



# Independent review of the Climate Change (State Action) Act 2008

Tasmanian Climate Change Office

Discussion Paper

20 June 2016



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## Executive Summary

This discussion paper has been prepared to inform the second independent review of the *Climate Change (State Action) Act 2008* ('the Act'). The purpose of the Act is to help Tasmania address the challenges of climate change and contribute to the broader national and international response to those challenges.

The Act has legislated the State's greenhouse gas emissions target, which is for a 60% reduction on 1990 levels by 2050. The latest (2014) greenhouse gas accounts indicate that Tasmania's emissions have been reduced by more than 90% on 1990 levels: this reflects reduced harvesting activity in the state's native forests and the state's continuing reliance on renewable energy sources. Annual per capita emissions are approximately 3 t CO<sub>2</sub>e/annum and are low relative to other Australian jurisdictions.

There have been several significant national and international developments in climate change policy since the first review of the Act in 2012. Internationally, the landmark Paris Agreement was reached at the 21<sup>st</sup> Conference of Parties (COP21) to the UN Framework Convention on Climate Change (UNFCCC). There is now broad in-principle agreement to limit global warming to less than 2°C above pre-industrial levels and to pursue efforts to limit temperature increases to 1.5°C. COP21 also provided a focus on sub-national governments and their important role in driving climate change mitigation and adaptation.

Within Australia, the Commonwealth Government has significantly modified climate change policy, with new emissions reduction, energy efficiency and renewable energy targets. It abolished the former government's carbon tax and introduced its Direct Action program, with payments for abatement under the Emissions Reduction Fund.

These developments and other influences on the context for climate change policy are briefly described in this paper to initiate discussion on the Act and how it might be strengthened to achieve Tasmanian Government objectives for climate change adaptation and mitigation and complement national and international action on climate change. With Tasmania's emissions reduced to levels below the state's 2050 target, this discussion paper also seeks perspectives on whether and how this target might be reset to both consolidate the emissions reductions achieved and extend them to other key economic sectors.

### Your feedback

Questions are provided in most sections of this discussion paper to prompt reflection and comment. The independent reviewers are keen to read your thoughts in response to any or all of these questions (reproduced in Appendix C) or on other issues which are relevant to the review's terms of reference (see Appendix B). They will also take account of submissions on the recent *Draft Climate Change Action Plan*.

Submissions made in response to this discussion paper will be made publically available on the Tasmanian Climate Change Office (TCCO) website. If you would like your submission to be treated in confidence, please note this in your submission.

Feedback is requested to be provided in writing by 22 July 2016, either by mail or email to:

[climatechange@dpac.tas.gov.au](mailto:climatechange@dpac.tas.gov.au)

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## 1. Background

### Climate change legislation in Australia

Tasmania is one of four Australian jurisdictions (with South Australia, Victoria and ACT) with specific legislation to promote action: on the abatement of greenhouse gas emissions (mitigation); and to reduce the impacts of actual or projected climate change (adaptation). While there are differences in the scope and emphasis of legislation in each jurisdiction, some or all share these key features:

- *Economy-wide greenhouse gas reduction targets:* several jurisdictions set additional targets, with South Australian legislation specifying a renewable energy generation target and ACT legislation setting interim and per person targets
- *Common objectives:* legislative or policy objectives have consistent themes of: target-setting; assisting communities and business to take action and capture opportunities; reporting on progress; and alignment with national and international developments. The objects of South Australian climate change legislation are particularly similar to Tasmania's (see Appendix A) in respect of energy conservation, R&D and early consultation with community and business. Victorian climate change legislation places particular emphasis on managing risk, building resilience and adaptation.
- *Inter and intra-generational equity:* South Australian and Victorian legislation is underpinned by concept of equity within and between generations, with decisions to be based on the precautionary principle and best available science.
- *Governance:* South Australian, Victorian and ACT legislation, to varying extents, specify the functions of the Minister and how they are required to discharge their responsibilities under their Acts. Legislation in South Australia and ACT also establishes an independent body to advise the Minister on climate change issues.
- *Sector agreements:* for emissions reductions are provided for under ACT and South Australian climate change legislation,
- *Parliamentary reporting:* legislation in each jurisdiction requires that progress on climate change periodically report to parliament. This reporting includes reports on greenhouse gas emissions and operation of their respective Acts

### Objects of the *Climate Change (State Action) Act 2008*

The Tasmanian *Climate Change (State Action) Act 2008* (the Act) has 10 objects (Appendix A), which emphasise four main themes:

- *Targets and reporting:* the Act sets a whole-of-State 2050 target for greenhouse gas emissions reductions and allows for interim targets and targets for specific sectors of the State's economy. The Act also provides for progress towards the State's emissions reductions targets being reported to parliament.
- *Actions to reduce greenhouse gas emissions:* the objects specifically refer to the promotion of energy efficiency and conservation and the development of low emissions and carbon sequestration technologies. The Act also seeks to support "early" action by Tasmanian businesses and communities in taking advantage of the opportunities these technologies provide.
- *Adaptation to projected climate change:* the Act recognises that projected changes in climate may create risks and opportunities for Tasmania and supports adaption to the risks and encourages action (including research) to take advantage of any opportunities.
- *Complementarity with national and international climate change initiatives:* the Act recognises the requirement for national and international action to reduce greenhouse gas emissions and the value in Tasmania actively participating in those endeavours.

The State's 2050 target under this Act is to reduce, by 31 December 2050, greenhouse gas emissions in Tasmania to at least 60% below 1990 levels.  
Section 5 *Climate Change (State Action) Act 2008*

Tasmania's emissions fell below the target level in 2012 and in 2014 were almost 92% below 1990 levels.

## Independent review of the *Climate Change (State Action) Act 2008*

Section 18 requires that an independent review of the operation of the Act is conducted every four years. The review must address the extent to which the Acts' objects are being achieved and any requirement for additional legislative measures to achieve the targets which have been set. The review may also consider other matters of interest to the Minister.

The first independent review of the Act was undertaken in 2012. It found that there was a high likelihood of the 2050 greenhouse gas emissions target being achieved. With the (Commonwealth) *Clean Energy Act 2011* and Renewable Energy Target (RET) anticipated to drive actions to reduce greenhouse gas emissions, the review considered that there was no need for interim or sectoral targets. Better integration of climate change considerations across government decision-making, particularly in planning, was identified as an opportunity to spread ownership and minimise the risk of locking in undesirable levels of greenhouse gas emissions.

The review also found that the Act's objects were sufficiently broad to allow for flexibility in Government responses to climate change. Submissions received through the review process were divided on the question of whether the objects were appropriate and should be retained or be redrafted and strengthened to improve clarity and support action on adaptation.

In their response to the review, the (then) government noted that the need for interim or sectoral targets would be reviewed as part of the development of a climate change strategy for the State. It also noted that uncertainty in national climate change policy could create a need for reform and would be explicitly considered in subsequent reviews.

Following the election of the current government, sections of the Act dealing with the Tasmanian Climate Action Council were repealed.

This second independent review of the Act is timely, given: the transformation of Australia's climate change policy; the strengthening of the scientific evidence for climate change; and the recent Paris Agreement to limit greenhouse gas emissions to contain global warming below 2°C. The State has also reduced its emissions to well below the Act's 2050 target and the reviewers have been asked to advise on any new target for the State. Details of the terms of reference for this review are given in Appendix B.

This discussion paper is the first main output of the 2016 independent review of the Act. It canvasses issues related to the reviews' terms of reference and seeks comment from business, industry, government and non-government organisations, the scientific and wider community. Non-confidential submissions in response to the recent *Draft Climate Change Action Plan* will also be considered during the review of the Act. This discussion paper includes a summary of some of the key points from those submissions which are relevant to the review's terms of reference.

## 2. Climate change opportunities and challenges

### Scientific evidence of the need to act on climate change

Scientific evidence of the need to act on climate change and reduce greenhouse gas emissions associated with human activities has been building for decades. In their *Fifth Assessment Report* (AR5), the Intergovernmental Panel on Climate Change (IPCC) asserted that there is "unequivocal" evidence of increased concentrations of greenhouse gases in the atmosphere and consequent warming of the climate system. Most observed changes in the global climate system since the mid-20th century is attributable to human influences.

