of the Government of Victoria⁷⁷ and to provide clarity, certainty and consistency in specified decision making.⁷⁸

A primary objective of the framework was to reduce the legal uncertainty faced by decision makers about whether to take climate change into account in making decisions. In the absence of a clear statutory framework, courts and tribunals were being left to reach their own conclusions and formulate their own approaches about the relevance of climate change. The duty clarifies when and how climate change is to be taken into account by making it a 'mandatory relevant consideration' for the Schedule 1 decisions.

4.6.3 Effectiveness of the framework

The 2011 Review of the Act recommended that the decision-making requirements for the six designated Acts be retained in the Act, with their effectiveness to be monitored and reconsidered in the next legislated review of the Act in 2015.

The former Government, in its response to the 2011 Review, supported the recommendation and pledged that the ongoing effectiveness and consideration of the scope of these requirements would be considered at the next scheduled review of the Act.

77. *Climate Change Act 2010* (Vic) s 1(b).

78. Victoria, Parliamentary Debates, Legislative Assembly, Second Reading Speech, *Climate Change Bill 2010*, 29 July 2010, 2836–2842, (John Brumby, Premier).

Decisions made under the framework

A number of decisions or actions have been undertaken since the 2011 Review of the Act:

- ▲ Approval of Regional Catchment Strategies under the *Catchment and Land Protection Act 1994*.⁷⁹
- ▲ Consideration of the draft Victorian Coastal Strategy under the *Coastal Management Act 1995*.⁸⁰
- ▲ Endorsement of Coastal Action Plans under the *Coastal Management Act 1995*.⁸¹
- ▲ Environment Protection Authority (EPA) works approvals and licensing decisions.⁸²
- ▲ Variations to, and making of, State Environment Protection Policies and Waste Management Plans by the EPA.⁸³
- ▲ Preparation and amendment of actions statements under the *Flora and Fauna Guarantee Act 1988*.⁸⁴
- ▲ Preparation of municipal public health and wellbeing plans by councils under the *Public Health and Wellbeing Act 2008*.⁸⁵
- ▲ Preparation of a State Public Health and Wellbeing Plan under the *Public Health and Wellbeing Act 2008*.⁸⁶

Eight decisions and actions under the *Flora and Fauna Guarantee Act 1988* were not required to be undertaken, and hence the framework was not applied.⁸⁷ (Note that this Act is also under review.) Similarly, no management plans under the *Catchment and Land Protection Act 1994* have been revoked, so the framework was not applied.⁸⁸

Operation of the framework

The framework creates a legal obligation on decision makers to consider climate change ('the Duty'). It forms part of the mandatory relevant considerations to which the decision maker should have regard in making a decision. The Act does specify in section 14(5) that the requirements of this Duty apply in addition to and without limiting the power or duty of the decision maker in taking their specified decision or action. Therefore, the climate change factors listed in the Duty are to be considered alongside any other issues the decision maker is obliged to consider.

Individual decision makers are to determine the appropriate weight to be given to those climate change considerations, relative to other considerations, in the circumstances of the particular decision. It is important, however, to ensure that decision makers have properly considered or 'turned their mind' to each climate change factor, even if they elect to give little or no weight to certain considerations.

To ensure the most effective consideration of the implications of climate change, the Duty should be embedded in the usual decision-making processes, rather than treated as an 'add-on'. The IRC acknowledges that approaches to discharging the Duty will vary depending on the type of each decision. However, the process of embedding means that decision makers are under a legal duty to demonstrate how they have had regard to the implications of climate change in their decision making through documenting the reasoning process which lies behind each decision or action. Whether or not sufficient regard has been had to mandatory and other relevant considerations is a matter for the court upon an application for judicial review.

79. *Catchment and Land Protection Act 1994* (Vic) sch 2 cl 3.

80. *Coastal Management Act 1995* (Vic) s 17.

81. *Coastal Management Act 1995* (Vic) s 26.

82. *Environment Protection Act 1970* (Vic) ss 19B, 20.

83. *Environment Protection Act 1970* (Vic) ss 16, 16A.

84. *Flora and Fauna Guarantee Act 1988* (Vic) s 19.

85. *Public Health and Wellbeing Act 2008* (Vic) s 26.

86. *Public Health and Wellbeing Act 2008* (Vic) s 49.

87. *Flora and Fauna Guarantee Act 1988* (Vic) ss 17, 18, 21, 22, 24, 26, 31, 33 and 35.

88. *Catchment and Land Protection Act 1994* (Vic) sch 2 cl 7.

Application of the framework

Decision makers and policy makers have to varying degrees introduced tools to embed the Duty (and climate change) more broadly into their existing decision-making processes. Examples of implementation have included:

- ▲ Templates to demonstrate consideration of the Duty;
- ▲ Updating Work Approvals Guidelines to provide specific guidance to applicants;
- ▲ Guidance for local government (see Box 4.4);
- ▲ Amending guidelines for the development of strategies and other products to include climate change considerations;
- ▲ Amending Standard Operating Procedures around the development of policies; and
- ▲ Development of a checklist that includes climate change considerations.

Climate change was reported to have been considered in all the decisions listed in 4.6.3 above. However, the IRC finds that the degree to which it is considered varied.

Variation in the application of the Duty could be due to a number of factors, including:

- ▲ The level of familiarity with the requirements of the Act;
- ▲ The type of decision, such as whether it is of a high level (more strategic, such as preparing the Victorian Coastal Strategy or Coastal Action Plans) or lower level (such as granting an EPA works approval or licence);
- ▲ The subject matter of the decision and the degree of certainty surrounding the frequency and consequences of expected impacts of climate change on that subject matter;
- ▲ Whether a decision maker is more advanced in their understanding of climate change; and
- ▲ Whether, and the extent to which, any previous work has been done to incorporate climate change into the framework for making the decision.

Box 4.4: Municipal public health and wellbeing planning: Having regard to climate change

Local councils are listed as Schedule 1 decision makers that must comply with the Duty when preparing a Municipal Public Health and Wellbeing Plan (MPHWP).

The MPHWP is a strategic plan that sits alongside and integrates with:

- ▲ The corporate plan of the council;
- ▲ The council land use plan required by the Municipal Strategic Statement (MSS); and
- ▲ Other local plans of community partners with an interest in local public health.

The former Department of Health released detailed guidance to councils in 2012 to assist local government in meeting its obligations under the Act.⁸⁹ It describes their responsibilities under the Act and how climate change can be considered in their MPHWP. It discusses what consideration of climate change entails and how it fits across the six stages of municipal public health and wellbeing planning. This guidance embeds climate change into the whole MPHWP planning cycle.

It also instructs local councils to state in the MPHWP how they have had regard to climate change, in order to demonstrate they have met their obligations under the Act.

⁸⁹ Department of Health, *Municipal public health and wellbeing planning: Having regard to climate change* (December 2012).

It is not clear that decision makers understand how to apply the Duty, and therefore how to consider climate change in their decision making. Consideration has been varied and has not been consistent across all decisions.

The IRC believes it would be worthwhile to examine whether the current decisions to which the framework applies are those where climate change is both practically and legally relevant, and whether they are most likely to significantly impact the pursuit by Government of climate change mitigation and adaptation and disaster risk reduction.

Recommendation 9

The Government should review the existing decisions or actions listed in Schedule 1 to establish whether they are those most likely to require an assessment of climate change impacts or risks, or whether they will significantly impact the pursuit by Government of climate change mitigation and adaptation and disaster risk reduction.

4.6.4 Broader application of the framework

In the second reading speech for the Bill, former Premier John Brumby explained the decision-making requirements, noting that ‘this framework will apply to a range of statutory decisions listed in Schedule 1 of the Act. This list is a first step and more decisions may be added over time’.

The IRC finds that the Duty applies to a narrow set of Acts, the majority of which sit in the portfolio of the Minister for Environment, Climate Change and Water. There are likely to be other Acts that are not currently covered by the framework where climate change may be a relevant consideration. The IRC believes that the

effectiveness of the framework will be increased if it has broader application.

There was broad support in submissions to the Review for the expansion of Schedule 1.⁹⁰

One significant omission from Schedule 1 is the relevant legislation governing major infrastructure and planning decisions. Infrastructure often requires significant initial investment and has a long lifespan. The structures that are built now, including roads and buildings, could last for a century or more, setting the trajectory for GHG emissions at a critical time for reining these in.⁹¹

The following is a non-exhaustive list of types of decisions that the IRC believes could be considered for inclusion:

- ▲ Development of council plans under the *Local Government Act 1989*;
- ▲ Development of risk management strategies under the *Financial Management Act 1994*;
- ▲ Approvals under the *Planning and Environment Act 1987*;
- ▲ Decisions about timber allocations under the *Sustainable Forests (Timber) Act 2004*;
- ▲ Decisions to grant licences and approvals for coal and coal seam gas, under the *Mineral Resources (Sustainable Development) Act 1990*; and
- ▲ Decisions about major transport infrastructure under the *Major Transport Projects Facilitation Act 2009*.

4.6.5 Support for decision makers

The IRC finds there was a lack of evidence to demonstrate that decision makers took into account the Duty before making specified decisions. There was little evidence that decision makers had documented which climate change considerations have been given more weight, and the reasons for doing so, in determining the outcome of the decisions.

90. Environment Victoria, Frankston City Council, Mornington Peninsula Shire Council, Municipal Association of Victoria, Environmental Justice Australia, Northern Alliance for Greenhouse Action, City of Melbourne, Brad Jessup (CREEL, Melbourne Law School), Lee Godden and Tim Baxter (CREEL, Melbourne Law School), Western Alliance for Greenhouse Action, BREAZE.

91. The Global Commission on the Economy and Climate, *Better Growth Better Climate: The New Climate Economy Report* (2014) 28.

Recommendation 10

1. Schedule 1 should be expanded to include a broader range of Acts that are likely to require an assessment of climate change impacts or risks, or whether they will significantly impact the delivery of climate change mitigation and adaptation and disaster risk reduction outcomes.
2. The Government should identify which Acts and which decisions or actions should be considered for inclusion. Preliminary analysis suggests that decisions and actions in the following additional Acts could be considered for inclusion in Schedule 1:
 - ▲ *Electricity Industry Act 2000*
 - ▲ *Emergency Management Act 2013*
 - ▲ *Essential Services Commission Act 2001*
 - ▲ *Flora and Fauna Guarantee Act 1988*
 - ▲ *Financial Management Act 1994*
 - ▲ *Local Government Act 1989*
 - ▲ *Major Transport Projects Facilitation Act 2009*
 - ▲ *Mineral Resources (Sustainable Development) Act 1990*
 - ▲ *Planning and Environment Act 1987*
 - ▲ *Sustainable Forests (Timber) Act 2004*
 - ▲ *Transport Integration Act 2010*
 - ▲ *Urban Renewal Authority Victoria Act 2003*
 - ▲ *Victorian Energy Efficiency Target Act 2007*
 - ▲ *Water Industry Act 1994*

Based on the evidence provided to the IRC, there was only one example of a decision maker demonstrating how they applied the Duty through noting down each of the factors under the framework and whether they were applicable to the decision in question. A number of other reports did not mention the requirement to consider climate change under the Act. Further, mention of climate change was indirect in some reports.

The EPA Works Approval Application Guidelines direct applicants to consider climate change and the requirements of the framework.⁹² This makes it clear what matters it will take into account when making a decision.

In the second reading speech to the Bill, former Premier John Brumby stated:

*'To support the implementation of the framework, a detailed package is being developed to guide decision makers. This will provide clarity and transparency and arm public sector staff with the knowledge and tools they need to make good decisions.'*⁹³

Under section 15 of the Act, the Minister has power to issue guidelines about the scope and application of the requirements of the framework. To date no guidelines have been issued by the Minister. The lack of guidelines may have contributed to the lack of understanding of the Duty.

Any guidelines issued by the Minister could not alter the application of the Act but would provide clarity for decision makers. They could, for example, elaborate on how to consider the potential impacts of climate change and how their decisions and actions may contribute to Victoria's GHG emissions and undermine resilience to climate change.

Templates could also be developed to assist decision makers to document how the relevant climate change evidence has been considered (see Box 4.5). This would enable decision makers to demonstrate they have effectively discharged the Duty.

⁹² EPA Victoria, Works approval application, April 2015, Publication 1307.10, < <http://www.epa.vic.gov.au/~media/Publications/1307%2010.pdf>>.

⁹³ Victoria, Parliamentary Debates, Legislative Assembly, Second Reading Speech, *Climate Change Bill 2010*, 29 July 2010, 2836–2842, (John Brumby, Premier).

Box 4.5: Lessons from the *Transport Integration Act 2010 (Vic)*

The *Transport Integration Act 2010* (TIA) came into effect on 1 July 2010 and is Victoria's principal transport statute.

The TIA provides a universal policy framework, requiring that all decisions affecting the transport system be made within the same integrated decision-making framework and support the same objectives.

The former Department of Transport developed guidance to assist decision makers with their obligations under the TIA. Each guide sets out a process for recording how the TIA was applied to a particular decision.

The guidance materials⁹⁴ developed for decision makers under the TIA are intended to be a flexible tool to assist in the recording of their explanation at the time of the action or decision, and to refresh their memories if in future they need to provide formal reasons for their actions or decisions.

It is a suggested form of contemporaneous record by the decision maker, and as such it can be used by the decision maker to compile a statement of reasons that meets all legislative requirements, if such a statement is subsequently required.

Recommendation 11

To improve the operation of the Act, the Minister should use his or her power to develop and publish ministerial guidelines (existing section 15) to assist decision makers to understand their statutory obligations under the Act.

4.6.6 Linking the Charter and embedding objectives in the framework

The IRC finds that there are no linkages between the framework and other parts of the Act. For example, there is no explicit connection to the Climate Change Adaptation Plan (section 16) or guiding principles (Part 2). The result is that Schedule 1 decision makers are considering climate change without sufficient policy context. Such context would assist decision makers assigning relevant weight to each consideration. The IRC proposes that the framework be amended to include references to the proposed Charter (see Chapter 6 for further information).

The 2011 Review found that section 14(2)(b) and section 14(4) may have implicitly required decision makers to consider the impact of decisions or actions on the target.⁹⁵ The IRC is proposing that there be an explicit link to the objectives of the Act – for example, requiring decision makers to consider the impact of decisions on the achievement of any target.

Although the weighting of climate change considerations (and other competing factors in decision making) should be determined on a case-by-case basis, overlaying the broad objectives of the Charter would help decision makers in the weighting and importance of climate change considerations insofar as they are consistent with objectives of the Act under which the decision is made.

Using the framework in a way that implements the long-term objectives of the Act can produce effective policy outcomes and support consistent decision making.

⁹⁴ Department of Economic Development, Jobs, Transport and Resources, *Transport Integration Act*, <<http://economicdevelopment.vic.gov.au/transport/legislation/transport-integration-act>>.

⁹⁵ Dr Lynne Williams, above n 51.

Recommendation 12

The existing decision-making framework should align with the Charter and include relevant decision-making criteria that give practical effect to each objective of the Charter.

4.6.7 Legal standing and review mechanisms

To ensure robust and lawful decision making, the IRC recommends broadening legal standing to enable certain individuals and groups to challenge the legality of decisions listed in Schedule 1 to which the framework applies. This will improve statutory compliance and ensure accountability of government decisions and consistency with Victoria's best-practice regulatory principles.

The IRC considers the extended standing provisions incorporated in section 487 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) (Box 4.6) to be appropriate. This approach was supported in the Victorian Climate Charter submission to the Review – a shared position of Environmental Justice Australia, the Australian Conservation Foundation, Environment Victoria and Friends of the Earth.

Recently, the Senate Committee on Environment and Communications held an Inquiry into the repeal of section 487 of the *Environment Protection and Biodiversity Conservation Amendment (Standing) Bill 2015*. The committee recommended that the Bill be passed, considering that the repeal of section 487 will not diminish the protection of Australia's environment and the conservation of biodiversity and heritage provided by the EPBC Act.⁹⁶ Three committee members held dissenting views, recommending that the Bill not be passed.⁹⁷

Box 4.6: Extended standing under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth)

Section 487 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) provides a statutory test for standing for Australian individuals and organisations in relation to applications for judicial review of decisions made under the Act.

Section 487 extends the meaning of a 'person who is aggrieved' for the purposes of the *Administrative Decisions (Judicial Review) Act 1977* (Commonwealth) (sections 5–7), allowing individuals and organisations that engage in environmental protection and/or conservation activities to commence judicial review applications.