The IPCC found that continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system. Global warming of more than 2°C above 1850-1900 levels is considered to indicate "dangerous climate change". The IPCC concluded that to keep temperatures below the threshold for

dangerous climate change, global emissions must fall by 40-70% of their 2010 levels by 2050 and that (net) emissions must fall to near zero by 2100<sup>1</sup>.

## A global agreement on avoiding dangerous climate change

Global action on climate change is pursued under the United Nations Framework Convention on Climate Change (UNFCCC), an agreement among 197 countries (“Parties” to the Convention) to prevent “dangerous” human interference with the climate system. Most countries have created laws which specifically address climate change mitigation and three-quarters of the world’s annual greenhouse gas emissions are now covered by national targets. While the level of “stretch” in targets varies between nations, many countries are actively pursuing policies to achieve their emissions reduction target.

The latest UNFCCC Conference of the Parties (COP21 in Paris, December 2015) achieved an in-principle agreement to: reach the peak in global greenhouse gas emissions as soon as possible; pursue rapid reductions in emissions to limit global warming to less than 2°C above pre-industrial levels; and pursue efforts to limit temperature increases to 1.5°C.

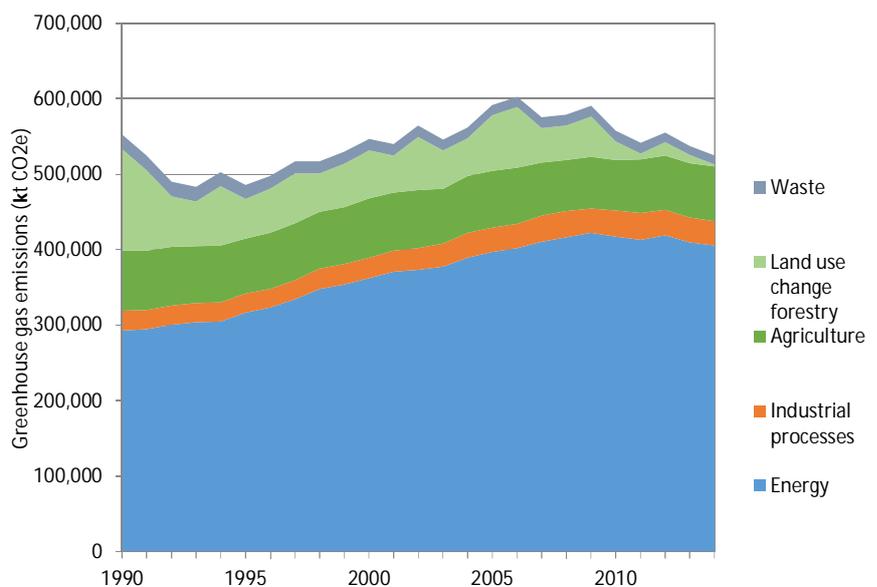
In the lead up to the Paris Conference, 187 countries representing 98% of the world’s population and 95% of global emissions put forward their “Intended Nationally Determined Contributions” (INDCs) to efforts to mitigate climate change. The Paris Agreement calls for zero net emissions to be reached during the second half of the 21<sup>st</sup> Century

## A growing global role for sub-national governments

Action to address climate change is being pursued by sub-national governments - provinces, states, territories, cities and regions – as well as national governments. Their important role in developing and implementing policies which influence greenhouse gas emissions and support action on adaptation was recognised at COP21.

State and Territory governments have control over many of the areas where mitigation action is possible, such as energy generation, rail and road transport, energy efficiency in the built environment, and water and waste water treatment. Collectively, State and local governments are responsible for land use, infrastructure and environmental planning; water and natural resource management and the provision of health and emergency management services. As a result they play an essential role in building the resilience of communities, the economy and natural environments to climate change.

The Subnational Global Climate Leadership Memorandum of Understanding (“Under 2 MOU”) was developed ahead of COP21 to build momentum for greater national ambitions on reducing



Source: Australian Greenhouse Gas Information System, Department of the Environment  
Figure 2.1 Australia’s national greenhouse gas inventory, 1990-2014.

<sup>1</sup> IPCC (2014) Climate Change 2014: Synthesis Report Summary for Policymakers. Page 20 [http://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5\\_SYR\\_FINAL\\_SPM.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf)

greenhouse gas emissions. Under 2 MOU brings together sub-national governments who commit to reducing emissions to 80-95% below 1990 levels by 2050 or to achieving per capita emissions of less than two tonnes by 2050. Parties also commit to working collaboratively on a variety of issues of applicable to climate change mitigation and adaptation South Australia is the only Australian signatory to this agreement.

## Australia's greenhouse gas emissions profile

Industrialised parties to the UNFCCC, such as Australia, must lodge annual inventories of greenhouse gas emissions. Australia's national emissions (Figure 2.1) have been relatively stable since 1990. Large increases in emissions from the energy and industrial processes sectors between 1990 and about 2012 have been largely offset by reductions in emissions from the land use-land use change forestry (LULUCF) sector. In 2014, Australia's national emissions were 5% below their 1990 levels.

## Australia's national climate change policy

At the time of the Act's first review, the Australian Government's 2020 emissions target was for a 5% reduction on 2000 levels by 2020 (in the absence of a binding agreement on climate change). The *Clean Energy Act* package, was expected to catalyse emissions reductions and investment in clean energy projects.

The change in government at Commonwealth level in 2013 resulted in a significant shift in climate change policy. The carbon tax was repealed in 2014, uncertainty about the RET discouraged renewable energy investment and that target was subsequently revised downwards. The Emissions Reduction Fund (ERF) was introduced (in place of the Carbon Farming Initiative) as the centrepiece of the Government's Direct Action plan to reduce greenhouse gas emissions.

In the lead up to COP21, the Commonwealth Government subsequently set 2030 renewable energy, emissions reduction and energy productivity targets, including:

- *Greenhouse gas emissions*: to be reduced by 26-28% of 2005 levels;
- *Energy productivity*: to increase by 40% through better informed decision-making tools, new efficiency measures and technologies and energy market reforms;
- *Renewable energy*: resetting the Renewable Energy Target to 33,000 GWh in 2020 from large schemes<sup>2</sup>.

Achievement of the targets is to be supported by a \$1 billion investment in a Clean Energy Innovation Fund from July 2016. The Fund is to support clean energy, energy efficiency and low emission projects seeking capital investment to progress to commercial deployment<sup>3</sup>.

Australia's emissions were 11% below 2005 levels in 2014 and were on track to achieved the 2030 target. The Australian Government announced it would review, in consultation with business and the community, its emissions reduction policies in 2017-18.

## Climate change in Australia

The status of climate change in Australia and the projected directions in Australia over the remainder of the 21<sup>st</sup> century were updated by CSIRO and Bureau of Meteorology (BoM) in 2015<sup>4</sup>.

Average air temperatures in Australia have increased by 0.9°C since 1910, reflecting, in part, increasing atmospheric concentrations of greenhouse gases. There has also be an increase in the frequency of anomalously warm months and new records for extreme high temperatures. There is very high confidence that this pattern will continue across all Australian regions for at least the remainder of this century. By 2030,

<sup>2</sup> Small scale solar and other renewable energy systems are no longer considered under the RET.

<sup>3</sup> Australian Government Department of the Environment (2016) Fact sheet – Clean Energy Innovation Fund <http://www.environment.gov.au/minister/hunt/2016/pubs/mr20160323-factsheet.pdf>

<sup>4</sup> CSIRO and Bureau of Meteorology 2015. Climate Change in Australia Information for Australia's Natural Resource Management Regions: Technical Report, CSIRO and Bureau of Meteorology, Australia.

average temperatures are projected to increase by 0.6-1.3°C<sup>5</sup>. Beyond that time, the effectiveness of global action to mitigate greenhouse gas emissions will determine the trajectory in temperatures. By 2090, average temperatures for Australia could increase by 0.6-1.7°C if greenhouse gas emissions peak and begin to decline this century. Business-as-usual growth in emissions could result in average temperatures increasing by 2.8-5.1°C. Changes in temperature are projected to be less extreme in coastal areas of Australia, particularly in southern coastal areas such as Tasmania.