The IRC sees value in the approach taken in section 487 and notes that previous reviews have supported the provision. The Report of the Independent Review of the *Environment Protection and Biodiversity Conservation Act 1999* stated that 'public interest litigation is one of the most significant means of enforcing environmental law and in enhancing the transparency, integrity and rigour of government decision making about activities which impact on the environment'.⁹⁸

The IRC does not believe that such an approach will result in a 'flood' of litigation. In the EPBC context, since the Act commenced in July 2000, there have been 5500 projects that have undergone some form of scrutiny, of which 22 have been the subject of third party proceedings under the extended standing provision (0.4% of projects).⁹⁹

⁹⁶ The Senate, Environment and Communications Legislation Committee, *Environment Protection and Biodiversity Conservation Amendment (Standing) Bill 2015* [Provisions] (November 2015).

⁹⁷ Ibid, Labor Senators' dissenting report and Australian Greens' dissenting report.

⁹⁸ Dr Allan Hawke, *Independent Review of the Environment Protection and Biodiversity Conservation Act 1999* (2009) 261.

⁹⁹ The Australia Institute, *Key administration statistics – 3rd Party Appeals and the EPBC Act* (August 2015).

Judicial review

If judicial review of the decision is made available to a third party (as proposed by the IRC) for decisions specified in Schedule 1, the IRC believes the possibility of increased scrutiny of decisions will enhance the effectiveness of the decision-making framework under the Act. In particular, the ability of a public interest group to apply for judicial review of a decision maker's consideration of relevant climate change factors will drive enhanced consideration of those factors in all relevant decision-making. In cases where a court finds that a decision maker has not applied the decision-making framework as required under the Act, it would be open to the court to find the decision was made unlawfully and order that it be remade, taking climate change into account as required under the Act.

Merits review

Merits review by its nature involves reviewing the substantive merits of a decision. In many instances this means the independent body carrying out the merits review needs to have a sound working knowledge of the industry or subject matter being regulated. The IRC understands that at present there is no administrative tribunal in Victoria that possesses the sufficient knowledge and subject matter expertise to undertake merits review of decisions made under the Acts listed in Schedule 1 (including those highlighted by the IRC for inclusion). However, the IRC suggests the Government consider the feasibility of merits review for those decisions in Schedule 1 that are likely to have a significant impact on the delivery of climate change outcomes in Victoria and which therefore warrant an increased level of independent expert scrutiny.

Recommendation 13

The Act should broaden legal standing for the judicial review of administrative decisions listed in Schedule 1 to which the decision-making framework applies. Standing should be open to individuals and groups that satisfy an extended standing test similar to the model used under section 487 of the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth).

Recommendation 14

The Government should examine the feasibility, appropriateness and effectiveness of merits review of specified administrative decisions to which the decision-making framework applies.

4.6.8 Further opportunities to embed climate change: statutory and strategic planning regimes in Victoria

The IRC believes that town planning plays a significant role in responding to climate change, particularly as state governments are the lead policy makers in relation to planning. In addition to investigating the potential inclusion of the *Planning and Environment Act 1987* in Schedule 1, the IRC believes that the Government should explore how Victoria's planning regime can accommodate responses to climate change.

A 2012 Productivity Commission report into 'Barriers to Effective Climate Change Adaptation' recommended that '...state governments should ensure that land use planning systems are sufficiently flexible to enable a risk management approach to incorporating climate change risks into planning decisions...'¹⁰⁰

100. Productivity Commission, *Barriers to Effective Climate Change Adaptation*, Report No. 59, Final Inquiry Report (Canberra 2012) 188.

Regulatory instruments in the planning space can be used to prevent or reduce the severity of climate hazards, eliminate or reduce the harmful effects of climate hazards, or reduce exposure to climate hazards.¹⁰¹

A range of tools and guidance should be developed to support decision making in the statutory and strategic planning schemes in Victoria.

Recommendation 15

The Government should investigate the most effective way to incorporate climate change considerations into statutory and strategic planning in Victoria – for example, the use of the Strategy as a Reference or Incorporated Document in planning schemes.

4.7 Measuring real economic costs and benefits of climate change

It is recommended that the Act mandates the introduction of a requirement to assess, based on clear and transparent measures, the real economic costs and benefits associated with climate change risks, liabilities and opportunities arising from government policies, plans, programs, operational decision making and under the decision-making framework in section 14.

The IRC notes that methodologies for assessing internal emissions liability are currently more established than for quantifying broader climate change risks such as sea level rise or other impacts. These may be case-by-case assessments.

This change is intended to:

- ▲ Drive the explicit consideration of the impacts of climate change and GHG emissions as a factor in decision making which leads to better informed decision making;
- ▲ Encourage the procurement of low-carbon goods and services;
- ▲ Get the best long-term and life-cycle value from assets;
- ▲ Assist in understanding the economic benefits of transitioning to a low carbon economy; and
- ▲ Demonstrate that the Government is leading by example.

4.7.1 Calculation of GHG emissions and climate change liability

Growing numbers of companies, investors and governments are using different tools to assess their liability and exposure to climate change and the emission of GHGs.¹⁰²

Companies

Companies use internal or shadow carbon pricing to evaluate the impact of mandatory carbon prices on their operations and as a tool to identify potential cost savings and revenue opportunities. In 2015, 436 companies reported using an internal price on carbon, up from 150 in 2014. An additional 583 companies anticipated using an internal price in the next two years.¹⁰³

An internal price is the price of a negative externality, or a negative environmental effect, that is not included in a good's market price. The internal price of carbon, and other GHGs, is determined by estimating marginal abatement costs and social (or damage) costs for a range of different emissions levels. The internal price is the price at which the marginal abatement costs and social costs align.¹⁰⁴

¹⁰¹ Macintosh, A, Foerster, A, McDonald, J, *Limp, leap or learn? Developing legal frameworks for climate change adaptation planning in Australia*, National Climate Change Adaptation Research Facility (Gold Coast 2013).

¹⁰² Kossoy, Alexandre; Peszko, Grzegorz; Oppermann, Klaus; Prytz, Nicolai; Klein, Noemie; Blok, Kornelis; Lam, Long; Wong, Lindee; Borkent, Bram, *State and trends of carbon pricing 2015. State and trends of carbon pricing*, World Bank Group (Washington, D.C. 2015).

¹⁰³ Carbon Disclosure Project, *Putting a price on risk: Carbon pricing in the corporate world* (September 2015).

¹⁰⁴ Elizabeth A. Stanton and Frank Ackerman, *Out of the Shadows: What's Behind DEFRA's New Approach to the Price of Carbon? A report to Friends of the Earth England, Wales and Northern Ireland*, Stockholm Environment Institute (2008) 3.

Recently in Australia, companies such as Origin Energy, AGL Energy and National Australia Bank have committed to put a price on carbon through the 'We Mean Business' Coalition.¹⁰⁵ BHP Billiton has used a price on carbon as a key input into its scenario planning analysis and has applied it to valuations since 2004.¹⁰⁶ Guidance on price can also be taken from the Commonwealth Government's Emissions Reduction Fund, which has priced carbon at an average of A\$13.12 per tonne,¹⁰⁷ whereas other global schemes and taxes have prices that range from less than US\$1 per tCO₂-e to US\$130 per tCO₂-e.¹⁰⁸ Further, prices disclosed by companies have ranged from US\$6 to US\$89 per tCO₂-e.¹⁰⁹

Investors

Investors are beginning to analyse the potential impact of climate policies on their investment portfolios,¹¹⁰ adopting detailed risk assessment reports as to how they assess carbon risks in investment. Under the Montréal Carbon Pledge, launched in 2014, investors commit to measure and publicly disclose the carbon footprint of their investment portfolios on an annual basis. Further, a recent study by Mercer concluded that climate change will inevitably have an impact on investment returns, and that climate change risk factors should be standard considerations for investors.¹¹¹

Government

A number of jurisdictions have incorporated a cost of carbon into their decision making. The US EPA (and other federal agencies) and Canada Environment Department incorporate a social cost of carbon (SCC)

to estimate the climate benefits of rulemakings.¹¹² The purpose of the SCC is to allow agencies to incorporate the social benefits of reducing carbon dioxide emissions into cost-benefit analyses of regulatory actions that have an impact on cumulative global emissions. The UK Treasury estimates 'carbon values', which are derived from modelling of the investments required to reach a long-term emission goal and are used in public policy appraisal.¹¹³ Section 5.5 of this Report discusses further specific mitigation actions including sub-national emissions trading schemes (ETS).

Ultimately, these measures need to provide the Government with an understanding of the economic consequences of its decisions from a carbon and climate change liability perspective.

4.7.2 Application to the Victorian Government

There is a suite of complementary measures to achieve emissions reductions, and no single instrument is capable of effectively tackling climate change.¹¹⁴ Using a mix of instruments has the potential to deliver emissions reductions more efficiently and cost effectively than any single instrument alone.¹¹⁵ The IRC believes that adoption of a number of tools like those identified above can form part of a best-practice response to climate change that can help deliver on the Government's climate change policy. It is a matter for the Government to select the most appropriate tool in the circumstances.

105. Australian Climate Leadership Summit 2015, *Media Release: Momentum grows ahead of Paris Climate Talks* (5 November 2015) <<http://www.climate-leadership.org/media-release-20151105/>>.

106. BHP Billiton have a long-term carbon price forecast of US\$50/tCO₂-e under a Global Accord scenario. BHP Billiton, *Climate Change: Portfolio Analysis* (2015) 11.

107. Commonwealth of Australia (Clean Energy Regulator), *Total auction results April & November 2015: Emissions Reduction Fund* (2015).

108. World Bank Group, above n 102, 13.

109. Carbon Disclosure Project, *Global Corporate Use of Carbon Pricing: Disclosures to Investors* (2014).

110. See for example: The Global Investor Coalition on Climate Change, a coalition of regional investor groups, <<http://globalinvestorcoalition.org/>> (accessed 3 December 2015).

111. Mercer LLC, *International Finance Corporation and UK Department for International Development, Investing in a Time of Climate Change* (2015).

112. United States EPA, *Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866* (2010).

113. Department of Energy & Climate Change, *Carbon valuation* (2015) <<https://www.gov.uk/government/collections/carbon-valuation-2>>.

114. See for example, World Bank Group, above n 102, 27.

115. Department of Energy and Climate Change and Department for Environment, Food, and Rural Affairs, *Making the Right Choices for our Future: An economic framework for designing policies to reduce carbon emissions*, Defra Evidence and Analysis Series (March 2009) iii.

For example, in the case of placing a cost based on a price per tonne of GHG emissions emitted, the Government could assign a value to GHG emissions that arise from government policies and which can be applied to government activities and policy/legislative decisions as part of broader cost-benefit analysis. Placing an internal price per tonne of emissions would enable the benefits of lower GHG emissions or costs associated with increased GHG emissions arising from particular policy proposals to be more readily identified within existing standard government processes. Ministerial guidance is recommended so that, for example, a government department could be tasked with setting the price every year with reference to the five-yearly plan for that period and established international or national methodologies.

The IRC believes an internal price could also help to fully analyse those policies and projects that are likely to have material impacts on emissions such as energy and transport infrastructure. Understanding the cost of any future GHG emissions and climate change liability will affect the determination of whether such projects have positive or negative net benefits. It may also increase the relative attractiveness of lower-carbon policy options in terms of the balance of costs and benefits and return on investment calculations. The primary objective is to embed across government the consideration of current and future climate change risks and opportunities.

In the case of its own procurement policy, the Government could adopt a policy stating that, where the traditional economic costs are equivalent, the default will always be that which provides a lower climate change liability.

The IRC prefers the introduction of an internal measure to calculate GHG and climate change liability as part of standard government cost benefit analyses. This is because:

- ▲ In the case of an investment-decision framework, it creates a clear set of matters to be taken into consideration;
- ▲ In the case of a carbon price, it is flexible and can be changed over time;
- ▲ The approach is efficient in that it can be added to existing cost benefit analyses;
- ▲ It internalises carbon costs for government to take into account the true economic cost of climate change damage; and
- ▲ It demonstrates leadership by the Government.

Recommendation 16

1. The Government should introduce into the Act a requirement to assess, based on clear and transparent measures, the real economic costs and benefits associated with climate change risks, liabilities and opportunities arising from government policies, plans, programs, operational decision making and under the decision-making framework in section 14.
2. The Minister should provide guidance on calculation of the metrics drawing on established methodologies such as those used under the *National Greenhouse and Energy Reporting Act 2007* (Commonwealth) or those used for assessing shadow carbon prices as adopted by business and carbon accounting calculations.

5

Tools to embed climate change action

This chapter describes a range of tools that will enable the Government to deliver the emissions reduction target and the Charter. These tools are well established and are used in other jurisdictions. They are also designed to be complementary with each other and with national action. Using these tools will help to mainstream and embed climate change as a consideration across government. Including these tools in the Act will provide the framework for strong state action, and will help to provide direction and support to Victorians during the transition to a low-carbon economy.

The tools described in this chapter include:

- ▲ A comprehensive Strategy – incorporating mitigation and adaptation and disaster risk reduction – that is consistent with the Charter and is developed every five years;
- ▲ ADRRAPs, which will be prepared by all government departments in response to the Strategy, to assess each department’s disaster and adaptation readiness, and identify actions to address climate change risks and priorities;
- ▲ Pledges and *Low Carbon Growth Plans* that identify how each department will contribute to the long term and interim emissions reduction targets;
- ▲ Regulatory and non-regulatory instruments that can significantly reduce emissions – such as EPA works approvals and licences and emissions trading; and
- ▲ Forestry, carbon sequestration and soil carbon rights to enable participation in national carbon markets.

5.1 The Victorian Climate Change Strategy

To address climate change effectively, the Government needs to clearly define the risks of climate change to Victoria and its desired outcomes and objectives across mitigation, adaptation and disaster risk reduction. In addition, it needs to provide a framework for action. In the absence of such commitments, it is difficult to communicate the seriousness of the risks and to measure the effectiveness of collective action on climate change, as well as the Government's investment in climate change action. It is also difficult for Victorians (including government bodies, businesses and the community) to understand the need for action and to determine how they can contribute to a shared vision.

A common theme expressed in public submissions to this Review was that the Act should facilitate an integrated, whole-of-government response to climate change – across all levels and areas of government. Respondents pointed out that mitigation and adaptation measures cross every portfolio of government, and need to be coordinated. They said the Act should clearly delineate roles and responsibilities for action, and identify which are the leading departments or relevant agencies for various areas.

Several submissions from local governments asked for the Government to more clearly outline the risks, costs and accountabilities at the various levels of government, business and the community. They also expressed a desire for the Government to articulate its climate change priorities and commitments over the life of the plan, and how these priorities will be addressed. This, they said, would enable local governments to better align their actions with action by the State Government, help build consistency of responses across the different levels of government and provide a consistent message that can be communicated to communities.

The IRC believes that a comprehensive, whole-of-government strategy is the most effective way for the Government to articulate its ambition across mitigation, adaptation and disaster risk reduction. It will also help it to explain how it will deliver outcomes in a collective and co-ordinated manner, and to guide others to contribute to this shared vision.

This could be achieved through a *Victorian Climate Change Strategy* (the Strategy) to be developed by the Government every five years using the best available climate science and in consultation with local government, businesses and the community. The Strategy should incorporate one component that addresses adaptation and disaster risk reduction, and another that addresses emissions reductions.