Warming of the climate is projected to lead to increases in the frequency, duration and intensity of heatwaves, as well as fewer frosts. It is also projected to affect global circulation patterns, with consequences for rainfall patterns (particularly in southern Australia) and wind speeds. Cool season rainfall is projected to decline in much of southern Australia (although not necessarily in Tasmania) and the time in drought and the frequency of severe droughts are projected to increase. For much of the rest of Australia, natural variability in rainfall will dominate any trend with climate change. Rainfall during extreme events has increased in intensity throughout much of Australia, a pattern which is projected to continue for all but south-western Australia.

The soils in areas where rainfall is projected to decline will dry and run-off and stream flows will fall as a result. Fire weather conditions in southern and eastern Australia are projected to worsen due to the warmer and drier climate. The incidence of days with potential for uncontrollable fire behaviour is projected to increase.

Sea levels around the Australian coast rose by an average of about 1.4 mm/y between 1966 and 2009. Thermal expansion of the oceans and the melting of continental ice sheets are projected to contribute to sea levels rising by between 26 and 82 cm by 2090. The oceans around Australia are projected to warm by up to 2-4°C by 2090 and become more acidic as they continue to absorb CO<sub>2</sub>.

### 3. Climate change and Tasmania

#### Tasmania's unique emissions profile

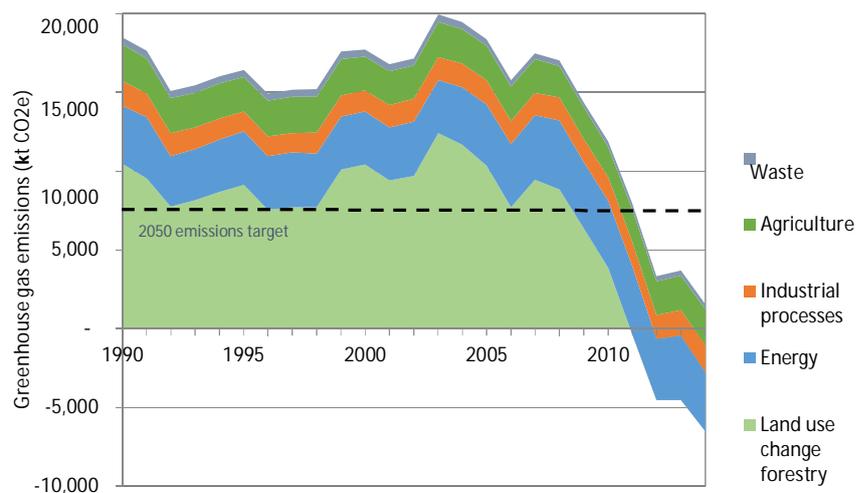
In 2014, Tasmania accounted for just 0.3% of Australia's overall greenhouse gas emissions (down from 3% in 1990). It has the lowest per capita emissions of any Australian state or territory (~3 t CO<sub>2</sub>e per capita).

The LULUCF sector was Tasmania's major emissions sector in 1990, accounting for over 50% of the state's emissions at that time (Figure 3.1). Expansion in the forest plantation estate and (particularly) reductions in the area of native forest harvested

since the mid 2000s have resulted in the Tasmania's forests becoming a net carbon sink. Forests effectively offset the state's emissions by 6,500 kt

CO<sub>2</sub>e in 2014.

As a result of changes in the LULUCF sector, Tasmania's emissions have declined from over 18,500 kt CO<sub>2</sub>e in 1990 to under 1,600 kt CO<sub>2</sub>e in 2014 and have fallen well below the 2050 emissions target (7,400 kt CO<sub>2</sub>e). This was not anticipated in the previous review of the Act or earlier analyses of greenhouse gas emissions and largely reflects changes in greenhouse gas accounting rules (for the LULUCF



Source: Australian Greenhouse Gas Information System, Department of the Environment  
Figure 3.1 Tasmania's greenhouse gas emissions, by sector

<sup>5</sup> Climate change projections resulting from modelling undertaken for the IPCC's AR5 are typically expressed as changes from the 1986-2005 reference period.

sector) under the second Kyoto agreement.

Energy generation (including for transport) and agriculture are the primary sources of the Tasmania's non LULUCF emissions (47% and 28%, respectively in 2014). Emissions from energy generation are low relative to Australia as a whole, where they comprised 77% of total emissions (in 2014). The significant contribution of renewable energy to the generation mix in Tasmania reduces emissions from this sector. In Tasmania, emissions from energy generation and industrial processes have trended upwards since 1990 and those from agriculture and waste have declined slightly.

## The future for greenhouse gas emissions in Tasmania

Climate variability and global commodity prices have the potential to drive cyclical changes in Tasmania's greenhouse gas emissions. The millennium drought during the early and mid 2000s was associated with a reduction in methane emissions because of a decline in livestock numbers during this period<sup>6</sup>. Similarly, the present depressed price outlook in the dairy sector could lead to a reduction in herd size, nitrogenous fertiliser use and associated emissions. Limited spring rainfall and run-off in 2015 affected hydroelectric power generation in Tasmania, and led to increased reliance on energy from fossil fuel sources into 2016. Initially sourced from the mainland, following the Basslink fault, energy has been provided locally by a gas fired power station and diesel generators.

The Tasmanian Government's population growth policy could also alter the direction of the State's emissions. Projections by the ABS suggest that without effective policy intervention the state's population could peak and then decline by mid-century<sup>7</sup>. The State Government's *Population Growth Strategy* sets a target for 650,000 people in Tasmania by 2050, which would require a doubling of current rate of growth.

The State Government seeks to leverage economic and population growth from the state's renewable energy resources and liveability advantages. However, based on Tasmania's current per capita emissions in population-related sectors (i.e. transport, stationary energy, waste and industrial processes) population growth alone could increase the state's emissions by over 1,500 kt CO<sub>2</sub>e/y.

The State Government is also seeking to increase economic activity in the forestry sector. Increased harvesting of native forests, particularly, would most likely reduce the level of sequestration they currently provide.

## Climate change projections for Tasmania

Tasmania's latitude, topography and location in the Southern Ocean mean that its climate is quite different to that of the Australian mainland. It is also likely to experience the effects of projected climate change in a somewhat different way to other Australian regions.

Tasmania was included as part of the "Southern Slopes Cluster" in the recent CSIRO and BoM update of Australia's climate change status and future projections<sup>8</sup>. This, more recent analysis is consistent with results from the *Climate Futures for Tasmania* project. Key features of the projected changes in Tasmania's climate are:

- Less rainfall in spring and increased winter rainfall. Natural variability is expected to be the dominant influence on climatic change through to 2030.
- Average temperatures will continue to increase in all seasons, with a higher frequency of hot days and warm spells, fewer frost-risk days and a substantial increase in the temperature reached on hot days.
- Increased intensity of extreme rainfall events.
- The time spent in drought and the severity of those droughts are expected to increase.

<sup>6</sup> OECD (2015) Climate Change Mitigation: Policies and Progress

<sup>7</sup> Department of State Growth (2015) Population Growth Strategy

[http://www.stategrowth.tas.gov.au/\\_data/assets/pdf\\_file/0014/124304/Population\\_Growth\\_Strategy\\_Growing\\_Tas\\_Population\\_for\\_web.pdf](http://www.stategrowth.tas.gov.au/_data/assets/pdf_file/0014/124304/Population_Growth_Strategy_Growing_Tas_Population_for_web.pdf)

<sup>8</sup> The report forms part of the Climate Change in Australia projections for Australia's Natural Resource Management Regions

- A harsher fire-weather climate will be experienced, this may lead to changes in the frequency, size and/or impact of bushfires.
- Mean sea level will continue to rise and the height of extreme sea-level events during storm surges will also increase.
- Coastal waters will warm and acidify.
- Solar radiation will increase and relative humidity will decrease during in the cool season.