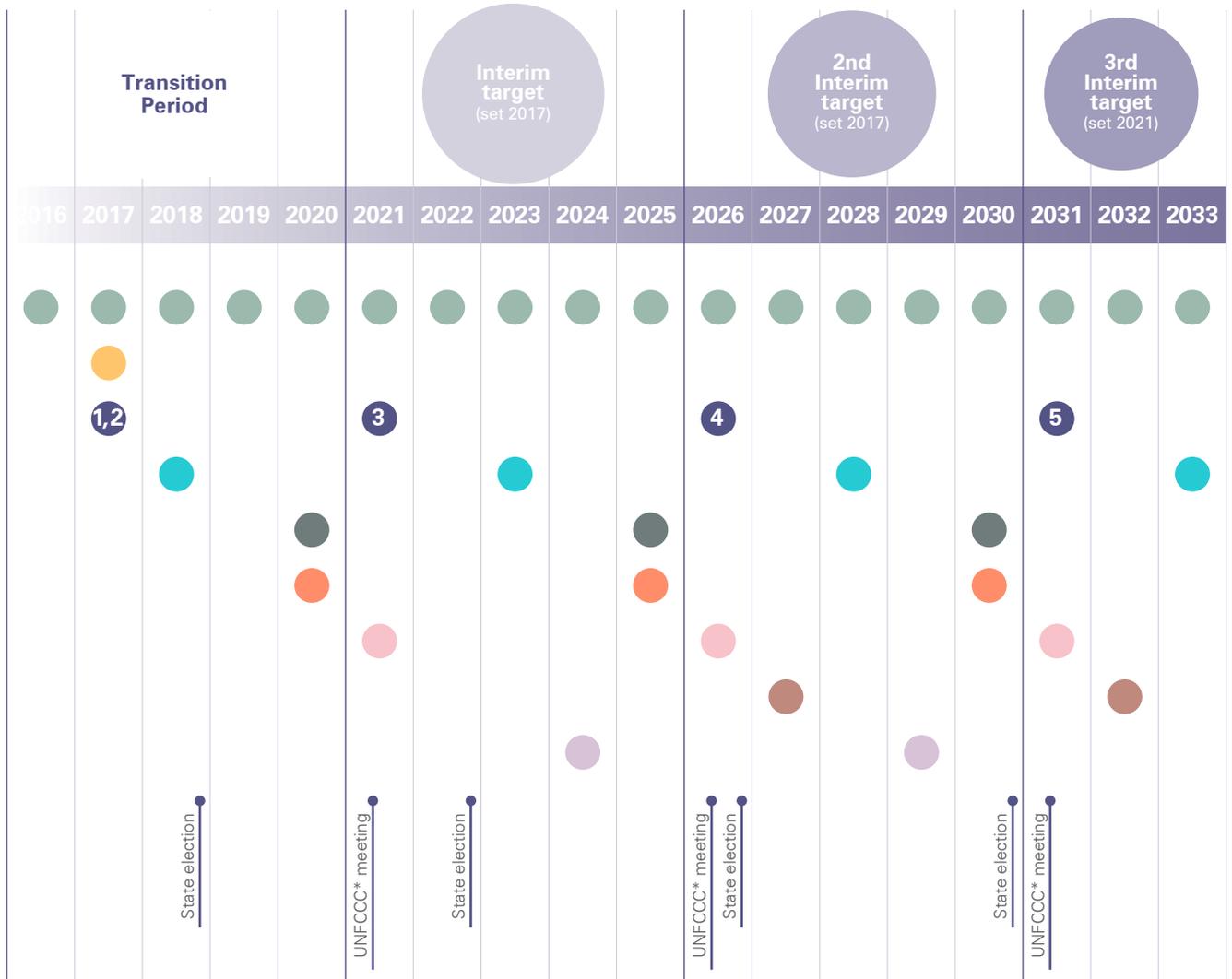
Producing the Strategy every five years would align with the five-year interim target periods. The policies and actions for meeting the interim target for that period will be set out in the Strategy. The timing should be developed to align with the IPCC reporting process and successive five-yearly reviews under the Paris Agreement. See Figure 5.1 as an example of how the preparation of the Strategy could align with timing under the Paris Agreement.

The adaptation and disaster risk reduction component of the Strategy should provide the long-term and medium-term objectives, and set out the roles and responsibilities of all levels of government, business and the community. It should also include a risk assessment that identifies the state-wide priorities for the five-year period and the lead department or relevant agency for each of these.

The emissions reduction component of the Strategy should summarise the Government's policies and actions for meeting the long-term target and the interim targets. It should also include each government department's emissions reduction pledge and the associated *Low Carbon Growth Plans*. It should contain a report on the achievements of the previous five-year period and include, if necessary, explanations for why targets have not been met or actions not taken.

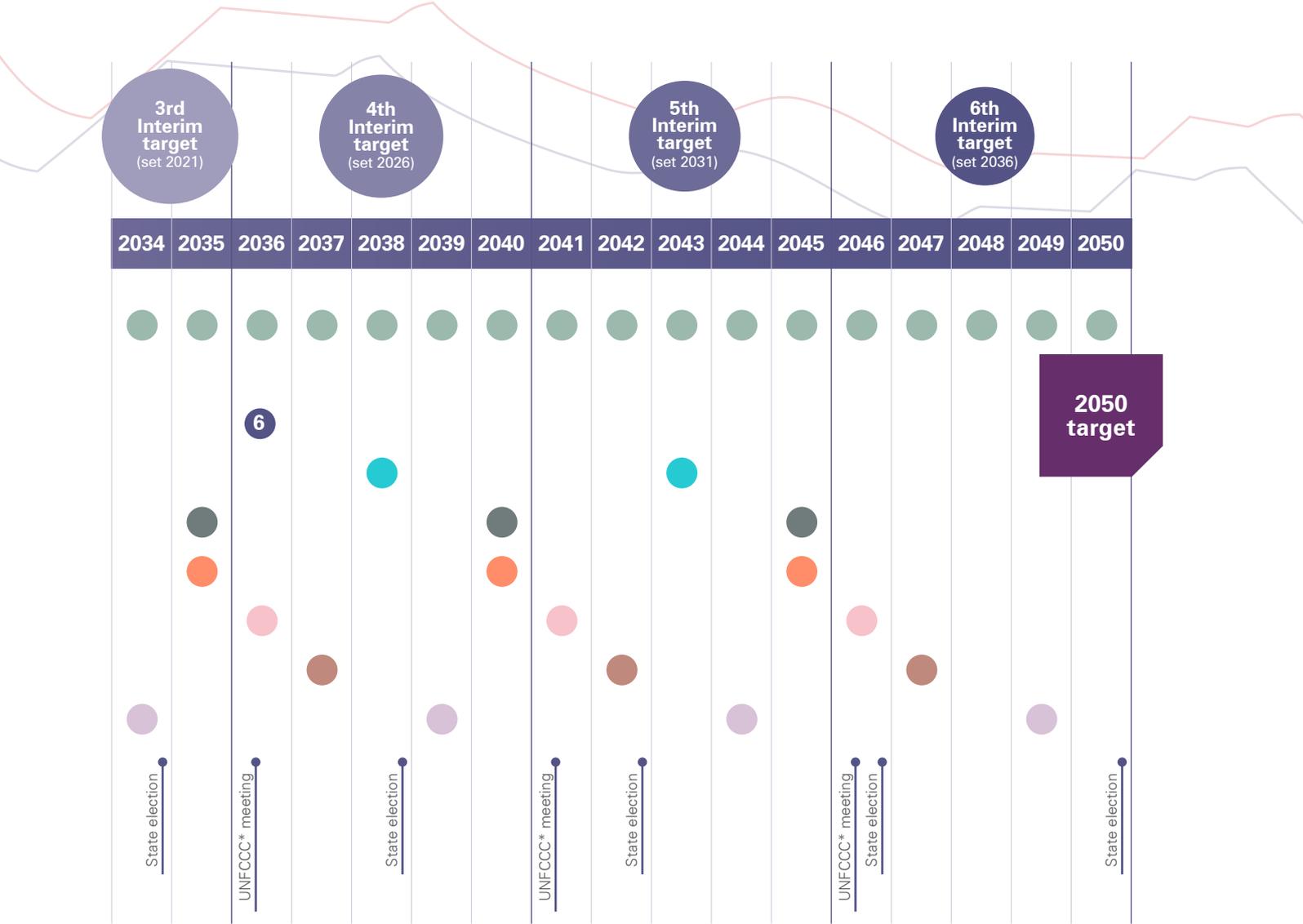
Figure 5.1: Climate Change Act, a proposed implementation plan

Climate Change Act implementation plan



- Annual greenhouse gas reporting
- Economic analysis of climate change risks to Victoria
- Set interim targets
- Government to issue guidance to departments
- *Victorian Climate Change Strategy*
- Government department *Low Carbon Growth Plans*
- Government department *Adaptation and Disaster Risk Reduction Action Plans*
- Interim target assessment
- *Adaptation and Disaster Risk Reduction Action Plan* assessment

* United Nations Framework Convention on Climate Change



The Strategy must be consistent with the Charter, and should be tabled in Parliament for maximum transparency.

Before the development of the first Strategy, the Government should undertake a full assessment of climate change risks and an economic analysis of those risks to serve as a platform from which to proceed with further strategic planning.

Recommendation 17

The Government should undertake a full analysis of the risks of climate change to Victoria, as well as an economic analysis of those risks, to serve as the platform from which to proceed with further strategic planning. This should be conducted prior to the development of the first Strategy.

Recommendation 18

The existing requirement to prepare a *Climate Change Adaptation Plan* should be replaced with the requirement to produce a five-yearly *Victorian Climate Change Strategy* that addresses emissions reduction and adaptation and disaster risk reduction.

- a. The Government must ensure that both the Premier and Minister are responsible for preparing the Strategy.
- b. The Act should outline the contents of the Strategy and the process to develop the Strategy.
- c. The Act should require that the Strategy be developed in consultation with local government, the community and business.
- d. The Act should require that the Strategy be tabled in Parliament.

Recommendation 19

The Strategy should include an adaptation and disaster risk reduction component that:

- a. Specifies the risks and likely economic costs of climate change to Victoria;
- b. Specifies long-term and medium-term objectives;
- c. Sets out the roles and responsibilities of the state and local governments for addressing adaptation and disaster risk reduction;
- d. Identifies the opportunities for private sector involvement - including, for example, through insurance; and
- e. Delivers a risk assessment that:
 - i. Identifies the state-wide priorities for the five-year period; and
 - ii. Identifies the lead department (or agency) for each state-wide priority.

Recommendation 20

The Strategy should contain an emissions reduction component that:

- a. Summarises the Government's policies and actions for meeting the state's interim target for that period;
- b. Contains each department's pledge to meet its share of the state's interim target based on emissions under that department's control for the forthcoming five-year period, including, if necessary, an explanation for any gap between the aggregated pledges and the state's interim target; and
- c. Contains each department's *Low Carbon Growth Plan*, setting out the actions they plan to take to help the state meet the interim target.

5.2 Adaptation and Disaster Risk Reduction Action Plans

5.2.1 Climate change impacts and costs

Climate change presents challenges in the form of slow onset impacts, such as sea level rise and drought, as well as sudden and short-lived disasters resulting from extreme weather events. The IPCC's Fifth Assessment Report found that changes in climate over recent decades 'have caused impacts on natural and human systems on all continents and across the oceans'¹¹⁶ and that 'the more human activities disrupt the climate, the greater the risks of severe, pervasive and irreversible impacts for people and ecosystems, and long-lasting changes in all components of the climate system.'¹¹⁷

Extreme weather events, such as heatwaves, storms and floods, are having an increasing impact on human lives. Globally, the number of reported weather-related natural disasters has more than tripled since the 1960s.¹¹⁸ The World Health Organisation conservatively estimates that climate change will cause an extra 250,000 deaths per year by the 2030s.¹¹⁹

The IPCC found that it was 'likely that human influence has more than doubled the probability of occurrence of heat waves in some locations.' In Europe, in the heat wave of summer 2003, more than 70,000 excess deaths were recorded.¹²⁰ Across Australia, heat waves have been responsible for more deaths than any other natural hazard.¹²¹ The heatwaves

'Parties hereby establish the global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the temperature goal referred to in Article 2.'¹²²

in Victoria in January 2009 and 2014 caused an estimated 541 excess deaths.¹²³ An estimated 289 people aged 65 and over die annually in Melbourne from heat-related deaths (1997–1999 average) and this could potentially rise to between 566 and 604 a year by 2020, and between 980 and 1318 by 2050.¹²⁴

The cost of extreme weather events, intensified by climate change, and resulting disasters is a major risk to the Victorian economy. The costs of extreme weather events in Victoria since 2003 have been estimated at nearly \$8 billion.¹²⁵ In Victoria 40 per cent of the natural disasters reported since 1967 have occurred in the last 10 years, and the estimated financial cost from the 2009–2011 period alone is greater than the total cost of the previous 40 years.¹²⁶

¹¹⁶ IPCC, above n 5.

¹¹⁷ Ibid.

¹¹⁸ World Health Organization, *Climate change and health*. Fact sheet N°266 (September 2015) <<http://www.who.int/mediacentre/factsheets/fs266/en/>>.

¹¹⁹ World Health Organization, *WHO key messages for COP21* <<http://www.who.int/globalchange/mediacentre/events/cop21-key-messages/en/>>.

¹²⁰ World Health Organization, *Climate change and health*, above n 118.

¹²¹ PricewaterhouseCoopers Australia, *Protecting human health and safety during severe and extreme heat events* (2011).

¹²² Conference of the Parties, United Nations Framework Convention on Climate Change, *Twenty-first sessions, Paris, 30 November to 11 December 2015, Agenda item 4(b), Durban Platform for Enhanced Action (decision 1/CP.17) Adoption of a protocol, another legal instrument, or an agreed outcome with legal force under the Convention applicable to all parties*. (UN Doc FCCC/CP/2015/L.9/Rev.1, 12 December 2015), <<http://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>>, Article 7.

¹²³ Department of Health and Human Services, *Heat health plan for Victoria. Protecting health and reducing harm from extreme heat and heatwave* (2015).

¹²⁴ Department of the Environment, *Climate change impacts in Victoria* <<https://www.environment.gov.au/climate-change/climate-science/impacts/vic/>>.

¹²⁵ Emergency Management Victoria, *Victorian Emergency Management Strategic Action Plan 2015-2018* (2015). Note from source: "All economic costs are estimates at the time of the event, and have not been normalised. Data has been compiled from a range of sources; please contact EMV for a full reference list."

¹²⁶ Victorian Government's public submission into the Productivity Commission's Inquiry into Natural Disaster Funding Arrangements (July 2014).

Substantial emissions reduction over the coming decades can reduce the impacts of climate change. However, Victorians need to build resilience and prepare for the unavoidable impacts that are already locked in. Emissions are expected to rise in the short to mid-term and will result in changes to global and local climates. As these changes progress, the costs associated with managing and adapting to the impacts will continue to increase.

Spending on disaster recovery generally exceeds spending on disaster risk reduction. One of the findings from the Productivity Commission's inquiry into Natural Disaster Funding Arrangements was that governments over-invest in post-disaster reconstruction and under-invest in mitigation that would limit the impact of natural disasters in the first place. The Commission found that a greater emphasis needs to be placed on disaster mitigation.¹²⁷

There are many examples indicating that investment in disaster risk reduction is far more cost effective than investment in disaster recovery. For example, a cost-benefit analysis (undertaken after a once-in-a-hundred-year flood event) of \$2.85 million in flood mitigation works conducted in 2007 in the northern Victorian town of Nathalia was found to have produced an estimated \$29.5 million in benefits. In this example, for every \$1 spent on risk reduction, \$10 was saved on recovery,¹²⁸ highlighting the value of prioritising and allocating appropriate resources for disaster risk reduction and preparedness. Appropriate disaster risk reduction investments by government can also lower insurance premiums for individuals.

Box 5.1: Key climate projections for Victoria include:¹²⁹

- ▲ Substantially increased daily mean, maximum and minimum temperature;
- ▲ Substantially increased heat-related extremes;
- ▲ Decreased frequency of frost days;
- ▲ A decline in mean rainfall with a greater proportion of annual rainfall coming from heavy rain events that will increase in intensity in the future;
- ▲ Increased duration and frequency of extreme drought;
- ▲ A harsher fire weather climate;
- ▲ Substantially reduced snow cover; and
- ▲ Continued rising of sea levels and sea surface temperatures, with oceans becoming more acidic.

5.2.2 Adaptation planning under the current Act

The primary adaptation-related provisions of the Act relate to the *Victorian Climate Change Adaptation Plan* (Adaptation Plan). The Act requires an Adaptation Plan to be prepared every four years and contains provisions that relate to the objective (s1(d)), content (s16(1)(a)–(g)) and process for development (s7(2), s16(2–4)). The purpose of the Adaptation Plan is 'to provide for a strategic response by the Government of Victoria to climate change'.¹³⁰

¹²⁷ Productivity Commission, *Natural Disaster Funding Arrangements*, Report No. 74, (December 2014).