The projected changes differ slightly between eastern and western Tasmania. Land and coastal waters in the east are projected to warm slightly more than those in the west. Cool season rainfall in the east is projected to increase somewhat, while it is projected to decrease in western Tasmania. Wind speeds are projected to strengthen in the Southern Ocean and Tasmania's west, but not in the east.

## Potential impacts of climate change

Climate change may have wide-ranging effects on the Tasmanian environment and economy, as well as on its infrastructure and communities. It will most likely present both risks and opportunities.

Projected reductions in cool season rainfall in the state's west and increases in the time spent in drought could affect hydropower and irrigation water security and the value that water storages add to the Tasmanian economy.

Sea level rise and the strengthening of winter westerly winds in the Southern Ocean may increase the risk of flooding and damage to settlements and other infrastructure located along Tasmania's coast. Increased water temperatures with climate change could increase thermal stress and disease among salmon<sup>9</sup> and, without effective adaptation strategies in place, jeopardise this industry.

Worsening of fire weather conditions with climate change may lead to larger and/or more frequent bushfire events. This could damage fire sensitive environments and their unique natural heritage values, as well as jeopardise some nature-based tourism opportunities. Fires affecting plantations and native forests could disrupt the forestry and forest products industry and diminish forest carbon stocks, which are a critical feature of Tasmania's relatively favourable greenhouse gas accounts.

While warmer temperatures with climate change are anticipated to have adverse impacts, they could also provide some benefits. Warmer conditions could favour Tasmania's wine-growing industry, with improved conditions for growth and ripening (potentially similar to key wine production areas such as the Coonawarra in South Australia and Rutherglen in Victoria<sup>10</sup>). The climate outlook in these areas may favour new wine industry investment, compared with the warmer traditional wine growing regions. This may enhance opportunities for food and wine based tourism and economic activity.

Warmer temperatures may improve liveability in Tasmania and improve the state's attractiveness relative to regions experiencing more rapid warming and less favourable conditions during summer.

Climate change policy will continue to drive investment in renewable energy sources, which Tasmania has in abundance. Further development of the renewable energy sector may help to attract industries and businesses to Tasmania for which this is an important feature of their branding or corporate objectives.

Question 1: The Act aims to help Tasmania respond to the challenges posed by climate change. What do you consider are the critical challenges to which this legislation and Government action should respond?

Question 2: How successful do you think the Act has been in influencing action on climate change within Tasmania?

Question 3: What amendments may the Act require to further drive action on climate change?

<sup>9</sup> Battaglione SC, Carter, C, Hobday, AJ, Lyne V, Nowak B (2008) 'Scoping Study into adaptation of the Tasmanian aalmonid aquaculture industry to potential impacts of climate change.' Report to DAFF, August 2008

<sup>10</sup> Holz, G.K., Grose, M.R., Bennett, J.C., Corney, S.P., White C.J., Phelan, D., Potter, K., Kriticos, D., Rawnsley, R., Parsons, D., Lisson, S., Gaynor, S.M. and Bindoff, N.L. (2010) *Climate Futures for Tasmania: impacts on Agriculture technical report*, Antarctic Climate and Ecosystems Cooperative Research Centre, Hobart, Tasmania.

## Climate change and Tasmania's brand

Tasmania has, for many years, sought to capitalise on its “clean and green” image. Its air is among the least polluted in the world, about half its land area is reserved for nature conservation and an even larger area retains native vegetation cover. Around 90% of Tasmania's energy is generated from renewable sources and its per capita greenhouse gas emissions are lower than in every other Australian jurisdiction. The state produces a rich variety of high quality food, fibre and beverages. Its main population centres are relatively small, uncongested and affordable, but provide the full range of expected health and education services.

The Draft *Climate Change Action Plan* aspires for Tasmania to be the “best in the world” at responding to climate change and to capitalise on its comparative advantages in renewable energy generation and cooler climate. It recognises the challenges that climate change may pose and the need to manage climate risks and build the resilience of communities, industry, infrastructure and natural environments.

In an increasingly sophisticated and connected world, “clean and green” rhetoric is no substitute to effective action – including action to address the challenges posed by climate change. Tasmania's capacity to effectively project its clean, green and liveable brand may be put at risk if the state is not seen to be acting substantively on climate change. Effective climate change legislation can be a key driver of action and contributor to how the State is perceived within Australia and internationally.

Question 4: The Act creates a narrative on how the state regards the challenges posed by climate change. How do you think the Act can provide a narrative which helps to project Tasmania's clean-green-liveable brand?

## 4. The *Climate Change (State Action) Act 2008*

The Act provides the overarching framework for action on climate change in Tasmania. Its 10 objects address four main themes: targets and reporting; actions to reduce greenhouse gas emissions; adaptation to projected climate change; and complementarity with national and international climate change initiatives. This independent review will assess the appropriateness of these objects and determine:

- Whether the Act provides a suitable framework for action in the context of changes in national and international climate change policy.
- How the Act has driven or supported action on climate change.
- What opportunities exist to improve the operation of the Act, further drive action on mitigation and adaptation and support improved consideration of climate change in Government decision-making.

The review will also consider the suitability of the state's 2050 emissions reduction target and provide advice on whether or how this may be reset given that emissions are now well below this level.

### Supporting national and international climate change policy

COP21 achieved broad, in-principle support for action to limit global warming below 2°C. It is anticipated that this commitment will now frame international action on climate change. Australia's INDC – the national target for emissions reduction as part of the Paris Agreement - will also drive action by the Commonwealth on climate change. While individual jurisdictions within Australia may have greater ambition for emissions reductions than the Commonwealth (see Table 4.1), the intended national contribution to international efforts to limit warming below 2°C provides a benchmark for action on climate change and a potential reference point for the Act.

Question 5: With Tasmania providing just 0.3% of national emissions, how important is it that the Act supports the achievement of national and international targets for climate change?

Question 6: Should the Act recognise the possibility of 2°C of warming as a means of driving action on climate resilience?

Question 7: What should the Act include to help Tasmania build resilience to climate change?

Recognition of the possibility of up to 2°C of warming by 2100 also provides a potential reference point for

action on climate adaptation. While limiting warming to this extent may avoid “dangerous” climate change, it will not be without risk. Even with successful global action on climate change, Tasmanian infrastructure, communities and environments will need to be resilient in a climate system which has changed to this extent.

## Achievements since the 2012 independent review

The review will assess actions which have been pursued by government, businesses and communities since the previous review.

### Energy efficiency and conservation

Several initiatives have been undertaken in Tasmania to improve the energy efficiency of businesses and communities. Some have been delivered with support from Tasmanian Government and others with Australian Government funding (such as *Get Bill Smart*, Dairy Shed energy audits).

Since the last review, the Government has adopted the six star housing standard for all new detached homes and units, and extensions to existing houses.

In May, the Minister for Energy announced the Government would establish an interest free Energy Efficiency Loan Scheme to help businesses and households undertake energy efficiency improvements<sup>11</sup>. This initiative builds on the no interest loan scheme – the YES (Your Energy Support) program - offered by Aurora Energy in partnership with NILS (No Interest Loans Network).

### Promoting early action by business and community

#### Case study: Enterprise suitability toolkit

Enterprise suitability maps have been developed by the Department of Primary Industries, Parks, Water and Environment (DPIPWE) using the Land Information System Tasmania (LIST) to help farmers identify and assess potential crop options.

The maps integrate soil mapping, localised climate data and crop rules, and currently extent to twenty different crops in the Meander Valley Irrigation Area, Midland irrigation Scheme area. Maps have also been developed for Flinders Island, and will eventually be developed for the whole of Tasmania’s farmlands.

#### Case study: Aged Care Energy audits

Nine energy audits were commissioned by TCCO and delivered by Sustainable Living Tasmania of aged care facilities in 2015.

The audits assessed energy inputs, usage and existing efficiency measures and behaviours, and identified opportunities to reduce energy use and achieve potential cost savings.

A summary report was produced with findings for all facilities audited, and a presentation subsequently made to and recorded for sharing with other aged care facilities.