¹²⁸ *Ibid.*

¹²⁹ Projections sourced from: Timbal, B. et al., *Murray Basin Cluster Report, Climate Change in Australia Projections for Australia's Natural Resource Management Regions: Cluster Reports*, eds. Ekström, M. et al., CSIRO and Bureau of Meteorology, Australia (2015) and Grose, M. et al., *Southern Slopes Cluster Report, Climate Change in Australia Projections for Australia's Natural Resource Management Regions: Cluster Reports*, eds. Ekström, M. et al., CSIRO and Bureau of Meteorology, Australia (2015).

¹³⁰ *Climate Change Act 2010* (Vic) s 1(d).

The intent of legislating adaptation action is to:

- ▲ Actively drive adaptation across the whole of government in a coordinated and strategic manner; and
- ▲ Ensure that adaptation action by government, business and the community is driven through an overarching framework, specific enough to provide tangible guidance, but flexible enough to account for the diversity of government departments, contexts and relationships.

The first Adaptation Plan was tabled in Parliament on 19 March 2013 and was designed to highlight existing initiatives, and to drive integration and co-ordination of government action through the cross-government Adaptation Co-ordinating Committee. It identifies seven strategic priorities for which 21 medium-term goals are defined for 27 deliverables (activities).

The Adaptation Plan:

- ▲ Includes a summary of key areas of action and adaptation efforts currently underway;
- ▲ Describes the division of roles and responsibilities (at a high level) across different levels of government and between public and private entities;
- ▲ Elaborates on the Guiding Principles in the Act;
- ▲ Establishes strategic priorities for adaptation planning across the state; and
- ▲ Reinforces the need to embed climate change risk management across all portfolios.

The Plan does not provide the most up-to-date science, as at the time of preparation it was not required to do so (as it was substantially completed prior to the 2012 amendments to the Act).

5.2.3 Effectiveness of the Adaptation Plan

The Act was reviewed in late 2011, prior to the publication of the first Adaptation Plan. The 2011 Review made several findings regarding the requirements in the Act, but as the Adaptation Plan had not been released, its effectiveness could not be assessed.

The Review found that there was a strong role for the State Government to facilitate adaptation, and that an effective adaptation plan would highlight the importance of adaptation being a shared responsibility, and help guide government decision making and investment. The Review also noted that effectiveness may be improved by integrating an adaptation plan with a state-wide planning policy as an incorporated document, although this has not occurred.

Following the 2011 Review, several amendments that related to the Adaptation Plan were made to the Act. However, the Adaptation Plan was substantially completed before the amendments were made, so the amendments were not reflected in the first Adaptation Plan.

DELWP advised that the extent to which the Adaptation Plan has been effective in driving climate adaptation planning in Victoria was unclear or patchy, due to limited awareness of the Adaptation Plan.

DELWP further advised that adaptation planning has slightly or partially been mainstreamed into Victorian Government decision making, slightly to partially assisted by the Adaptation Plan, and that this was largely due to lack of clear guidance as to how to implement adaptation action.

The main challenges for the development and implementation of the Adaptation Plan were found to be the result of its limited mandate, resourcing and consultation. As discussed in Chapter 4, further challenges were created by the poor linkages in the Act between the Adaptation Plan, the guiding principles¹³¹ and the decision-making framework.

Many of the submissions received by the IRC also point to the limited effectiveness of the current Adaptation Plan. Submissions stated that the requirements for the current plan need strengthening. Suggestions included providing policy certainty and a framework for long-term action with clear and measurable actions, support for private sector and regional adaptation, regular and high quality reporting, and regular tracking of progress that is fed back to stakeholders.

5.2.4 Increasing Victoria's resilience to climate change

The Productivity Commission's Inquiry into Barriers to Effective Climate Change Adaptation stated that governments at all levels should:

- ▲ Embed consideration of climate change in their risk management practices; and
- ▲ Ensure there is sufficient flexibility in regulatory and policy settings to allow households, businesses and communities to manage the risks of climate change.¹³²

The IRC believes that a well-designed Act can help drive behaviour change and increase accountability, and that the most effective way to do this is through embedding and mainstreaming climate change considerations and actions. An ideal process is for the State

Government to undertake an overarching state-wide assessment of climate risks (as described above) and allow each department or agency to develop their own solutions for how to best address these risks, as they are likely to be best placed to explore these risks and determine the best responses. The IRC therefore recommends that government departments and relevant agencies produce an ADRRAP in response to the Strategy.

Adaptation planning and disaster risk reduction are important roles for state governments. The IRC also recognises that local governments, regional organisations, businesses and the community are critical for delivering adaptation outcomes. Therefore, while the recommendations below are addressed to government departments and relevant agencies, collaboration should also occur with other government and non-government sectors. The ADRRAP process could be expanded to include local government.

This is a relatively new area for whole-of-government action and will be difficult initially. The recommendations are deliberately trying to embed consideration of climate change into many places to help create the shift that is required to create practical outcomes. With this in mind, it is critical that guidance and support is provided during the transition to build the capacity of government departments and agencies, business and the community.

The IRC notes the additional burden this places on government departments. However, the costs of inaction far outweigh the shorter-term costs of establishing effective adaptation and disaster risk reduction actions.

¹³¹ Note that the requirement to consider the Guiding Principles during the development of the Adaptation Plan was not introduced until the 2012 amendments to the Act. *Climate Change Act 2010* (Vic) s 7(2).

¹³² Productivity Commission, above n 100.

Recommendation 21

1. In response to the adaptation and disaster risk reduction component of the Strategy, the Act should introduce a requirement for each lead department (or agency) identified in the Strategy to develop an ADRRAP.
2. The Act should include the following:
 - a. ADRRAPs must be prepared for five-year periods in response to the Strategy and must contain the departments' or agencies':
 - i. Short-term and medium-term objectives for adaptation and disaster risk reduction;
 - ii. Proposals and actions (including timeframes) to address the risks and priorities identified in the Strategy;
 - iii. Performance indicators; and
 - iv. An assessment of the departments' (or agencies') own disaster and adaptation readiness.
 - b. Each ADRRAP must be consistent with the Charter;
 - c. The Minister may provide guidance on the development of the ADRRAPs; and
 - d. There must be consultation with local government, the community and business during the development of the ADRRAPs.

5.2.5 Integrating adaptation and disaster risk reduction into the Victorian Emergency Management Framework

The *Victorian Emergency Management Reform White Paper* (2012) highlighted the need for Victoria to reform its emergency management sector and defined the vision, principles and strategic priorities for that reform. The IRC notes that Victoria has delivered significant reforms to the emergency management sector since the release of the White Paper, including implementing streamlined governance arrangements and clarifying roles and responsibilities via amendments to the *Emergency Management Act 2013*. Victoria's *Emergency Management Strategic Action Plan 2015–2018* (SAP) defines the strategic priorities for emergency management as:

- ▲ Community and business;
- ▲ People and culture;
- ▲ Governance; and
- ▲ Services and systems.

The IRC notes that the SAP is aligned with the Sendai Framework and the 2011 National Strategy for Disaster Resilience.

Building on the work to date, there is an opportunity for Victoria to integrate climate change into strategic planning for emergency management. The IRC notes that integrated emergency management planning legislation will be introduced to the Victorian Parliament in 2016, and it encourages the Victorian Government to use this as an opportunity to drive both adaptation and disaster risk reduction outcomes across state, regional and local levels.

5.3 Multi-year interim emissions reduction targets

The World Resources Institute states that coupling short-term and long-term emissions reduction targets can provide clarity for long-term planning and ensure a decreasing emissions pathway. This coupling can also reveal cost-effective and realistic emission reduction pathways that are aligned with phasing out net GHG emissions in the long term.¹³³

5.3.1 The global limit on GHG emissions

Changes to the global climate are determined by cumulative GHG (total amount emitted), not emissions in any given year or the average rate of emissions over a limited period.

The IPCC's Fifth Assessment Report quantified the amount of carbon dioxide emissions the world can emit while still having a likely chance (66 per cent) of limiting global temperature rise to 2 degrees above pre-industrial levels.¹³⁴ This global limit of GHG emissions, often also referred to as the 'carbon budget', is 1000 gigatonnes. The IPCC notes that about half of this limit or budget has already been emitted. Further, the Climate Change Authority's Targets and Progress Review derived a long-term national emissions limit or budget for Australia as a share of the global budget.¹³⁵

A long-term emissions reduction target supported by a series of multi-year interim emissions reduction target periods (interim targets), helps to link emissions targets and trajectories to the underlying science of climate change by focusing on total emissions over a period of time.

Box 5.2: Key definitions of timeframes for emissions reductions targets¹³⁶

Long-term target: a target of more than 10 years.

Short-term or interim target: a target of between five and 10 years.

Single-year target: aims to reduce emissions by a future single year – **the target year** —for example, the long-term target recommended by the IRC.

Multi-year target: aims to reduce cumulative emissions over multiple years – **the target period** – for example, the years 2021 to 2025. These are sometimes referred to as 'carbon budgets'.

Figure 5.2 illustrates possible emissions pathways under multi-year and single-year targets. Under a multi-year target, the total, cumulative emissions must stay below the target amount (the interim target periods and area shown in blue). In contrast, under a single-year target (e.g. long-term target), emissions could rise until shortly before the time period and then drop quickly. This is illustrated by the orange pathway. While a target could still be met, larger cumulative emissions would result than if emissions were capped and steadily declined over the same period using a cumulative multi-year target.¹³⁷ The blue circle illustrates the total cumulative emissions under a capped approach of multi-year targets and the possible additional cumulative emissions shown in the orange circle for a single-year target.

¹³³ World Resources Institute, *Mitigation Goal Standard: An accounting and reporting standard for national and subnational greenhouse gas reduction goals* (2014) 46.

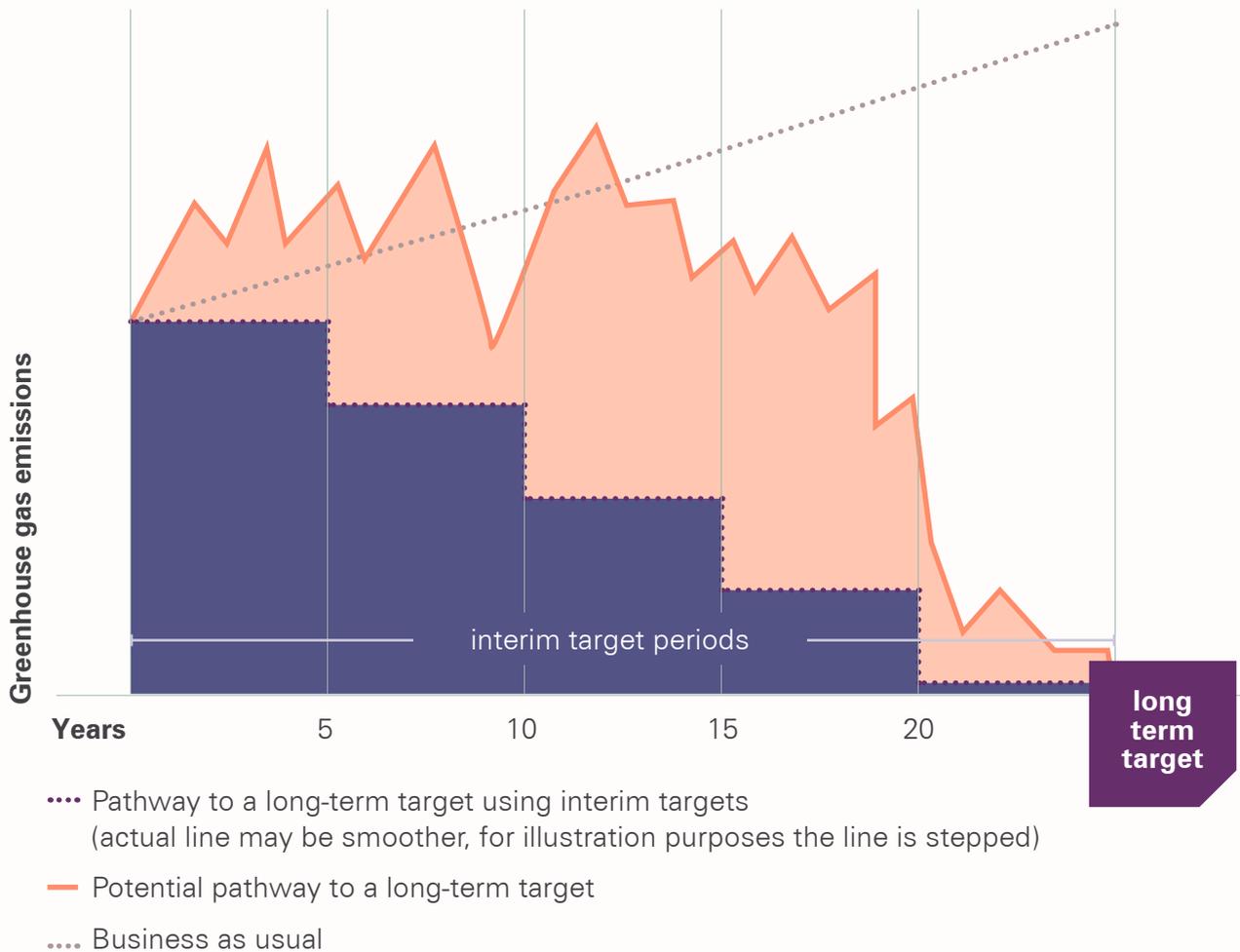
¹³⁴ IPCC, above n 5.

¹³⁵ Climate Change Authority, above n 18.

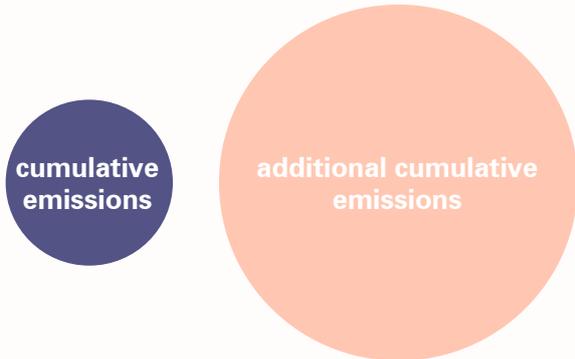
¹³⁶ World Resources Institute, above n 133.

¹³⁷ Ibid 42.

Figure 5.2: Possible emissions pathways under single-year and multi-year targets



- Pathway to a long-term target using interim targets (actual line may be smoother, for illustration purposes the line is stepped)
- Potential pathway to a long-term target
- Business as usual



The IRC proposes a robust approach that couples long-term and short-term targets (a series of interim targets) and considers cumulative emissions consistently with an emissions trajectory that phases out GHG emissions in the long term, and that is based on the best available science.

Interim target periods minimise the risk that emissions in a single target year are unrepresentative of underlying trends, and provide more frequent measuring of progress towards goals.¹³⁸

¹³⁸ Prag, A., Hood, C. and Barata, P. M. *Made to Measure: Options for Emissions Accounting under the UNFCCC*. OECD/IEA Climate Change Expert Group Paper No. 2013(1). Organisation for Economic Co-operation and Development and International Energy Agency, Paris (2013) <<http://dx.doi.org/10.1787/5jzbb2tp8ptg-en>>.

5.3.2 Rationale for multi-year interim targets

To complement the long-term target, the IRC recommends setting a series of interim targets that are multi-year and limit emissions over a defined target period (five years) (Box 5.2 and Figure 5.2). This would create a pathway towards the long-term target, effectively creating a total sum, or budget, of emissions that can be produced in that period. When combined, the actual volume of emissions over successive interim target periods will aim to deliver the limit on emissions required to achieve the long-term emissions reduction target. Consequently, emissions for each interim target period must be lower than for the previous period.

Under this approach, the Government would commit to setting the maximum level of GHG emissions under which the state will aim to keep its emissions over successive five-year periods. The Government could decide to express the maximum limit set out in each interim target as a single figure (Mt CO₂-e), a range, or a percentage range, or as a combination of these. These limits would be consistent with the overall long-term trajectory.

An assessment should be conducted at the end of the interim target period to determine the actual reduction in the volume of emissions (see section 6.2.5).

The IRC believes this approach has a number of benefits, including:

- ▲ Recognition that the environmental effects of emissions are a result of cumulative emissions over time;
- ▲ Offering more flexibility in meeting mitigation goals;
- ▲ Accommodating variability in emissions;
- ▲ Ensuring emissions reductions occur continually;
- ▲ Indicating expected emissions reductions over time;

- ▲ Driving the policies necessary for achieving the long-term target; and
- ▲ Helping the state to balance its efforts over time and to minimise economic, social and environmental disruption.

The IRC's proposed approach is flexible, meaning that it can operate within a changing national policy context. In the event the Commonwealth Government commits to ambitious emissions reductions, the proposed amendments would ensure Victoria is well positioned to contribute to national abatement. Where the Commonwealth Government's commitments are not considered sufficiently ambitious, the IRC's recommendations provide Victoria with the opportunity to demonstrate its leadership role. Ambitious action also produces other important co-benefits to emissions reduction – as discussed earlier in Chapter 2.

The benefits of strong and early action are widely recognised.¹³⁹ Such action to reduce global emissions improves the chance of staying well below 2 degrees and limits the future costs of climate change. Early, ambitious commitments to reduce emissions will set Victoria on a gradual path towards its long-term target and will avoid the need for steeper reductions at later dates, which will be more costly.

The IRC's proposed approach is similar to that adopted in the United Kingdom through its *Climate Change Act 2008* (Box 5.3).

5.3.3 Proposed interim target process

Five-year timeframe

The IRC believes that a five-year timeframe for each period is reasonable and will ensure that reductions can occur when combined with strong monitoring, reporting and verification (MRV) processes to demonstrate progress.

Interim target periods of five years would align neatly with the release of subsequent reports from the Intergovernmental Panel on Climate Change (IPCC) and the

¹³⁹ See for example: N. H. Stern, *The economics of climate change: the Stern Review* (Cambridge University Press, 2007); The Global Commission on the Economy and Climate, *Better Growth Better Climate: The New Climate Economy Report* (2014); Jotzo, F. and Kemp, L., *Australia can cut emissions deeply and the cost is low*, Centre for Climate Economics and Policy for WWF-Australia (2015).

Box 5.3: *Climate Change Act 2008 (UK)*

The Climate Change Act 2008 established a target for the UK to reduce its emissions by at least 80 per cent from 1990 levels by 2050.¹⁴⁰ This target represents an appropriate UK contribution to global emission reductions consistent with limiting global temperature rise to as little as possible above 2° C.¹⁴¹

To ensure that regular progress is made towards this long-term target, the Act also established a system of five-yearly carbon budgets, to serve as stepping stones on the way.

The UK Committee on Climate Change is responsible for advising on the appropriate level of the UK's carbon budgets and steps required to meet them. The budgets define the maximum level of CO₂ and other greenhouse gases that the UK can emit in each five-year year budget period, beginning with 2008–12. It also monitors progress towards meeting carbon budgets and recommending actions to keep budgets on track.

The first four carbon budgets, leading to 2027, have been set in law. The UK is currently in the second carbon budget period (2013–17). Meeting the fourth carbon budget (2023–27) will require that emissions be reduced by 50 per cent on 1990 levels in 2025. The Committee will publish its advice to government on the fifth carbon budget in December 2015, covering the period 2028–2032, as required under section 4 of the UK Act. The Government will propose draft legislation for the fifth budget in 2016.

commitment to ratchet up every five years under the Paris Agreement. In commenting on the proposed five-year reviews under the Paris Agreement,¹⁴² the World Resources Institute stated that five-year cycles of commitments would allow countries to respond to advances in technology and thereby benefit from the best available mitigation and adaptation practices.¹⁴³

Figure 5.1 illustrates the IRC's recommended approach, including the long-term emissions reduction target with a target year of 2050.

Setting interim targets

The process for developing each interim target should be enshrined in the Act. The Government could decide to express the maximum limit set out in each interim target period as a single figure (Mt CO₂-e), a range,

or a percentage range, or as a combination of these. Consistent with an emissions trajectory that phases out GHG emissions in the long term, the amount of emissions for each interim target period must be lower than for the previous period.

Each interim target period must be set 10 years in advance to provide clarity and certainty to business and policy makers about the Government's level of ambition. Figure 5.1 illustrates this approach, with the IRC's suggested approach proposing the first two interim target periods be set in 2017 and the remainder 10 years in advance. Six interim targets would represent the trajectory to the long-term target. At any one time, two periods' worth of interim targets would be set, providing certainty to investors about the medium-term policy landscape.

¹⁴⁰ *Climate Change Act 2008 (UK)* s 1.

¹⁴¹ The Committee on Climate Change, *Setting a target for emission reduction*, <<https://www.theccc.org.uk/tackling-climate-change/the-science-of-climate-change/setting-a-target-for-emission-reduction/>>.

¹⁴² Conference of the Parties, United Nations Framework Convention on Climate Change, *Twenty-first sessions, Paris, 30 November to 11 December 2015, Agenda item 4(b), Durban Platform for Enhanced Action (decision 1/CP.17) Adoption of a protocol, another legal instrument, or an agreed outcome with legal force under the Convention applicable to all parties*. (UN Doc FCCC/CP/2015/L.9/Rev.1, 12 December 2015), <<http://unfccc.int/resource/docs/2015/cop21/eng/109r01.pdf>>.

¹⁴³ Morgan, J., K. Levin, and Jiawei Song, with J.P. Osornio, *Driving Transformative Change: The Role of the Private Sector in Advancing Short-Term and Long-Term Signals in the Paris Climate Agreement*, Working Paper. (Washington DC: World Resources Institute) <<http://www.wri.org/driving-transformative-change>>.

Advice on the level of each interim target

Prior to setting an interim target, the Government must seek and consider independent expert advice on the amount of each interim target and its relative contribution towards the long-term target. Like the long-term target, each interim target should be based on the best available science.

The IRC's view is that the interim targets for Victoria should be set by the Minister on the advice of people suitably qualified in climate science, mitigation, adaptation and disaster risk reduction. Upon setting each interim target, the Minister should report on the ways in which the independent advice was incorporated into the setting of the target. Section 6.2.1 discusses the role of independent monitoring and oversight, including the provision of expert advice.

Revision of interim targets

The Act should contain a method for reviewing interim targets if there are significant changes affecting the basis on which the target was set. However, to ensure policy certainty, reviews should not be undertaken for periods beginning less than five years in the future.

Flexibility

Flexibility should be allowed within each five-year period as emissions may fluctuate. The aggregate of emissions over the five-year period must not exceed the maximum limit set out in the interim target.

5.3.4 Responsibility for meeting interim targets

The Government must ensure that both the Premier and the Minister are accountable for meeting each interim target.

Compliance with interim targets will be achieved through a transparent reporting framework. Legislating a long-term target and interim targets has the effect of strengthening

the Government's resolve to achieve each goal and will also subject the Government to greater public accountability.

Further discussion about monitoring, evaluating and reporting against interim targets can be found in Chapter 6.

5.3.5 Cross-border issues

The IRC acknowledges that prescribing emissions reduction may be considered problematic by some, as it constrains the state's emissions despite the fact that Australian states and territories have 'open borders'.

Events may occur in another state or territory that, unrelated to any activity in Victoria, would result in an adverse emissions consequence for Victoria. This is due to the national nature of Australia's energy markets. For example, closure of a power station in one state could increase carbon emissions in states from which it imports energy.

The IRC acknowledges this argument, but notes that all jurisdictions will have to reach net zero emissions eventually. Such an argument will simply defer the problem to a time when drastic reductions will be disruptive and costly.

In light of these issues, the IRC has recommended that at the end of each interim target period (see Chapter 6), the Government will be required to undertake an assessment of whether the interim target was met. This assessment report provides an opportunity for the Government to explain why the interim target might not have been met. This could be due to cross-border factors that result in an adverse emissions consequence.

5.3.6 Supporting interim targets

The IRC recommends that the interim targets be supplemented with the use of an internal assessment of GHG and climate change liability by all government departments (refer to section 4.7).

Recommendation 22

1. The Act should introduce a process for rolling multi-year interim emissions reduction targets to support delivery of the long-term target. The process would indicate a maximum level of GHG emissions for Victoria, which the Government would aim to keep the state below.
 - a. Interim targets should be five-yearly and set by the Government at least two target periods in advance to provide sufficient clarity and certainty for stakeholders and a clear medium-term pathway to the long-term target.
 - b. The level of emissions for each interim target would have to be lower than that for the previous target period.
 - c. The Government should seek and consider independent expert advice on the amount of each interim target and its relative contribution towards the long-term target.
 - d. In setting each interim target, the Minister should provide a statement on how the independent advice has been taken into account.
 - e. The Act should contain a method for reviewing interim targets if there are significant changes affecting the basis on which the targets were set.
2. The Government must ensure that both the Premier and Minister are accountable for meeting each interim target.

5.4 Department pledges and Low Carbon Growth Plans

The IRC highlights the need for ambitious emissions reduction across Victoria if the state is to play its part in limiting global warming to well below 2 degrees. Behavioural change and accountability were key considerations of the Review.

5.4.1 Pledge and review process

To support the achievement of each interim target, the IRC recommends adopting the bottom-up approach of the UNFCCC 'pledge and review' model. This model required countries in the lead up to COP21 in Paris to submit Intended Nationally Determined Contributions (INDCs) that publicly outline what post-2020 climate actions they intend to take under a new international agreement. It was predicted that the INDCs would largely determine whether the world achieved an ambitious 2015 agreement and was put on a path toward a low-carbon, climate-resilient future.¹⁴⁴ This model is said to allow for sufficient flexibility in national responses so as to have the greatest prospect of garnering universal consensus.¹⁴⁵

'This new bottom-up process meant that for the first time, other countries, observers and climate organisations could review proposed commitments ahead of the COP, to assess the remaining emissions gap and degree of global warming. This evolution of global governance is a victory for transparency.'¹⁴⁶

144. World Resources Institute, *INDC Definition*, <<http://www.wri.org/indc-definition>>.

145. Anna Celliers, 'The scope of a 2015 climate change agreement: A mixed top-down/bottom-up approach to achieve universal participation' (2015) 32 EPLJ 46.

146. The Climate Group, *Compact of States and Regions Disclosure Report 2015* (2015) 9.

INDCs are used by governments to communicate internationally the steps they will take to address climate change in their own countries. They reflect each country's ambition for reducing emissions, taking into account their national priorities, circumstances and capabilities.¹⁴⁷

To achieve a whole-of-government response to climate change, the IRC recommends building on this approach by requiring all government departments to commit, or pledge, an amount of emissions reduction they will deliver based on the suite of policy tools available to them. This approach places overarching responsibility on all departments across government to deliver action. These pledges could be coordinated by a lead department and agreed between ministers and department secretaries.

Requiring departments to pledge can assist the integration of climate change into existing planning processes, and strengthen institutional cooperation and mutual accountability. Such an approach would help ensure that addressing climate change becomes a standard element of departmental operations and managerial responsibilities. It also invites further devolution and engagement of stakeholders outside government in each portfolio – for example, by encouraging pledges (voluntary, perhaps) from external groups and communities. This builds skills, awareness and a sense of ownership.

The pledge or 'bottom-up' approach has a number of benefits over a 'top-down' approach. It:

- ▲ Provides the Government with the flexibility to deliver its policy priorities within a system where emissions are effectively capped to achieve the interim targets;
- ▲ Drives accountability, transparency and enables performance monitoring, as the Government is responsible for collectively managing delivery of Victoria's interim targets with each department playing a part;

- ▲ Strengthens the integration of climate change into existing government policies, plans, programs and decision-making;
- ▲ Strengthens institutional cooperation through mutual accountability while allowing for differentiated responses;
- ▲ Invites departments that have existing relationships with high-emission stakeholders to manage the issues in partnership with those stakeholders; and
- ▲ Provides an opportunity for departments to demonstrate leadership in addressing climate change.

5.4.2 Changing the culture and behaviour of government

The IRC's focus has been on how the Act can facilitate a whole-of-government approach to climate change consistent with best practice and the Government's desire to be a leader. The IRC understands that these recommendations, if adopted, would require significant cultural and behavioural change for the Government initially, until the new ways become standard practice.

Figure 5.1 (on pages 86–87) contains the model envisaged by the IRC. It proposes a transition period (2016–2020), with the first interim target period applying from 2021–25. This provides the Government with a 4–5 year transition period to build capacity and properly embed the task of emissions reduction across all departments. The IRC also sees merit in the approach of 'learning by doing'. For example, the EU Emissions Trading Scheme (EU ETS) began with a three-year pilot period of 'learning by doing' to prepare for phase two, when the ETS would need to function effectively to help ensure that the EU and its member states met their Kyoto Protocol emission targets.¹⁴⁸

The IRC believes a pledge approach will enable effective monitoring of progress, as the Government is responsible for collectively managing delivery of Victoria's interim targets.

147. World Resources Institute and UNDP, *Designing and Preparing Intended Nationally Determined Contributions (INDCs)* (2015).

148. European Commission, *EU ETS 2005 – 2012* <http://ec.europa.eu/clima/policies/ets/pre2013/index_en.htm>.

It is not the role of the Act to prescribe what activities must be undertaken to meet any interim target or long-term target. Rather, this approach places the onus on departments to demonstrate that they are taking the requisite actions to meet Victoria's emissions trajectory, both in the long term as well as within each five-year interim target period.

Ministerial guidance should be issued to assist departments in the development of their pledges.

Under a pledge approach, the IRC sees responsible ministers inviting regulated sectors to make their own pledges towards fulfilling a department pledge. For example, the Minister for Local Government could invite pledges from local governments and the Minister for Energy and Resources could invite pledges from existing and proposed power stations

including community-owned renewable energy projects. Pledges could also contain other actions – for example, the Department of Education and Training could pledge actions for reskilling and retraining in energy efficiency and renewable energy that will support other department pledges.

By including the pledges in *Low Carbon Growth Plans*, departments have the opportunity to link their mitigation actions with existing growth plans for their portfolio such as economic, jobs and wellbeing improvements.

Recommendation 23

1. Reducing emissions and meeting any interim target will require whole-of-government involvement. The Act should require each department to pledge its contribution to the state's interim targets and long-term target. These pledges would articulate each department's role in the Strategy, and demonstrate that responsibility for action on climate change is embedded across government and can be advanced by all departments.
2. Guidance should be issued by the Minister for the development of the department pledges.

Recommendation 24

1. Each department's pledge must be detailed in a *Low Carbon Growth Plan* that outlines the sectors and emissions covered by their department (including emissions of stakeholders within the portfolio responsibility of the department) and the specific actions (including timeframes) it proposes to meet its pledge and reduce emissions.
2. Each Plan must be consistent with the Charter and should include the actions the department intends to take to reduce the emissions:
 - a. That it directly controls, such as from buildings and operations (including wider operations such as purchasing and fleets) and through procurement; and
 - b. Within sectors of the economy over which it has influence through policy interventions.

5.5 Specific mitigation actions

The IRC believes that to be a leader in climate change, Victoria should, like many other jurisdictions, adopt measures that reduce emissions at their source. There is a suite of options for doing so including imposing emissions limits under EPA licences, establishing a state-based emissions trading scheme (which could include linking to other national or international schemes), adopting carbon taxes or other targeted financial incentives or charges and even the accelerated phase-out or upgrade of high GHG emitting facilities. The IRC believes that the actual choice of measures should be a policy matter for the Government, but that the Act should provide the legislative power for adopting such measures.

With regard to the role of the EPA, the IRC notes that while it is clear that the *Environment Protection Act 1970* provides the EPA with the power to regulate GHG emissions, the provisions of the State Environment Protection Policy (Air Quality Management) (SEPP (AQM)) limit the EPA's capacity to regulate to bring about significant reductions in emissions. As such, the Act needs to clearly remove any ambiguity around the EPA's authority to bring about emissions reductions.

5.5.1 Role of the Environment Protection Authority (EPA)

The IRC has considered the role of the EPA in relation to climate change from two perspectives: first, in relation to the EPA's power to regulate emissions under the provisions of the *Environment Protection Act 1970* and, second, in relation to the former role of the EPA in reducing emissions for the purposes of achieving the emissions reduction target.

EPA's powers to regulate GHG emissions – *Environment Protection Act 1970*

The *Environment Protection Act 1970* gives the EPA the power to regulate GHG emissions (Box 5.4). The SEPP (AQM) articulates how the EPA can give effect to these powers. The relevant provisions of the SEPP (AQM) are:

- ▲ *Clause 33* states that '(1) Generators of emissions of greenhouse gases must manage their emissions in accordance with the provisions of Clauses 18 and 19'. It also states that '(3) The Authority will apply (any) protocols (for environmental management relating to GHG emissions) to generators of emissions subject to works approvals and licences, and in assessing the potential impacts of other development proposals'.
- ▲ *Clause 18* states that '... generators of emissions include: (a) those who operate or manage sources of emissions, or undertake activities that generate emissions or result in the generation of emissions'. It also states '(3) Generators of emissions must: (a) manage their activities in accordance with the aims, principles and intent of the policy; (b) pursue continuous improvement in their environmental management practices and environmental performance; and (c) apply best practice to the management of their emissions...'
- ▲ *Clause 19* states that '(1) A generator of a new or substantially modified source of emissions must apply best practice to the management of those emissions'.