One of the objects of the Act is to promote consultation and early action on climate change issues by business and the community. Submissions made on the draft Climate Change Action Plan indicate that major industry players such as Bell Bay Aluminium and Norske Skog, are reducing the carbon intensity of their operations.

Several initiatives to promote action in the agriculture sector have been undertaken since 2012. These include the *Tas Farming Futures* project to support farmers to reduce emissions and participate in the national ERF.

Community awareness and preparedness projects have also been initiated, including ‘Whatever the Weather’, borne from Regional Climate Change Adaption Project to encourage communities to respond to climate impacts. This is being delivered by the State Government and several local councils.

### Promoting research & development

The Act seeks to promote technologies for reducing or limiting greenhouse gas emissions and dealing with expected consequences of climate change.

<sup>11</sup> Department of Premier and Cabinet (2016) Loan scheme to drive energy efficiency. 31 May 2016. [http://www.premier.tas.gov.au/releases/loan\\_scheme\\_to\\_drive\\_energy\\_efficiency](http://www.premier.tas.gov.au/releases/loan_scheme_to_drive_energy_efficiency)

Research conducted since 2012 includes investigations into soil carbon storage potential in Tasmania's forests and the development of an innovative renewable energy scheme at King Island

### Climate change adaptation

The Act seeks to support measures to help Tasmania deal with and adapt to the expected consequences of climate change.

A body of research has been undertaken in relation to adaptation to likely impacts of climate change in the marine environment and fisheries sector<sup>12</sup> and on identifying risk and building capacity of local government<sup>13</sup> to manage coastal hazards.

Initiatives such as the *Regional Councils Climate Change Adaptation Project* demonstrate a collaborative approach to responding to climate change impacts. Through the Regional Councils climate change adaptation strategy 2013-17 project, corporate Climate Change Adaptation Plans have been developed for each of the participating councils, and an accompanying stakeholder report and adaptation toolkit have been developed.

The project has led to agreement on adaptation principles, key focus areas for managing climate change impacts and implementation actions to progress adaptation planning<sup>14</sup>. It was funded by Australian Government and Hobart City Council, and delivered by Southern Tasmanian Council Authority (STCA) in partnership with State Government and Local Government Association of Tasmania.

### Reporting on greenhouse gas emissions

The Act provides for parliamentary oversight of progress against climate targets and consistency with national and international efforts in emissions reporting.

Tasmania's baseline and latest emissions figures are published yearly by the Minister in the *Government Gazette*, consistent with the requirement under the *Climate Change (Greenhouse Gas Emissions) Regulations 2012*. TCCO also releases an annual Tasmanian Greenhouse Gas Accounts report that tracks emissions by sector and progress against the 2050 emissions reduction target<sup>15</sup>.

### Regulations

The Act provides for the making of regulations to prescribe a method for establishing an economy-wide emissions baseline and baselines for particular activity areas, and tracking subsequent changes emissions. It also allows for regulations to set interim economy-wide targets, and sector-specific targets.

The first independent review found that the lack of regulation had not inhibited climate change action, and that any new regulations would need to be consistent with the objectives of the *Subordinate Legislation Act 1992* to minimise regulatory burden. Any regulation imposing a significant burden, cost or disadvantage on any sector would be subject to a Regulatory Impact Statement and a process of public consultation.

#### Case study: King Island Renewable Energy Integration project

The project is a hybrid off-grid energy project that uses a range of renewable and conventional technologies to reduce diesel for power generation on the island. Consisting of wind, solar, battery storage, flywheels, dynamic resistor technology, dynamic load control and biofuels, it is capable of delivering up to 100 percent of the Island's power from renewables, and displacing up to 60 percent of annual diesel fuel requirements.

The project involved the development of modular units to facilitate shipment of the technologies, and is expected to become a showcase for other projects in the region

An initiative of Hydro Tasmania, it is expected to be completed by November 2016 and received support from the Australian Renewable Energy Agency and the Tasmanian Government.

Question 8: How can the Act facilitate action on climate change at state and local levels and among businesses and the broader Tasmanian community?

<sup>12</sup> For instance as part of National Climate Change Adaptation Research Plan for Marine Biodiversity and Resources, an investigation was conducted into markets and opportunities along the supply chain to support adaptation of Australian fisheries and aquaculture sectors in the context of climate change impacts on fish stocks.

<sup>13</sup> For example, successive rounds of the Tasmanian Coastal Adaptation Pathways project have been funded and managed by TCCO in different Council areas. A subsequent initiative building on TCAP established in 2015 is the *Communities and Coastal Hazards Project* with a broader focus on emergency management and critical infrastructure.

<sup>14</sup> STCA (2013) Regional Councils Climate Change Adaptation Strategy: Southern Tasmania 2013-2017

<sup>15</sup> DPAC (2015) Tasmanian Greenhouse Gas Final Report 2012-13

## The 2050 target: what next?

Tasmania's greenhouse gas emissions fell below the legislated 2050 target level in 2012. In 2014<sup>16</sup> the state's greenhouse gas emissions were almost 92% lower than those recorded in 1990. In this context, the independent review has been asked to advise on the suitability of the original 2050 emissions reduction target and on any new legislated target.

### Locking in Tasmania's emission reductions

As shown in Figure 3.1, the reduction in Tasmania's greenhouse gas emissions is due to small changes in agricultural and waste emissions and the transformation of the LULUCF sector from being the largest source of emissions to being a source of net sequestration greater than the emissions from the energy and agriculture sectors combined.

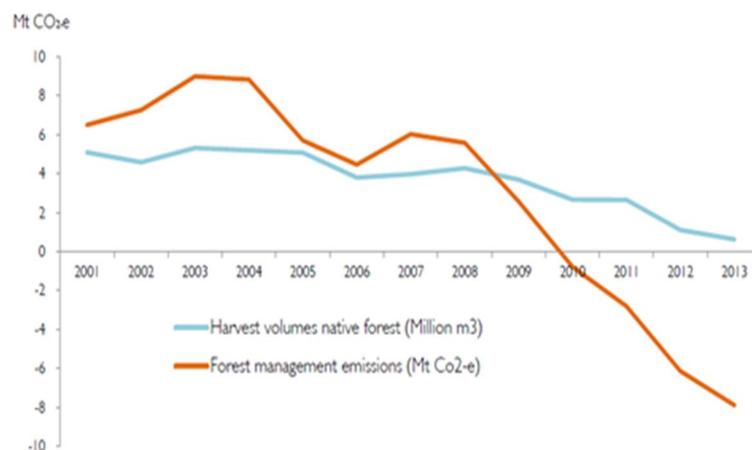
Inclusion of forest management in Australia's emissions reporting protocols under the second (2013-2020) Kyoto Agreement reporting period has allowed changes Tasmanian forested land use policy and forest industry activity to be reflected in this turnaround in its greenhouse gas accounts. Given the significance of forest management and the broader LULUCF sector to Tasmania's greenhouse gas abatement performance, it is important to consider the security of the recorded emissions reductions.

The quantity of carbon stored by Tasmania's forests has varied over time. Reduced harvesting rates in native forests during the last decade (from 5.3 million m<sup>3</sup> in 2002-03 to 0.6 million m<sup>3</sup> in 2012-13; Figure 4.1) have driven large reductions in net emissions from forest management. Changes in harvesting followed implementation of the *Tasmanian Forest Agreement 2012* and lower international demand for pulpwood from native forests.

There are significant prospects for increased harvesting activity in native forests, which reflects state Government policy to grow economic activity in this sector and emerging opportunities for the use of lower grade timbers (e.g. in engineered wood products) and forest residues (e.g. for energy generation). Even with these opportunities, the level of harvesting is unlikely to return to the levels recorded in the early 2000s and the state's native forests may be retained as a net sink for carbon, albeit a smaller one.

Forestry plantations have also been a net sink for carbon in Tasmania since the expansion driven by managed investment schemes (MIS) during the late 1990s and early 2000s. Commercial failure of the original MIS proponents and plantings in uneconomic locations are anticipated to result in some plantations being cleared by land owners, which will increase emissions from this sector.