Box 5.4: *Environment Protection Act 1970 (Vic)* – relevant provisions relating to GHGs

1. *Powers to recommend policy or regulations in relation to GHG emissions*

EPA has the power to:

- ▲ Recommend to the Governor-in-Council to make statutory policies and regulations to regulate the emission and discharge of GHG substances to reduce harm to the environment [section 13(1)(ga)]
- ▲ Recommend regulations including:
 - i. Prohibiting or regulating the emission or discharge of GHG substances into the environment;
 - ii. Prescribing standards for the emission or discharge of GHG substances into the environment, including emission intensity standards and maximum levels of emission of GHG substances; and
 - iii. Prescribing conditions under which GHG substances may be emitted or discharged into the environment. [section 71(1)(fab)-(fad)].

2. *Power to regulate GHG as 'waste':*

- ▲ The definition of waste includes 'any GHG substance emitted or discharged into the environment [section 4].
- ▲ EPA can regulate greenhouse gases as a waste via works approvals and licences [sections 19A and B].
- ▲ Other 'Powers, duties, and functions' of the EPA may be applicable to regulating emissions of greenhouse gases as a waste [for example – section 13(1)(b),(ca),(cc), (d),(n), (na) & (p)].

3. *Other*

- ▲ EPA has power to implement economic measures to provide incentives to avoid or minimise environmental harm (where the definition of 'environment' includes climate) [section 19AA] – this includes tradeable emissions schemes [section 19AB].

Changes to EPA's role following the 2011 Review of the Act

In response to the 2011 Review's recommendation, in 2012 the Victorian Government repealed the 2020 target and consequentially repealed the EPA's power to recommend to the Governor-in-Council the making of statutory policies and regulations to 'regulate the emission of GHG substances to contribute to Victoria's greenhouse emissions target'.¹⁴⁹

The 2011 Review also recommended that the EPA 'should assess the future application of its GHG regulation powers in the context of the Commonwealth carbon price/emissions trading scheme legislation and provide greater certainty to stakeholders through a statement of regulatory intent'. In December 2012, the Victorian Government released a 'Statement of Regulatory Intent'¹⁵⁰ as part of its implementation of responses to this recommendation. That statement sought

¹⁴⁹ *Environment Protection Act 1970 (Vic)* repealed s 13(1)(ga)(i).

¹⁵⁰ Department of Sustainability and Environment, *Effective regulation in the context of the national carbon price: Environment Protection Authority Victoria* (2012).

to clarify the EPA's role and to explain how its ongoing core regulatory functions apply to GHG emissions – including the Government's position at that time that 'EPA regulation will not be applied as the principal mechanism for GHG abatement directed to climate change mitigation; this instead being managed by the national carbon price'.¹⁵¹

As described above, the 2011 Review precipitated two significant changes in the role of the EPA in climate change mitigation:

1. *The EPA's power to recommend the making of regulations for the purposes of achieving an emissions reduction target was removed*

The IRC was informed that the repeal of this provision in 2012 gave rise to a perception of uncertainty regarding the EPA's ability to regulate GHG emissions for the purposes of emissions reduction. This is despite the fact that the *Environment Protection Act 1970* states clearly that the EPA has the power to regulate emissions. It is important that the Victorian Government makes it clear that the EPA does, in fact, have this power.

If the Government accepts the IRC's recommendation to introduce a long-term emissions reduction target into the Act, the IRC believes it is important that the EPA's power to recommend to the Governor-in-Council the making of statutory policies and regulations to regulate GHG emissions to contribute to the emissions reduction target be reinstated.¹⁵² Reinstating this provision would also emphasise that the EPA has a mandate to achieve emissions reductions.

2. *The 'Statement of Regulatory Intent'*

The Statement of Regulatory Intent issued in 2012 sought to re-define the EPA's role – and indeed the role of the Victorian Government more broadly – in GHG emissions reduction policy. The IRC believes it is important that the current Victorian Government revisit this statement on the basis that:

- ▲ The current national policy context has changed significantly since 2012 – in particular, the carbon pricing mechanism that was identified as the reason for reducing the Victorian Government's and EPA's role in emissions abatement no longer exists since its repeal in 2014; and
- ▲ The statement is inconsistent with the current Victorian Government's commitment to repositioning Victoria as a national climate change leader and to lowering GHG emissions across the state.¹⁵³

5.5.2 Future Role of the EPA

The IRC notes that the current Independent Inquiry into the EPA is considering the EPA's role in regulating GHG emissions.¹⁵⁴ However, given that the Act explicitly recognises the EPA as a decision maker (Schedule 1 to the Act); and that the Act prior to its amendment in 2012 included a role for EPA in the mitigation of emissions, the IRC believes it is important that it also considers the role of the EPA in relation to climate change mitigation.

151. Ibid 4.

152. *Environment Protection Act 1970* (Vic) repealed s 13(1)(ga)(i).

153. Victorian Government, *2015 Victorian Government Response to the State of the Environment Report 2013* (2015) 7.

154. Independent Inquiry into the Environment Protection Agency, *Terms of Reference* <<http://getinvolved.epa-inquiry.vic.gov.au/terms-of-reference>>.

EPA's powers to regulate GHG emissions

The IRC notes that it is clear that the *Environment Protection Act 1970* provides the EPA with the power to regulate GHG emissions. The IRC believes, however, that the provisions of the SEPP (AQM) limit the EPA's capacity to regulate to bring about significant reductions in emissions. This was evident in VCAT's decision in *Dual Gas Pty Ltd & Ors v EPA (Red Dot)* [2012].¹⁵⁵ The Tribunal considered an application concerning new technology for the generation of electricity in the Latrobe Valley. The EPA issued a works approval for a station at half the capacity (300 MW) of that originally proposed by Dual Gas. Four objectors sought a review of this decision, claiming that the emissions would be inconsistent with the SEPP (AQM). Dual Gas objected, seeking a restoration of the full capacity.

The Tribunal found that the proposed works satisfied the environmental requirements of the SEPP (AQM), noting that the project complied with the requirement for 'best practice' having regard to the definition of best practice in the SEPP (AQM) and comparable industry activity. Further, it noted that the project was not inconsistent with the aims, principles or intent of the SEPP (AQM). VCAT noted that 'best practice' does not require a comparison with all other types of electricity generation, and added that the task of considering whether the use of the works will lead to emissions that are inconsistent with the SEPP (AQM) 'is made harder here because the SEPP (AQM) contains some provisions that are qualitative rather than quantitative'.

The IRC believes the current provisions of the SEPP (AQM) are inadequate for achieving meaningful emissions reductions commensurate with recommendations made elsewhere in this report and consistent with the Government's commitment to being a national leader on climate change. The SEPP (AQM) should be amended – or new statutory policy introduced – to address these limitations. These amended or new instruments should enable EPA to use its powers to amend licences to achieve significant reductions in emissions.

EPA and the regulation of emissions from other sectors

The EPA has a critical role to play in regulating GHG emissions, but the EPA's regulatory powers are not the only option available to government to deliver long term emissions reduction targets. Additional regulatory and non-regulatory options are available and depend on the sectors the Government wishes to prioritise for emissions reduction – for example, stationary energy and transport. This is a policy decision that will be informed by factors including the long-term emissions reduction target. It also will be important to consider the comparative efficiency and effectiveness of regulatory and non-regulatory approaches.

The Government, through the department pledge approach (see section 5.4), should explore which sectors it wishes to prioritise for emissions reduction and determine the most efficient and effective options to deliver these reductions. This analysis must include both regulatory and non-regulatory mechanisms.

¹⁵⁵ *Dual Gas Pty Ltd & Ors v Environment Protection Authority* (includes Summary) (Red Dot) [2012] VCAT 308 (29 March 2012) at 16.

Power stations – which in Victoria are predominantly fuelled by brown coal – are the single largest source of the state’s GHG emissions (see Figure 2.2). They are subject to EPA works approval and licensing powers as Scheduled Premises. The IRC sees value in the Government examining the approach taken by the US EPA¹⁵⁶ and Environment Canada¹⁵⁷ in regulating emissions from both new and existing power stations with a view to considering the potential applications of these or other approaches in regulating emissions from Victorian power stations.

The City of Melbourne, Environmental Justice Australia, Campaign Submissions, Environment Victoria and a number of other submissions supported giving the EPA the power to regulate GHG emissions. The Business Council of Australia and Minerals Council of Australia noted concerns about the EPA’s role as a regulator of GHG emissions.

5.5.3 Additional options for emissions reduction measures

There is a suite of options to reduce GHG emissions at source and some of these are discussed below.

Standards for emission limits

The US EPA’s Clean Power Plan establishes state-by-state targets for carbon emissions reductions from existing fossil fuel-fired electric generating units. It is then up to individual states to develop and implement plans to ensure that the plants in their state achieve the targets.¹⁵⁸ Further, in 2015 the EPA set standards to limit carbon dioxide emissions from new, modified, and reconstructed power plants.¹⁵⁹

Environment Canada also introduced regulations that set a performance standard of 420 tonnes of carbon dioxide per gigawatt hour (CO₂/GWh) for new coal-fired electricity generation units and those that have reached the end of their useful life.¹⁶⁰

Sub-national emissions trading schemes

There has been a significant increase in recent years in the emergence of new national and sub-national carbon pricing instruments.¹⁶¹ As of 2015, 22 sub-national jurisdictions have implemented emissions trading schemes (ETS) or are scheduled to implement them:

- ▲ California and Québec have linked cap-and-trade programs, covering 85 per cent of their total GHG emissions.
- ▲ The Regional GHG Initiative is a cooperative effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island and Vermont to cap and reduce CO₂ emissions from the power sector.
- ▲ Oregon, Ontario and Washington State are also considering the implementation of an ETS.

China currently has seven pilot ETSs, which combined form the largest national carbon pricing initiative in the world in terms of volume.¹⁶² China has announced its intention to move to a national ETS in 2017.¹⁶³

Recently, South Australia’s Low Carbon Economy Experts Panel recommended that its Government investigate options for SA to implement a state-based ETS, linked to the Californian ETS.¹⁶⁴

156. US EPA, Clean Power Plan and ‘Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule’ <<http://www2.epa.gov/cleanpowerplan>>.

157. Environment Canada, *Coal-Fired Electricity Generation Regulations* (SOR/2012-167) <<http://www.ec.gc.ca/lcpe-cepa/eng/regulations/detailReg.cfm?intReg=209>>.

158. US EPA, Clean Power Plan and ‘Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule’, <http://www2.epa.gov/cleanpowerplan>.

159. Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units; Final Rule. 40 CFR Parts 60, 70, 71, et al.

160. Environment Canada, above n 157.

161. World Bank Group, above n 102.

162. Ibid. Beijing, Guangdong, Shanghai, Shenzhen, and Tianjin in 2013, and in Chongqing and Hubei in 2014.

163. The White House, U.S.-China Joint Presidential Statement on Climate Change (September 2015) <<https://www.whitehouse.gov/the-press-office/2015/09/25/us-china-joint-presidential-statement-climate-change>>.

164. South Australia’s Low Carbon Economy Experts Panel, above n 46, 30.

The IRC notes that the *Environment Protection Act 1970* contains provisions for the EPA to implement a tradeable emission scheme as an economic measure, which may relate to the emission of waste into the environment (the definition of waste includes GHG substances). This may warrant further investigation by the Victorian Government as part of its consideration of the EPA's role in regulating GHG emissions. For the avoidance of doubt, the EPA's role should be clarified by the Act.

The IRC believes that the specific approach adopted by the Government is a matter for the Government to determine, as is the legislative manner in which that will occur, either through this or another stand-alone Act. For example, if the Government was to adopt an ETS, the preference may well be to do this under or through the Act or through separate legislation.

In the meantime, the IRC recommends that the Act create the necessary enabling environment for such measures to be adopted in the future through regulation or other appropriate means.

Accelerated phase-out or upgrade of high GHG emitting facilities

A number of submissions to the Review called either for the phased closure of brown coal power stations in Victoria, or for a rapid transition towards renewable energy.¹⁶⁵ The IRC notes that it is not the role of the Act to prescribe policy decisions for the Government. However, the Act should provide a robust framework for the Government to deliver its policy objectives. Such decisions could also be considered in the development of department *Low Carbon Growth Plans*.

Recommendation 25

The Act should vest in the Minister a clear legal power to implement measures to reduce GHG emissions at source, particularly from high emitting sectors, to achieve the long-term emissions reduction target. This would include the power to impose emissions limits under EPA licences, establishing a state-based emissions trading scheme (which could link to other state or international schemes), adopting carbon taxes or other targeted financial incentives or charges and the accelerated phase-out or upgrade of high GHG emitting facilities.

Recommendation 26

1. The Government should reinstate the EPA's power to regulate GHG emissions from those facilities that the authority regulates for the purposes of achieving a long-term emissions reduction target for Victoria.
2. The Government should make it clear that the EPA's ability to regulate waste could include GHG emissions through a future state-based emissions trading scheme, which could be linked to other states in Australia or internationally.
3. The Government should revisit the 2012 statement on the *Effective regulation in the context of the national carbon price: Environment Protection Authority Victoria*.
4. The Government should consider:
 - a. Amending the State Environmental Protection Policies framework; and
 - b. Enabling the EPA to use its powers to issue and amend licences to achieve significant reductions in GHG emissions.

¹⁶⁵ See for example, Doctors for the Environment Australia, Wodonga Albury Towards Climate Health (WATCH), Wangaratta Sustainability Network and Origin Energy.

5.6 Forestry rights, carbon sequestration rights and soil carbon rights

5.6.1 Establishing a carbon rights regime

The objective of the carbon rights regime under the Act was to:

- ▲ Facilitate the participation of Victoria in emerging national carbon markets or government-funded programs to establish carbon sinks through carbon sequestration projects on private and Crown land; and
- ▲ Ensure alignment with the approaches taken in New South Wales, Western Australia and other states where carbon sequestration rights were registered on land title and could be separately traded like other interests in land.

The Act was not intended to create a market or accounting framework for carbon, but to ensure that if such a demand was created, Victoria had a legislative framework that created legally recognised and enforceable rights to support trade in this commodity. The intention was to:

- ▲ Facilitate the development of land sector abatement activities in the context of an emerging national carbon market;
- ▲ Encourage development of a local carbon offset industry, and
- ▲ Enable carbon revenues to help support broader environmental outcomes.

Part 4 of the Act establishes a rights-based framework for carbon sequestered by vegetation and in soil on private land. Key features of this framework include:

- ▲ Property rights of land owners, forest property owners and carbon investors are defined, allowing land, vegetation and carbon to be traded separately;
- ▲ Carbon rights are an interest in land and can be registered under the *Transfer of Land Act 1958*; and

- ▲ All parties can agree on management arrangements as part of the process of creating a Forestry and Carbon Management agreement. These arrangements run with the land once recorded on the title.

Part 5 of the Act establishes rules for managing and using Crown land for carbon sequestration purposes. The Government may participate in carbon markets in its own right or by arrangements with third parties, based on an instrument known as a Carbon Sequestration Agreement (CSA).

5.6.2 The role of state governments

In recent years, all Australian states have enacted legislation to define carbon sequestration rights.

Initially, the rationale for state legislation stemmed from opportunities presented by emerging voluntary carbon markets in the early 2000s. The *Carbon Credits (Carbon Farming Initiative) Act 2011 (Commonwealth)* facilitated development of national carbon markets and created an additional incentive for states to enact legislation that supported participation in this market.

In addition to facilitating participation in carbon markets, state governments have identified that carbon sequestration projects provide opportunities for jobs and economic growth, and drive the delivery of adaptation and biodiversity outcomes – for example by:

- ▲ Restoring degraded land and river corridors, and creating bio-links in strategic locations across the landscape;
- ▲ Conserving biodiversity; and
- ▲ Intercepting rainfall through improved vegetation management and thereby contributing to emergency preparedness for events such as floods.

A number of public submissions to the Review identified the multiple benefits delivered by these projects and supported greater access to public and private land for this purpose.