Major bushfire events in carbon-dense wet eucalypt forests could significantly disrupt Tasmania's carbon stocks. While loss of forest carbon due to bushfires is not directly accounted, no further sequestration from the forest management sector would be recorded until the losses are reinstated by the regenerating forests



Source: Tasmanian Climate Change Office 2015. *Tasmanian Greenhouse Gas Accounts*.

Figure 4.1 Forest management emissions and timber harvest volumes in Tasmania 2001-2013.

Question 9: To what extent should Tasmania rely on the Land Use-Land Use Change Forestry emissions sector to achieve its emissions reduction target?

<sup>16</sup> The most recent comprehensive reporting on Tasmania's and Australia's greenhouse gas emissions is for 2014.

## Setting new targets for climate action

The terms of reference for this review include consideration of revised legislative targets under the Act. The *Draft Climate Change Action Plan* stated that the Government will consider further ‘policy’ targets to capitalise on Tasmania’s comparative advantage and provide a clear direction for future action on climate change. Such targets could include: sector-based and interim targets; a net zero emissions target; and energy efficiency or per capita target.

There is considerable Australian and international experience with climate change target setting by sub-national governments. Several examples of relatively ambitious sub-national targets are given in Table 4.1. The Act’s 2050 target embodies a moderate level of ambition for emissions reduction and is not world leading, as expressed in the *Draft Climate Change Action Plan*. However the state’s current overall level of achievement is significant.

Table 4.1 Sub-national emissions and renewable energy targets

Jurisdiction	2050 Targets	Interim targets	Other targets
ACT	Legislated net zero emissions.	40% reduction in GHG emissions by 2020 (1990 baseline).	100% renewable energy supply by 2020.
Northern Territory	60% reduction in emissions <sup>17</sup> (2007 baseline).		
South Australia	Net zero emissions.		<ul style="list-style-type: none"> <li>• 50% renewable energy by 2025.</li> <li>• \$10B in low-carbon energy generation investment by 2025.</li> <li>• 30% improvement in energy efficiency of Government buildings by 2020.</li> <li>• Adelaide to be the world’s first carbon neutral city.</li> </ul>
Victoria	Net zero emissions.	5-yearly interim targets.	
California (USA)	80% reduction in emissions.	Emissions reduced to 1990 levels by 2020 and 40% below 1990 levels by 2030	<ul style="list-style-type: none"> <li>• 50% renewable electricity by 2030.</li> <li>• Up to 50% reduction in petroleum use in cars and trucks by 2030.</li> <li>• Double energy efficiency savings from existing buildings, and make heating fuels cleaner.</li> </ul>
North Rhine-Westphalia (Germany)	Legislated 80% reduction in emissions (1990 baseline).	Legislated 25% reduction in emissions by 2020 (1990 baseline).	<ul style="list-style-type: none"> <li>• Carbon neutral by 2030.</li> <li>• 15% wind energy mix by 2020.</li> </ul>
British Columbia (Canada)	80% reduction in emissions by 2050 (2007 baseline).	Legislated 33% reduction in emissions by 2020 (2007 levels).	

Tasmania could also consider broadening the reach of its current target to include Scope 2 emissions (those resulting from the use of electricity generated outside its jurisdiction). The ACT is currently the only jurisdiction to do this: although unlike Tasmania, most of its electricity is generated elsewhere.

Question 10: What 2050 emissions reduction target would you consider is consistent with Tasmania seeking to be an international leader on climate change?

Question 11: Should Tasmania’s targets account for emissions and abatement associated with its importation and export of electricity?

<sup>17</sup> The Northern Territory’s target is the only state or territory target that is ‘aspirational’ goal, i.e. not legally binding.

## Interim emission reduction targets

The 2015 independent review of the Victorian *Climate Change Act 2010* recommended 5 yearly interim targets aligned with the timing of IPCC assessment reports and COP meetings and to ensure they complemented (where appropriate) national initiatives on climate change. Interim targets would be set two target periods in advance to provide certainty to stakeholders and a clear pathway towards the 2050 target<sup>18</sup>. As discussed in the 2016 review of the ACT's climate change legislation, interim targets also drive Government accountability for driving action towards the principal target.

## Sectoral targets

Several Australian jurisdictions' climate change legislation provides for sector-based targets for emission reductions, although these are not enshrined in legislation.

The South Australian Government may enter into voluntary sectoral agreements with specific business entities, community groups, non-government organisations (NGOs), local governments and regions. These agreements can relate to emissions abatement from particular projects or programs or to part or the whole of an organisation or region. Over twenty agreements have been entered into, although only four are currently in operation<sup>19</sup>.

ACT climate change legislation has similar provisions, although no voluntary sectoral agreements have yet been made. In part, this reflects the lack of emissions-intensive industries, for which voluntary emissions reductions could significantly affect the jurisdiction's emissions profile.

Question 12: What other types of emissions reduction target should be considered (e.g. interim, sectoral, energy efficiency, mandatory/voluntary)?

Victoria intends to pursue a "pledge and review" model similar to the INDCs asked of parties in the lead up to COP21. The state-wide TAKE2 pledge program has broad applicability, enabling all levels of government, business and the community to pledge

emissions reduction contributions. The government will set priorities for existing and future pledges, commit to mandatory pledges across each of its agencies<sup>20</sup> and develop implementation plans for pledges that cover government's own operations. As with interim targets, the pledges will help to drive accountability for action, enable the government to provide leadership to industry and the community and clarify each Department's role in implementing the Government's climate change strategy.

Victoria's approach is a variant of a model adopted by the UK Government. Under its climate change legislation, the UK Government may set legally binding carbon budgets which cap national emissions over a five-year period. The independent Committee on Climate Change (set up under the Act) provides advice on each carbon budget to ensure it provides a cost effective path towards the long term emissions objective.

Question 13: How willing would your business, community group, local government or region be to commit to pledges to reduce emissions?

## Energy efficiency targets

Energy efficiency targets may provide multiple benefits, including through cost savings from reduced energy consumption; improved health outcomes from reduced pollutant emissions; and improved quality of housing stock. Targets may be formulated on a per capita basis or as economy-wide, sectoral or infrastructure class reductions in energy consumption. While they have value in some settings, such measures generally have limited effect in driving emissions reductions in Tasmania due to the dominance of renewable energy.

<sup>18</sup> ABC (2016) Victoria sets ambitious target for zero greenhouse gas emissions by 2050. 09 June 2016 <http://www.abc.net.au/news/2016-06-09/victoria-aims-for-zero-greenhouse-gas-emissions-by-2050/7495434>

<sup>19</sup> Department of Environment, Water and Natural Resources (2016) Register of South Australia sector agreements. Page last updated 06 January 2016 [http://www.environment.sa.gov.au/Science/Science\\_research/climate-change/climate-change-initiatives-in-south-australia/sa-climate-change-legislation/sector-agreements/register-sa-sector-agreements](http://www.environment.sa.gov.au/Science/Science_research/climate-change/climate-change-initiatives-in-south-australia/sa-climate-change-legislation/sector-agreements/register-sa-sector-agreements)

<sup>20</sup> DELWP (2016) Victoria's Net Zero by 2050 Emissions Reduction Target. 09 June 2016 <http://www.delwp.vic.gov.au/news-and-announcements/net-zero-by-2050>

The Australian Government's *National Energy Productivity Plan* sets a non-binding target for energy productivity improvements of up to 40% by 2030. Progress towards the targets is to be achieved through collaboration with state and territories, many of whom have their own energy and/or resource efficiency policy targets and schemes.

The European Union's Energy Efficiency Directive sets binding measures to help member states achieve a 20% reduction in energy consumption against projected levels of use by 2020<sup>21</sup>. These include: procurement of energy efficient buildings, products and services by the public sector; making energy consumption data publicly available and mandating or incentivising energy audits (for large and small companies, respectively).

### Renewable energy targets

Tasmania has more installed renewable energy generation capacity than its current domestic energy demand. Further generation capacity for domestic uses is not anticipated to be required until 2030<sup>22</sup>. However, with its rich renewable energy resources, it could export energy to traditionally fossil fuel-reliant jurisdictions (e.g. Victoria) with zero net emissions targets. Significantly increased renewable energy capacity is unlikely to develop unless domestic demand increases greatly or there is a second electrical transmission connection to the mainland.

Tasmania's relatively large renewable energy capacity means that the state could support ambitious targets for electric vehicles without jeopardising its overall emissions target. This could also lower transport fuel costs and reduce price volatility risk<sup>23</sup>.

In its submission on the draft *Climate Change Action Plan*, HydroTasmania proposed setting a rolling five year target of renewable electricity generation as a proportion of total consumption. A rolling five year target would mitigate the risk of underachievement in some years due to the inherent variability in most renewable energy sources.

Recent legislative amendments mean that residues from native forest harvesting are now an eligible fuel source under the RET<sup>24</sup>. This could improve the economics of the native forest harvesting. While it may not necessarily do so, this change has potential to drive increases in the area harvested and therefore could be counterproductive for the state's emissions accounts.

The review will need to consider whether legislated targets are required to increase share of specific renewable energy generation technologies, or whether the RET and associated national policies provide a sufficient signal for investment if accompanied by enabling policies or schemes.

## Mainstreaming climate change in government planning and decision-making

Mainstreaming refers to integrating climate change considerations within decision-making processes, such as setting budgets, developing policies, procuring services and program implementation. It is often discussed in terms of adaptation but is equally applicable to mitigation. This review is to consider the extent to which the Act and its objects support mainstreaming.

### Mainstreaming through shared accountability

Efforts to decarbonise the economy can be pursued by sharing accountability for emission reductions. Several national and sub-national jurisdictions have or are adopting this approach, including the UK, Germany ACT and Victoria.

<sup>21</sup> European Commission (nd) Energy Efficiency. Page last updated 12 June 2016 <http://ec.europa.eu/energy/en/topics/energy-efficiency>

<sup>22</sup> Department of State Growth (2014) Energy Strategy Issues Paper [http://www.stategrowth.tas.gov.au/\\_data/assets/pdf\\_file/0005/90815/Energy\\_Strategy\\_Issues\\_Paper.pdf](http://www.stategrowth.tas.gov.au/_data/assets/pdf_file/0005/90815/Energy_Strategy_Issues_Paper.pdf)

<sup>23</sup> Department of State Growth (2015) *Tasmanian Energy Strategy: Restoring Tasmania's energy advantage*.

<sup>24</sup> Clean Energy Regulator (2015) Renewable Energy Target legislative amendments pass the Senate. <http://www.cleanenergyregulator.gov.au/About/Pages/News%20and%20updates/NewsItem.aspx?ListId=19b4efbb-6f5d-4637-94c4-121c1f96cfe&ItemId=146>

The UK Government sets five yearly carbon budgets. These are set on the advice of the Committee on Climate Change, which assesses by sector the most cost-effective means of reducing emissions and the emissions reductions required to keep climate within a tolerable range<sup>25</sup>.

The ACT Government is implementing a carbon neutral framework in which carbon budgets are used to promote accountability. All government directorates have a cap on emissions for which they are responsible<sup>26</sup>. Annual reports from directorates and an interdepartmental working group will provide for reviews against implementation of mitigation actions.

The proposed Victorian pledge and review model for carbon budgeting will allocated shares of the State's interim target to each government Department period. A Climate Change Strategy will be developed in consultation with business and the community that sets priorities and implementation plans for pledges. The Victorian Government will also mainstream climate adaptation by requiring portfolio-specific *Adaptation Action Plans* to ensure adaptation and emergency management planning aligns with the state's climate change strategy<sup>27</sup>.

### Establishing a set of principles to guide decision-making

In addition to the objects of the Act, a broader set of principles could be developed which that set out the types of considerations and thinking about climate change which is expected of decision-makers. Examples from Victorian legislation and its 2015 review include: having regard to best available science; consideration of cost-effectiveness or proportionality; consultation; equity within and between generations; consistency with national policy; and risk-based decision-making.

Question 14: What do you consider might be appropriate principles to guide government decision-making which influences climate risks and greenhouse gas emissions?

### Government decision-making to consider the *Climate Change (State Action) Act 2008*

Decision-making across many areas of government activity are likely to require consideration of climate change risks and/or emissions contributions. While a set of principles would support government decision-making, clarity may be required as to the types of decisions or areas of decision-making to which these principles would apply. This also provides legal certainty about the requirement to consider climate change in the event that decisions are subject to review by courts or tribunals.

The Victorian *Climate Change Act 2010* provides for decisions made under certain specified legislation to have regard to potential impacts of climate change and whether the action or decision could influence the State's mitigation efforts. Following the 2015 independent review of that Act, the Victorian Government is to extend the range of Acts for which climate change must be considered and to which the principles should apply. Climate change legislation in South Australia and the ACT does not have similar provisions.

Such a reform would require administrative resources to assess which legislation should be considered and to make and communicate any amendments to those Acts. An alternative could be for the TCCO to be statutory consultee in respect of specific decisions or actions by other agencies, although this would also need to be resourced.

### Integrating climate change into land use planning

Tasmania is developing a single state-wide Planning Scheme to improve consistency in planning controls across the State while providing flexibility to take into account local issues<sup>28</sup>. The scheme will be supported by a single set of procedures and documents for all new applications and permits. There is potential for the Planning

<sup>25</sup> CCC (nd) Carbon budgets and targets <https://www.theccc.org.uk/tackling-climate-change/reducing-carbon-emissions/carbon-budgets-and-targets/>

<sup>26</sup> ACT Environment and Planning Directorate (2014) Carbon Neutral ACT Government Framework: Environmental Leadership – ACT Government Carbon Neutrality. <http://www.environment.act.gov.au/cc/what-government-is-doing/act-government-operations/carbon-neutral-government-act-framework>

<sup>27</sup> DELWP (2016) Victorian Government response to the Independent Review of the Climate Change Act 2010

<sup>28</sup> Department of Justice (nd) Planning Reforms Factsheet : Overview

Scheme to embed certain forms of climate adaptation (e.g. to natural hazards such as coastal storm surges, flooding and bushfires) and principles supporting climate change mitigation (e.g. accessibility for public transport).

## 5. A path for action: Tasmania's Climate Change Action Plan

### About the Action Plan

The 2016 independent review of the Act is being undertaken concurrently with preparation of the *Climate Change Action Plan*. The draft plan was released in December 2015 and proposes practical actions to meet climate change and leverage Tasmania's natural advantages. Non-confidential information collected as part of consultation on the draft plan has been shared with the independent reviewers.

The *Draft Climate Change Action Plan* proposed or compiled planned government actions in four key areas:

1. *Meeting the climate challenge*: well planned and appropriate management of climate risks to minimise disruption and build resilience.
2. *Maximising Tasmania's energy advantage*: encouraging innovation, improving energy efficiency, and leveraging Tasmania's clean energy brand to attract investment and create jobs.
3. *Maximising Tasmania's business advantage*: investing in Tasmania's comparative strengths, particularly agriculture, tourism, energy, resources, science, education and research and niche manufacturing. Leveraging Tasmania's low carbon status as an attractive place to do business in the transition to a low carbon future.
4. *Maximising Tasmania's natural liveability advantage*: increasing Tasmania's appeal as place to live, work, invest and for families.

### What you have said about the draft Action Plan

Four consultation questions were set out in the draft Action Plan. Two are of particular relevance to this review. The first question asked what targets should be adopted to pursue carbon abatement and the second question sought suggestions on possible amendments to the Act to ensure an effective State response to climate change.

Eighty-eight written submissions on the *Draft Climate Change Action Plan* were received, and will be considered as part of the independent review. The TCCO also held three public forums in the first quarter of 2016. A summary of feedback relevant to the scope of this review is provided below.

#### Targets for greenhouse gas emissions and energy efficiency

There was strong support for a long-term emissions reduction target that is consistent with the objectives and reporting timeframes outlined at COP21. The most frequently raised target was for zero net emissions by 2050. Several submissions advocated for negative emissions target: for Tasmania, via its forests and use of renewable energy to sequester more carbon dioxide than it produces emissions.