5.6.3 Effectiveness of Parts 4 and 5 of the Climate Change Act

The 2011 Review found that Part 4 of the Act met the criteria necessary to allow for participation in national carbon markets under the then *Carbon Credits (Carbon Farming Initiative) Act 2011 (Commonwealth)* (the CFI Act) and found that Part 5 similarly allows statutory authorities to participate.¹⁶⁶

The Review:

- ▲ Recommended the retention of the carbon sequestration elements of the Act (Parts 4 and 5); and
- ▲ Noted that there was some doubt as to whether the carbon sequestration rights granted in Part 5 in relation to private parties undertaking carbon sequestration projects on Crown land were sufficient to be recognised as carbon sequestration rights for the purposes of the CFI Act.

The Government supported the recommendation to clarify carbon sequestration rights granted under Part 5 of the Act to ensure that rights granted in Crown land were sufficient to be recognised as carbon sequestration rights under the CFI Act. Amendments were subsequently made to Part 5 of the Act under the *Climate Change and Environment Protection Amendment Bill 2012* to clarify that carbon sequestration rights granted in relation to Crown land are an estate or interest in land.

No amendments were proposed to the operation of Part 4 of the Act in the 2011 Review.

Parts 4 and 5 of the Act have effectively created a legislative framework for forestry rights, soil carbon rights and carbon sequestration rights on public and private land in Victoria. In this regard, the Act has successfully enabled the commercial exploitation of carbon sequestration under GHG reduction schemes.

To date, however, this legal framework has not been well utilised. Only a small number of forestry rights and carbon sequestration agreements on private land have been registered with the Land Titles Office in Victoria, and no CSAs have been made under Part 5 of the Act.

The IRC does not ascribe the poor utilisation of Parts 4 and 5 to a deficiency in the Act. Although creating legally recognised and enforceable carbon property rights is a critical first step for states that want to recognise the value of carbon stored by vegetation and in soil and enable trade of this commodity, it does not guarantee the successful operation of carbon markets. A carbon price is a critical driver for these markets to function effectively.

The absence of a carbon price, or any other regulatory mechanism that places a price on carbon, makes investment in long-term carbon sequestration projects undesirable and is the primary reason for poor utilisation of Parts 4 and 5 of the Act.

5.6.4 Shifting Commonwealth Government policy

The Commonwealth Government's Carbon Farming Initiative (CFI) was introduced in 2011 and designed to generate carbon offsets that could be traded in a domestic market via a national carbon pricing mechanism. In 2014, the new Commonwealth Government introduced its Direct Action Plan and the Emissions Reduction Fund (ERF), ending the carbon pricing mechanism.

¹⁶⁶ Dr Lynne Williams, above n 51, Chapter 8.

Additional design elements of the ERF have also contributed to uncertainty about the relationship between state-based carbon sequestration schemes and the Commonwealth scheme:

- ▲ The ERF reduced the requirement to maintain vegetation from 100 years under the CFI to 25 years. This is expected to reduce the number of Australian Carbon Credit Units (ACCU's) issued for carbon sequestration projects.
- ▲ Under the ERF, carbon obligations are a contractual matter, as opposed to an interest that runs with the land, which raises concerns about legal certainty and enforceability.

Under the Act, very few variations may be made to Forestry and Carbon Management Agreements. Specifically, under section 34(2) (c), parties to the agreement cannot vary the date on which the agreement ends. This inflexibility may act as a real or perceived barrier to utilising Part 4 agreements and does not reflect a relaxation of permanence requirements under the ERF to 25 years.

Recommendation 27

To reduce barriers to utilising Part 4 agreements and optimise alignment with the Commonwealth Government's Emissions Reduction Fund, amend Part 4 of the Act to improve the flexibility of Forestry and Carbon Management Agreements – for example, by enabling parties to vary the date on which the agreements end.

5.6.5 Additional barriers to utilisation of Part 4

In addition to the absence of a national carbon price, the following factors have contributed to poor utilisation under Part 4 of the Act:

- ▲ Inconsistent land use planning. Varying local planning schemes and inconsistent zoning issues were identified as barriers to enter the market.
- ▲ Varying capability within government – administering carbon sequestration arrangements is a knowledge-intensive technical skill. Due to the low demand for carbon sequestration projects, there has been little incentive for governments to invest in this capability.
- ▲ Changeable land surveying requirements. The IRC was advised that for a period after the Act was operational, there was lack of clarity about the standard of land survey to support registration of rights on title. This created a cost to business and a disincentive to participate in carbon sequestration projects. The IRC was advised that current surveying requirements have now struck an appropriate balance with certified surveyor input.
- ▲ Poor understanding of the implication of registering agreements. There appears to be a perception by landholders that carbon sequestration programs will negatively impact land value and property access. This has made it difficult for industry to get access to suitable properties and create a critical mass of projects to make it financially viable.

5.6.6 Additional barriers to utilisation of Part 5

Assigning carbon rights to a private third party is a relatively new form of public land management that raises broader policy issues including:

- ▲ How to value the public land carbon right within the context of other public land values – for example, water, biodiversity and traditional owner interests; and
- ▲ The relationship between the value of the carbon right assigned and the residual responsibilities of the state for protecting the carbon in the land over time.

A number of public submissions called for greater access to Crown land for the purposes of carbon sequestration projects. A number of local councils that made submissions called for increased flexibility for local governments to manage Crown land for the purposes of carbon sequestration.

Carbon sequestration projects can have benefits beyond mitigation, which should act as an incentive for the Government to prioritise delivery of these projects on Crown land. These co-benefits include:

- ▲ Restoring degraded land and river corridors, and creating bio-links in strategic locations across the landscape;
- ▲ Conserving biodiversity;
- ▲ Greater interception of rainfall, thereby contributing to emergency preparedness for events such as floods; and
- ▲ Opportunities for jobs and economic growth, particularly in regional areas.

Given these multiple benefits, it is surprising that no carbon sequestration agreements have been granted on Crown land since the Act came into operation.

The IRC notes that a number of private organisations have expressed interest in participating in CSAs on public land with a focus on obtaining the carbon rights associated with revegetation and reforestation activities.

Recommendation 28

The Government should provide greater access to public land for the purposes of carbon sequestration, particularly to those areas of public land that can be used to deliver complementary outcomes and co-benefits across a range of values.

There are opportunities for the linking of carbon sequestration agreements with existing State Government initiatives such as BushBroker to drive efficiencies across the administration of such schemes. Such an approach could help deliver co-benefits across a range of environmental outcomes including adaptation, biodiversity, native vegetation, water quality and carbon sequestration.

6

Transparency and accountability

This chapter discusses the need for the Act to embed a framework for MRV of progress towards the Government's climate change objectives and outcomes. It is recommended that the framework should seek to drive continuous improvement and that it be based on the principles of transparency and public accountability.

The chapter emphasises the importance of publicly accessible data and information. The recommendations proposed in this chapter would enable this through:

- ▲ Reinstating regular GHG emissions reporting and stand-alone climate science updates;
- ▲ Undertaking regular assessments of ADRRAPs, *Low Carbon Growth Plans* and emissions reductions during interim target periods and ensuring transparency through independent audits of these assessments;
- ▲ Reporting significant decisions made under Schedule 1 of the Act; and
- ▲ The use of devolved voluntary emissions reduction pledges as part of a binding process with transparent reporting obligations.

6.1 Climate change science and emissions data

6.1.1 Original requirement to produce climate change and emissions data (repealed section 17 report)

The Act originally required a biennial report (repealed section 17) to be produced on climate change and emissions data that contained:

- ▲ Victoria's GHG emissions;
- ▲ The science and data relevant to climate change in Victoria; and
- ▲ The extent to which Victoria's GHG emissions have been reduced in relation to the 2020 target.

The 2011 Review found it 'appropriate for the State Government to provide a biennial report on climate change science that identifies regionally-specific risks and impacts' and recommended that this reporting be included in the Adaptation Plan. It also found that if the emissions reduction target were to be removed, there would be no need for the State Government to separately report on emissions, and stated that State reporting would duplicate the information provided by the Commonwealth Government through the National GHG Inventory.¹⁶⁷

The amendments to the Act following the 2011 Review resulted in the repeal of the section 17 requirement to produce a biennial report on GHG emissions. The requirement to produce climate change science updates was transferred to section 14, to be included in the Adaptation Plan.

The Adaptation Plan was substantially developed by the time the amendments were made, so it did not incorporate this change. Due to the timing of the amendments to the Act, only one science and data update was released and this was as a separate document, according to the requirements of the now repealed section 17.

There has been no formal evaluation of the section 17 report and there is no clear evidence of how this report has been used. However, public submissions to this Review indicate that the information previously provided by the section 17 report and other information made available by the State Government is insufficient and does not meet the needs of the community.

6.1.2 Importance of providing information

Submissions to this Review indicated a high demand for the State Government to provide regular, high quality, unbiased information on Victoria's GHG emissions and climate – based on the latest science – that is effectively and quickly distributed to government, business and the community.

Suggestions included providing information about:

- ▲ Progress in reducing emissions and meeting targets;
- ▲ The risks and effects of climate change;
- ▲ How to create positive climate change action; and
- ▲ The benefits of acting on climate change.

Submissions from local government in particular expressed a desire for strengthened ministerial reporting requirements on Victoria's GHG emissions, climate change science, and the progress of the State Government and the Adaptation Plan on meeting the targets set by the Act. They also asked for the provision of more up-to-date and accessible information, and more regionally-specific research on climate change impacts.

The IRC believes the State Government has an important role to play in providing up-to-date information on GHG emissions, climate science and the risks of climate change to Victoria, its economy, the environment, and the public. The IRC also notes the importance of having a solid baseline of data to enable informed decision

¹⁶⁷. Ibid 25.

making and effective monitoring of progress towards achieving a range of outcomes. High quality and up-to-date information is critical to support effective application of the Charter and the decision-making framework.

Climate Science

The IRC believes the science updates and provision of climate science information by the Government would be most useful as stand-alone publications rather than as components of the Adaptation Plan. Stand-alone publications are more beneficial as they:

- ▲ Can be used to inform the development of the Strategy;
- ▲ Will be available to separately inform other decision making both within government and across non-government sectors;
- ▲ Will inform the public about the importance of taking action on climate change;
- ▲ Can be updated more easily and with more timeliness if significant new information becomes available; and
- ▲ Enable greater flexibility in developing tailored scientific updates for different purposes and audiences.

Emissions Data

Although data for Victoria is already available through the National Greenhouse and Energy Reporting Scheme, separate annual state-wide reports can be more useful when presented in a Victorian context and in a more accessible manner. Annual reporting over time can also indicate the effectiveness of the Strategy and government department *Low Carbon Growth Plans* on the state's emissions trajectory.

The IRC notes that annual GHG reporting may be difficult given the current lag in data produced through the National Greenhouse

and Energy Reporting Scheme. Therefore, it may be appropriate for the report to contain an assessment of the GHG emissions during the most recent year for which the relevant data is available.

Recommendation 29

1. The Act should retain the requirement to produce regular climate science updates, which should be stand-alone publications.
2. The climate science updates should be published at a frequency that best enables the development of the Strategy, ADRRAPs and *Low Carbon Growth Plans*.
3. The Act should require the Government to introduce compulsory reporting of GHG emissions from all sectors annually.

6.2 Progress monitoring and continuous improvement

The IPCC found that 'an iterative process of monitoring, research, evaluation, learning, and innovation can reduce disaster risk and promote adaptive management in the context of climate extremes'.¹⁶⁸

The current Act has no performance monitoring framework to measure the efficiency of actions and the effectiveness of strategies at achieving defined objectives and outcomes. The IRC recommends that MRV requirements should be embedded into the Act. This is important for learning and provides an increased incentive to comply with the other elements of the Act.

¹⁶⁸ IPCC, 2012: *Summary for Policymakers. In: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK, and New York, NY, USA, pp. 1-19.

The purpose of such a MRV framework would be to:

- ▲ Promote transparency and accountability for decision making and the expenditure of public funds in pursuit of policy objectives;
- ▲ Inform the community about the Government's climate change actions; and
- ▲ Drive efficiency and effectiveness via continuous improvement towards the delivery of outcomes.

The proposed structure of the Act and the recommendations made in this report are designed to promote sound performance management. The remainder of this section outlines the opportunities to embed best-practice MRV under the Act.

6.2.1 Independent monitoring and oversight

The Act does not require the Minister or a decision maker to seek or consider independent expert advice on climate change when developing policies, plans or programs or when making decisions. Nor is there any independent oversight of implementation of the Act such as through a dedicated climate change agency.

A number of public submissions from individuals, local councils and not-for-profit organisations, advocated for the Act to create an independent statutory authority to provide expert advice and ensure Victoria meets its emissions targets and adaptation goals. Submissions ranged from recommending the creation of a Climate Change Commission, to creating a Victorian Climate Council.

The IRC considered recommending the establishment of a new independent body to monitor, report on and verify the requirements specified in the Strategy and advise on the level of emissions reduction targets. However, the IRC believes that there are a number of existing agencies that could potentially undertake these functions. Such agencies include, for example, the Environment

Protection Authority and the Commissioner for Environmental Sustainability, both of which are currently under review. For this reason the IRC has not specified which body should perform these functions. The IRC notes that while a body should be identified, the Government is best placed to decide on the most appropriate body once all relevant reviews are complete which could include a new and separate dedicated agency. After an appropriate body has been identified, it is important that the Government empower that body to effectively deliver the oversight and advice requirements which are defined in the recommendations of this report.

6.2.2 The Charter

It is difficult to measure the effectiveness of strategies or actions in the absence of clearly defined objectives or outcomes. The proposed Charter enshrines climate change objectives in legislation and provides goals against which progress can be measured.

The proposed Charter must be taken into account when preparing the Strategy, all plans, policies, programs and operational decision making across government.

Recommendation 30

The Act must require the Government to specify how the Charter is taken into account when:

- a. Setting the long-term emissions reduction target, including interim targets;
- b. Developing the Strategy;
- c. Developing ADRRAPs;
- d. Developing *Low Carbon Growth Plans*; and
- e. Developing all plans, policies, programs and operational decision making across government.

6.2.3 Decision-making framework

The IRC believes there may be some Schedule 1 decisions where additional reporting obligations are warranted. These 'significant decisions' are ones that have the potential to affect the Government's achievement of the interim target for that period, or to significantly increase vulnerability to future climate change. It is reasonable to expect decision makers to be transparent in how they take climate change into account for such decisions. Reporting could be embedded into existing reporting processes and a threshold test could be developed to determine what fits the criteria of a 'significant decision'.

Recommendation 31

The Act should introduce additional reporting requirements for 'significant decisions' to which the decision-making framework applies in order to promote transparency and accountability.

6.2.4 Adaptation and disaster risk reduction

Understanding of adaptation and disaster risk reduction will continue to evolve as new information becomes available and as results of adaptation and disaster risk reduction actions become clearer. It is important that new information and what is learned over time are incorporated into future strategies and actions.

More frequent and systematic monitoring and reporting, followed by independent verification, would provide greater transparency and enable learning and improvement over time. The IRC recommends that the Act incorporate strong and transparent MRV requirements, and that lessons learned are fed into the development of each new Strategy and ADRRAP.

The IRC notes that this potentially increases the burden on administration and that, where possible and appropriate, the Government should seek to:

- ▲ Use existing processes, products and methodologies across different sectors; and
- ▲ Use existing reporting avenues.

Recommendation 32

1. The Government should develop a robust methodology and guidance to enable consistent and effective monitoring, reporting and verification (MRV) of progress towards achieving adaptation and disaster risk reduction objectives and outcomes.
2. The Act should contain a requirement to assess and report on whether the actions identified in the ADRRAPs:
 - a. Were delivered; and
 - b. Were effective at reducing the risks identified in the Strategy.
3. An independent audit and analysis of the ADRRAP assessment should be conducted and should be tabled in Parliament.

6.2.5 End of interim target period assessment

Every five years following the release of the final, validated data to show emissions in the last year of an interim target period, the Government should prepare a final assessment report (see Figure 5.1). It is at this stage that the Government will have the opportunity to explain (if necessary) why emissions may have exceeded the interim target for that period. This could include an explanation of any cross-border issues which have impacted delivery of the target. See 5.3.4 and 5.3.5 for further discussion.

The final assessment report at the end of each interim target period (e.g. 2046–50) should contain an assessment of whether the long-term target has been met.