Sectoral targets were also proposed as a means of extending the emissions reduction effort beyond forest management. Options proposed included: an overall long-term emissions reduction target which specifically excluded the LULUCF sector; targets for the transport sector and agriculture sectors; as targets for terrestrial and "blue" (marine) carbon stocks. The pledge and review model which is being adopted by Victoria, requiring each State Government department to pledge emissions savings in its sector and commit to actions to achieve this, was also supported. Some submissions advocated against sectoral targets on the basis that they could affect the national or international competitive position of the particular sector.

Targets for renewable energy and energy efficiency were also advocated. Suggestions included:

- 100% net renewable electricity consumption (by 2020), where any imports of non-renewable energy were at least balanced on an annual basis by exports renewable energy.

- A non-hydro renewable energy supply target of 30% (by 2020).
- A target for all new or replacement hot water systems to be solar or heat pump-driven.
- Annual incremental increases in electricity and/or gas consumption savings.
- Incremental targets for the number of homes assessed for energy efficiency and/or the number of homes and businesses with insulation or other efficiency improvements.
- Incremental improvement in electricity usage outside of peak use periods.

### **Proposed amendments to the Act**

Several submissions identified the need for the Act to provide an integrated framework for consideration of climate change across government decision-making. Specific suggestions included:

- Preparation and 5-yearly review of the Climate Change Action Plan be given legal status under the Act to provide continuity and consistency of action, independent of changes in Government.
- Requiring decision-makers to consider a climate impact assessment, where decisions could contribute to Tasmania's emissions or resilience to climate change. The process for undertaking such assessments could be prescribed by regulations under the Act.
- Introduction of a climate change charter or set of principles and objectives to guide Government policy and procurement processes.

Several submissions proposed that an independent climate advisory council or committee be established, similar to the former Tasmanian Climate Change Action Council.

Several submissions advocated for the Act to remain unchanged and emphasised the primacy of a national approach to climate change and the risks associated with uncoordinated actions by states.

### **Mitigation beyond forest management practices**

Many submissions advocated for the pursuit of long-term emission reduction efforts across non-LULUCF sectors (energy, industrial process, agriculture, waste), whose emissions have remained relatively stable since 1990.

Expansion and diversification of the state's renewable energy mix was identified as a key opportunity to improve energy security and reduce reliance on hydroelectricity and fossil fuel energy imports from the national electricity grid.

Submissions which addressed renewable energy frequently called for Government incentives for the installation of domestic and community-scale renewable energy technologies, particularly rooftop solar. Key enablers for small and medium-scale renewable energy were considered to be: a "fair" feed-in tariff; increasing the maximum capacity for feed-in tariffs from the current 10 kW; and the use of reverse auctions for competitive procurement of large-scale renewable energy by government (as in the ACT).

The transport sector received considerable attention in submissions. Many advocated for government support for electric vehicles and support infrastructure (particularly charging stations). Greater investment in public transport was also supported, as was the encouragement of active transport modes.

Several submissions identified waste management as an opportunity for emissions reductions. Suggestions included placing greater emphasis on: diverting waste from landfill; recycling; and improved product stewardship.

Many submissions expressed concern about the use of forest residues as a source of biomass for energy generation and the potential implications of their use on biodiversity values and air quality.

### **Coordinated and supportive adaptation**

Several submissions addressed the role of government in supporting research into climate change impacts and adaptation and in disseminating information and guidance to support climate change adaptation. Some considered that there was an important role for the State Government in supporting local government in developing its capacity to respond to or manage natural hazards. The emerging Tasmanian Planning Scheme was considered to be an opportunity to embed adaptation and mitigation actions in land use planning and urban development.

## **Appendix A. Objects of the *Climate Change (State Action) Act 2008***

Section 4 of the *Climate Change (State Action) Act 2008* states the Act's objects. These are

- a) to help Tasmania respond to the challenges of climate change by addressing issues associated with that phenomenon and, in particular, by providing for the setting of a target for the reduction of greenhouse gas emissions in the State as part of the national and international response to climate change; and
- b) to promote a commitment to action on climate change issues in Tasmania by providing for the development of –
  - i. interim State targets for the reduction of greenhouse gas emissions in the State; and
  - ii. suitable targets and interim targets, having the same aim, for specific sectors of the State's economy; and
- c) to help Tasmania take advantage of the new social, economic and environmental opportunities that climate change will present; and
- d) to provide for reporting and Parliamentary oversight of progress being made towards achieving the State's 2050 target and other targets; and
- e) to promote energy efficiency and conservation; and
- f) to promote research and development in the development and use of technology for reducing or limiting greenhouse gas emissions or for dealing with and adapting to the expected consequences of climate change, including technology for removing greenhouse gases from the atmosphere; and
- g) to promote and facilitate business and community consultation and early action on climate change issues; and
- h) to identify, promote and support measures to help Tasmania deal with and adapt to the expected consequences of climate change; and
- i) to promote a Tasmanian response to climate change issues that is as far as practicable consistent with national and international schemes addressing those issues, including any schemes for emissions trading and emissions reporting; and
- j) to enhance Tasmania's willingness and capacity to contribute and respond, constructively and expeditiously, to national and international developments in climate change issues.

## **Appendix B. Terms of Reference for the 2016 independent review of the *Climate Change (State Action) Act 2008***

Section 18 of the Act requires that independent reviews be conducted at four yearly intervals. The review is to address:

- a) the extent to which the objects of the Act are being achieved.
- b) The extent to which additional legislative measures, if any, are considered necessary to achieve the targets set by the Act within the periods contemplated by the Act, including by the introduction of performance standards and other mandatory requirements.

The review may consider other matters which the Minister may consider relevant. For the current review, these matters are:

1. A review of the suitability of the 2050 emissions reduction target and advice on a new target given Tasmania has met its legislated target in 2012-13;
2. How improvements could be made to the Act to assist with achieving the Tasmanian Government's commitment on climate change adaptation and mitigation and to drive consideration of climate change in decision making across State Government. This will include consideration of specific examples of how this might be achieved, such as:
  - A statutory requirement for the Tasmanian Government to prepare a regular climate change action plan.
  - Consideration of the appropriateness of the Objects of the Act, particularly in the context of current national and international developments in climate change policy.
  - Advice on how the Act could assist Tasmanian Government agencies to incorporate consideration of climate change into strategic decision making.

## Appendix C. Discussion paper questions

This discussion paper includes 14 questions as potential guides to persons and organisations wishing to make submissions to this independent review of the *Climate Change (State Actions) Act 2008*. Submissions may be made in relation to any or all of these questions and/or to other matters which are relevant to the review's terms of reference (Appendix B).

1. The Act aims to help Tasmania respond to the challenges posed by climate change. What do you consider are the critical challenges to which this legislation and Government action should respond?
2. How successful do you think the Act has been in influencing action on climate change within Tasmania?
3. What amendments may the Act require to further drive action on climate change?
4. The Act creates a narrative on how the state regards the challenges posed by climate change. How do you think the Act can provide a narrative which helps to project Tasmania's clean-green-liveable brand?
5. With Tasmania providing just 0.3% of national emissions, how important is it that the Act supports the achievement of national and international targets for climate change?
6. Should the Act recognise the possibility of 2°C of warming as a means of driving action on climate resilience?
7. What should the Act include to help Tasmania build resilience to climate change?
8. How can the Act facilitate action on climate change at state and local levels and among businesses and the broader Tasmanian community?
9. To what extent should Tasmania rely on the Land Use-Land Use Change Forestry emissions sector to achieve its emissions reduction target?
10. What 2050 emissions reduction target would you consider is consistent with Tasmania seeking to be an international leader on climate change?
11. Should Tasmania's targets account for emissions and abatement associated with its importation and export of electricity?
12. What other types of emissions reduction target should be considered (e.g. interim, sectoral, energy efficiency, mandatory/voluntary)?
13. How willing would your business, community group, local government or region be to commit to pledges to reduce emissions?
14. What do you consider might be appropriate principles to guide government decision-making which influences climate risks and greenhouse gas emissions?