The IRC recommends that following the completion of this report, the target period be audited. This serves as an additional independent mechanism for scrutinising the effectiveness of the Government's policies to reduce emissions.

Recommendation 33

The Act should require preparation of a final assessment report at the end of each interim target period. This report must:

- a. State the total volume of Victoria's emissions over the period;
- b. State whether the interim target has been met and, if not, explain why;
- c. Evaluate the effectiveness of the actions in the *Low Carbon Growth Plans* at delivering on the pledges of each department;
- d. Be completed no later than the second year following the end of the period to which it relates;
- e. Be followed by an independent audit and analysis of the target period; and
- f. Be tabled in Parliament.

6.3 Consultation and engagement

Climate change affects everyone, but its effects vary across different sectors of the community, and therefore the responses will also vary. For this reason, it is critical to empower and engage all sectors of the Victorian community to contribute to climate change action.

6.3.1 Adaptation and disaster risk reduction

Very little evidence is available to indicate how effective section 16 of the Act, relating to climate change adaptation planning, has been in influencing and informing local government, business and the community. Broader engagement and consultation, during both the development and implementation of the Adaptation Plan, would likely have assisted with driving and mainstreaming adaptation action.

Public submissions to this Review indicated the requirements for the current Adaptation Plan need strengthening. Suggestions in submissions on how to strengthen the Plan included providing policy certainty and a framework for long-term action with clear and measurable actions, regular and high-quality reporting, and regular tracking of progress that is fed back to stakeholders.

Several local government submissions noted that it would be helpful for the State Government to support regional planning for adaptation in order to help address the current gap between adaptation planning at the state and local government levels, and to build capacity for research and action at the regional level. Several also noted the importance of the State Government and local government working together on social dimensions of adaptation, as well as the need for a clear and unified approach to community engagement and communication.

Two elements of Recommendation 21 can contribute to enhanced engagement and empowerment:

- ▲ (2) c. The Minister may provide guidance on the development of the ADRRAPs; and
- ▲ (2) d. There must be consultation (with local government, community and business) during the development of the ADRRAPs

The IRC encourages the Government to invite state departments, as they are developing their ADRRAPs, to invite stakeholders to comment on the content of the ADRRAPs. For example, the minister responsible for local government should invite local governments to submit proposals and actions within the ADRRAP and/or create their own.

6.3.2 Emissions reduction

A number of submissions highlighted the need to engage the community in the process of transitioning to a low-emissions future, and expressed their support for the principle of engagement that currently exists in the Act.

- ▲ Six respondents said that the community should be involved in conversations and decision making about climate change adaptation and mitigation processes.
- ▲ Three respondents said that local groups should be engaged.
- ▲ Two respondents said that local government organisations should be approached about the best ways to engage with their communities and plan programs.
- ▲ One respondent noted that the Act should raise the profile of the emissions reduction and climate change discussion in Victoria and engage the business community regarding climate change and its implications to enable a suite of cost-effective emissions reduction policy options.

Under the interim targets and departmental pledges approach, the IRC envisages departments consulting with business, community and local government to develop their *Low Carbon Growth Plans*. It could also be an opportunity for the Government to invite business, the community and local governments to make their own pledges.

7

Other policy ideas raised during consultation

The IRC was not requested in its terms of reference to comment on the effectiveness of the Victorian Government's policy agenda. However, the process of public consultation, whereby 103 submissions (plus 1556 campaign letters) were made on the effectiveness of the Act, unearthed a wealth of opinion on broader government action in this policy area. The IRC suggests that the Government considers these ideas as it designs and delivers its climate change policies and programs.

The following are extracts from submissions rather than recommendations from the IRC. Appendix 2 provides a summary of the submissions received.

7.1 Improving the impact of existing legislation and regulation

- ▲ Base building regulations on modern science, in particular those relating to building standards and urban sprawl.
- ▲ Consider how multiple forms of carbon management agreements affecting rights on Victorian private land, and covering different ecosystem services, might inhibit environmentally sustainable land management.
- ▲ Improve access to carbon farming by clarifying the terms and conditions around carbon sequestration areas, investigating how many agreements have been signed, and removing barriers to encourage a greater uptake.

7.2 Energy

- ▲ Legislate on a minimum level of renewable energy supply in Victoria, to provide investment certainty.
- ▲ Transfer subsidies from high polluters to encourage energy efficient technology and business.
- ▲ The Victorian Energy Efficiency Target scheme requires continued support and expansion.
- ▲ Benchmark energy performance across industry segments.
- ▲ Provide policy and assistance in support of community energy enterprises, noting that community ownership of renewable energy facilities was integral to the broad acceptance and deployment of clean energy technologies in Europe.
- ▲ Legislate to decrease local pollution, including the requirement for any new generation capacity to be offset by the decommissioning of a more highly polluting plant.
- ▲ Ban the development of additional and new onshore and offshore fossil fuel resources in Victoria, including the mining of brown coal for export and the exploration and development of onshore and offshore coal seam gas.

7.3 Information and planning

- ▲ Regulate for sustainable design assessment in the building planning process, to enable local councils to set specific assessment requirements.
- ▲ Establish an independent advisory body (a state 'climate council') for government on climate change, and possibly an additional agency for economic transition planning.
- ▲ Support the capacity of local government to manage the impact of climate change in growth corridors, coastal areas and where assets are used regionally (e.g. tourism areas).

- ▲ Provide a coordinated approach to infrastructure and asset management planning. This would ensure that planning and design processes are informed by the latest predictions on the climate conditions expected throughout an asset's life. It would also assist councils to manage local assets that are used regionally (such as coastal areas frequented by holiday makers).
- ▲ Collect and communicate localised data on observed (climate-related) changes, as well as predicted changes.

7.4 Funding Victoria's transformation

- ▲ The Sustainability Fund should be identified as a primary funding source. Over the past five years, there has been little state investment in climate change programs despite there being more than \$300 million in the Sustainability Fund. One of the Fund's legislative purposes is to foster 'community action or innovation in relation to the reduction of GHG substance emissions or adaptation or adjustment to climate change in Victoria'.
- ▲ Reconsider the impact of a local government rates cap on social justice imperatives, particularly as they relate to climate resilience.
- ▲ Establish a Victorian Clean Energy Finance Corporation, to complement (or take over, if required, in Victoria) the role of the national CEFC, and provide financial assistance for:
 - ▲ Private sector and local government renewable energy initiatives; and
 - ▲ Private sector and local government energy efficiency initiatives.
- ▲ Establish a Victorian Climate Security Fund to provide loans and funding for adaptation projects, emergency remediation measures and to fund an independent advisory body on climate change.

Appendix 1 – Legislative amendments as a result of the 2011 Review

The 2011 Review of the Act was triggered by the introduction of the Clean Energy Future Package into the Federal Parliament. The recommendations from the Review and the Government's response resulted in the *Climate Change and Environment Protection Amendment Act 2012* (Vic).

The Review recommended, and the Government supported, retention of a number of elements of the original Act:

- ▲ The Preamble to the *Climate Change Act 2010* (Recommendation 15)
- ▲ The decision-making requirements under the *Climate Change Act 2010* (Recommendation 3)
- ▲ The carbon sequestration agreements provisions on private land (Recommendation 7)
- ▲ The definition of waste in the *Environment Protection Act 1970* and Environment Protection Authority Victoria's powers to regulate GHG emissions (Recommendation 9)

The *Climate Change and Environment Protection Amendment Act 2012* (Vic) implemented the following changes recommended by the Review.

Repealed

- ▲ The state-based emissions reduction target and references to this target in the *Environment Protection Act 1970* (Recommendations 1 and 10)
- ▲ The state-based emissions data reports (Recommendation 6)
- ▲ The policy objectives of the *Climate Change Act 2010* (Recommendation 16)
- ▲ The Climate Covenants in the *Environment Protection Act 1970* (Recommendation 12)

Amended

- ▲ The application of guiding principles to the ministerial guidelines for decision making (Recommendation 2)
- ▲ The application of the guiding principles to the Adaptation Plan and the definition of its key elements, including the science and climate data report (Recommendations 4 and 5)
- ▲ The carbon rights under carbon sequestration agreements on Crown land were clarified as being an 'interest in land' (Recommendation 8)
- ▲ The renaming of the Climate Communities Fund under the *Environment Protection Act 1970*, as the Sustainability Fund.

Appendix 2 – Submissions received

To inform the Review, the IRC sought input from a broad range of stakeholders through a public submissions process that ran from 6 July to 10 August 2015. A total of 1659 public submissions were received, of which two were campaign letters, accounting for 1556 of this total. These two campaign letters, along with 103 other separate submissions, provide a total of 105 different responses received.

Key themes across the submissions include:

Effectiveness of the Act

- ▲ Respondents felt that the Act has not been effective in driving change across government, community and business. The main reasons given were that it:
 - ▲ Is too limited in scope;
 - ▲ Does not provide a high-level, measurable framework for action;
 - ▲ Does not mandate consideration of climate change in decision making across all areas of government and business; and
 - ▲ Does not integrate action across all levels and areas of government.

Improving the Act

- ▲ The Act should provide a clear pathway for the transition to a low carbon economy. To achieve this, the requirements for the adaptation plan need strengthening.
- ▲ It should provide policy certainty and a framework for long-term action with clear and measurable actions, regular and high quality reporting, and regular tracking of progress that is fed back to stakeholders.
- ▲ It should facilitate an integrated, whole-of-government response to climate change across all levels and areas of government.
- ▲ It should require the Government to provide regular, high quality, unbiased, information on climate change – based on the latest science – that is effectively and quickly distributed to government, business and the community.
- ▲ It needs to support the transition of businesses and workers from old industries to the new economy.

Emissions reduction target

- ▲ Respondents from the local government and non-government sectors, as well as some individuals, said Victoria should have its own emissions reduction targets (although there were a smaller number of respondents who used words such as measures, incentives and goals rather than targets). However, the respondents from the business sector said that the Commonwealth Government should have the responsibility of setting targets in a national and international context.

Energy use

- ▲ Respondents mentioned a variety of measures that are required to support the increased generation and use of renewable energy, including targets, incentives, fostering investment, research and development of new technologies, and promotion of products.
- ▲ There is an opportunity to position Victoria as a place that fosters new renewable energy and energy efficient technologies and products. The Act should provide support and incentives, and position Victoria as a place that fosters low carbon economy businesses.
- ▲ Respondents were divided on the issue of the use of brown coal and other fossil fuels – many asked for a speedy transition to the end of using these sources, while others (mostly those from the business sector) acknowledge that the industry is important to Victoria, that we are currently dependent on this energy and that this transition must be managed carefully.

Engagement with community and industry

- ▲ Local governments have already taken an active role on climate change, are keen to facilitate local action and are ideally placed to do this as they have strong local knowledge and links with their communities. However, they need long-term funding and resources to be able to do this effectively.
- ▲ The principles for community engagement in the current Act are supported, but require strengthening. Stakeholders should be consulted with respect to the action taken in their communities and industries.

Note: copies of these submissions can be found at delwp.vic.gov.au.

List of submissions

AGL
 Arup
 Australian Industry Greenhouse Network
 Ballarat Renewable Energy and Zero Emissions Inc. (BREAZE)
 Barwon Heads Sustainability Group
 Bass Coast Shire Council
 Beyond Zero Emissions
 BOSMA
 Brotherhood of St Laurence
 Business Council of Australia
 Carbon Market Institute
 Central Highlands Water
 City of Darebin
 City of Greater Geelong – Council Officer submission
 City of Melbourne
 ClimActs
 CLIMARTE
 Construction, Forestry, Mining and Energy Union
 Corangamite Shire
 Doctors for the Environment Australia
 East Gippsland Region Water Corporation
 Eastern Alliance for Greenhouse Action
 Embark
 Energetics
 Energy Supply Association of Australia
 Energy Users Association of Australia
 Environment Institute of Australia and New Zealand
 Environment Victoria
 Environment Victoria campaign submission
 Environmental Justice Australia (parts A and B)
 Federation of Victorian Traditional Owner Corporations, Native Title Services Victoria, Dru Marsh and the Aboriginal Carbon Fund

Friends of the Earth campaign submission	Individual – 308664
Frankston City Council	Individual – 308761
GDF SUEZ Australian Energy	Individual – 308765
Geelong Sustainability Group	Individual – 308875
Goulburn Broken Greenhouse Alliance (GBGA)	Lighter Footprints
Grattan Institute	LIVE
Hobsons Bay City Council	Melbourne Water
Housing Industry Association	Minerals Council of Australia Victorian Division
Hydro Tasmania	Mornington Peninsula Shire
Indigo Shire Council	Mt Alexander Sustainability Group
Individual – 1	Municipal Association of Victoria
Individual – 2	Northern Alliance for Greenhouse Action
Individual – 3	Origin
Individual – 306928	Port Phillip EcoCentre
Individual – 306949	Property Council Australia
Individual – 306957	RSTI, Centre for Climate Safety and Darebin Climate Action Now
Individual – 307011	Rural City of Wangaratta
Individual – 307314	Save the Planet
Individual – 307380	South East Councils Climate Change Alliance
Individual – 307490	South East Water
Individual – 307491	Trust for Nature
Individual – 307717	University of Melbourne – CREEL, Melbourne Law School (1)
Individual – 307718	University of Melbourne – CREEL, Melbourne Law School (2)
Individual – 307719	University of Melbourne – Melbourne Sustainable Society Institute
Individual – 307726	Victorian Association of Forest Industries
Individual – 307727	Victorian National Parks Association
Individual – 307746	Victorian Farmers Federation
Individual – 307756	Victorian Water Industry Association
Individual – 307760	Victoria’s Catchment Management Authorities
Individual – 307770	Voiceless
Individual – 308020	Wellington Shire Council
Individual – 308177	Western Alliance for Greenhouse Action
Individual – 308206	Wodonga Albury Towards Climate Health and Wangaratta Sustainability Network
Individual – 308229	Wodonga City Council
Individual – 308417	Wyndham City Council
Individual – 308418	
Individual – 308421	
Individual – 308561	
Individual – 308614	
Individual – 308618	
Individual – 308623	

Appendix 3 – UNFCCC 21st Conference of the Parties – Paris December 2015

In December 2015, an historic international agreement was reached at the 21st Conference of Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) in Paris. COP21 brought together the governments of more than 190 nations to discuss a new global agreement on climate change, aimed at reducing global GHG emissions and avoiding the threat of dangerous climate change. Australia has endorsed the agreement which will come into effect in 2020.

Key outcomes of COP21 include:

- ▲ Commitment to holding the increase in global average temperature to well below 2 degrees and to pursue efforts to limit the temperature increase to 1.5 degrees;
- ▲ Commitment to ratchet up commitments every five years – by 2020 new pledges must be a progression on the previous one and reflect each nation's highest possible ambition;
- ▲ Strong request to formulate and communicate mid-century, long-term low GHG emission development strategies; and
- ▲ Recognition of the role of non-state actors, including sub-national governments.

Sub-national climate change leadership

COP21 recognised and celebrated the leadership shown by sub-national governments around the world. This was evidenced through key commitments made by sub-national governments in the lead up to and during COP21, including the success of the Global Climate Leadership Memorandum of Understanding (Under2MOU). The Under2MOU has now been signed by 123 jurisdictions representing more than 720 million people and \$19.9 trillion in combined GDP (equivalent to more than a quarter of the global economy).¹⁶⁹ Central to this agreement is that all signatories agree to reduce their GHG emissions 80 to 95%, or limit to 2 metric tons CO₂-equivalent per capita, by 2050.

Under the Paris City Hall Declaration, 1000 mayors and local leaders from cities including Paris, Las Vegas, Vancouver and Stockholm announced they would go 100% renewable.¹⁷⁰

Given the success of initiatives such as the Under2MOU and Paris City Hall Declaration, it is clear that ambitious emissions reduction and renewable energy targets are now mainstream and jurisdictions wishing to demonstrate leadership will have to show even greater ambition.

¹⁶⁹ Office of Governor, Edmund G. Brown Jr. *Governor Brown issues statement on global climate pact*, <<https://www.gov.ca.gov/news.php?id=19237>> (accessed 14 December 2015).

¹⁷⁰ Climate Summit for Local Leaders, *Paris City Hall Declaration, A decisive contribution to COP21*, <http://www.uclg.org/sites/default/files/climate_summit_final_declaration.pdf> (accessed 15 December 2015).

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