

CLIMATE CHANGE AND GREENHOUSE
EMISSIONS REDUCTION ACT 2007

LEGISLATIVE REVIEW 2011

DISCUSSION PAPER

ABOUT THIS DISCUSSION PAPER

Under section 21 of the *Climate Change and Greenhouse Emissions Reduction Act 2007* a review of the operation of the legislation must be undertaken every four years. This paper has been prepared by the Sustainability and Climate Change Division of the Department of the Premier and Cabinet. The purpose of the paper is to facilitate consultation and discussion on issues pertinent to the 2011 review. This paper is for discussion purposes only and is not a statement of policy from the Government of South Australia.

This discussion paper is available to download from www.sa.gov.au/climatechange.

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EXECUTIVE SUMMARY

Introduction

The *Climate Change and Greenhouse Emissions Reduction Act 2007* ('the Act') places a requirement on the South Australian Government to work with business and the community to develop and put in place strategies that will put South Australia in a position to take early action to reduce greenhouse emissions and adapt to climate change. The Act is headlined by emissions reduction and renewable energy targets. Requirements for periodic review are specified in the Act, and this paper has been prepared to facilitate the second review of the Act since its commencement in 2007.

Objects

Sound progress has been made against the 11 Objects of the Act, with a wide range of actions being undertaken or supported by the State Government. Notably, South Australia has made significant progress against the emission reduction and renewable energy targets. The Commonwealth Department of Climate Change and Energy Efficiency ('DCCEE') reports that South Australia's net greenhouse gas emissions, including emissions associated with electricity flows between States/Territories, were 29.5 million tonnes of carbon dioxide equivalent ('CO₂-e') in 2009.¹ This means that South Australia's 2009 net greenhouse gas emissions were 8% lower than the 1990 baseline.

The 20% renewable energy generation target was met in 2010/11, three years ahead of schedule. The Australian Energy Market Operator's ('AEMO') report on South Australian supply and demand in 2010/2011 found that:

"The capacity of wind generation in South Australia continues to grow and wind energy has now reached 20 per cent of energy production."

The AEMO report also comments that *wind energy currently supplies approximately 3,000 GWh annually, which equates to approximately 20% of the State's energy consumption*².

Review of the Targets

It is proposed to amend the South Australian principal emissions reduction target to reflect the changes to the Commonwealth's emissions reduction target as follows:

Reduce by 31 December 2050 greenhouse gas emissions within the State by at least 80% to an amount that is equal to or less than 20% of 2000 levels.

The advice of relevant experts will be sought in accordance with the requirements under the legislation with a view to updating the principal target.

It is proposed to replace the headline renewable energy targets in the Act with the following renewable energy target, which was set under the legislation in June 2009:

¹ Commonwealth of Australia, April 2011, Australian National Greenhouse Gas Accounts – State and Territory Greenhouse Gas Inventories 2009.

² AEMO 2011, *South Australian Supply and Demand Outlook*, p112

Increase the production of renewable energy so that it comprises at least 33% of electricity generated in the State by 31 December 2020.

It is also proposed to add a new headline target to complement these targets. This target is:

To reduce the carbon intensity of South Australia’s electricity generation to 0.5 tonnes of carbon dioxide equivalent per megawatt hour (‘CO₂-e/MWh’) by 2020.

Policies

A range of further legislative amendments are proposed in the paper to ensure that the Act reflects and supports the most up-to-date policies and approaches to addressing and managing the impacts of climate change. These include amendments to:

- Support adaptation to climate change
- Consider the needs of the most vulnerable and disadvantaged members of the community in relation to both the costs of carbon and the effects of climate change
- Consider the needs of Aboriginal people and communities in relation to the effects of climate change
- Ensure the need to reduce greenhouse gas emissions and adapt to the effects of climate change is considered in all relevant Government decisions
- Facilitate consideration of the complementarity of South Australian Government climate change measures to the Commonwealth Government’s carbon pricing policy.

Administration

There are a range of issues surrounding the administration of the Act. Amendments are proposed to resolve these issues and improve the operation of the Act.

Consultation

Feedback is sought on the issues raised by this discussion paper.

INTRODUCTION

The *Climate Change and Greenhouse Emissions Reduction Act 2007* ('the Act') places a requirement on the State Government to work with business and the community to develop and put in place strategies that will put South Australia in a position to take early action to reduce greenhouse emissions and adapt to climate change. The Act is headlined by emissions reduction and renewable energy targets. Requirements for periodic review are specified in the Act, and this paper has been prepared to facilitate the second review of the Act since its commencement in 2007.

This discussion paper has been prepared in two parts.

- The Introduction outlines the purpose of the paper and provides essential background including the legislative review requirements. This part also outlines the methodology and timeline for undertaking the review.
- The Discussion outlines the preliminary findings of the review for the purpose of discussion and consultation. The discussion is in four parts: objects, targets, policies and administration.

BACKGROUND

Under the Act the Minister must cause a review of the Act and its operation on a four-yearly basis. The Act sets out the following requirements for undertaking the review:

Section 21 – Review of Act

- (1) The Minister must cause a review of this Act and its operation to be conducted on a four-yearly basis.
- (2) The review must include a specific report on—
 - (a) the extent to which the objects of this Act are being achieved; and
 - (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.
- (3) The Minister must take reasonable steps to ensure that, in the conduct of the review, there is consultation with—
 - (a) the Premier's Climate Change Council; and
 - (b) other relevant business, environment and community groups and organisations.
- (4) The outcome of the review must be embodied in a written report.
- (5) The Minister must cause a copy of the report to be laid before both Houses of Parliament within 6 sitting days after the report is presented to the Minister.
- (6) Subsection (1) operates subject to the qualification that the first review must be completed by the end of 2009.

The first review was completed in 2009. The review found that there was a range of issues that could affect the operation of the Act but which were unclear at the time. This included the effects of the then proposed Carbon Pollution Reduction Scheme. Under section 21(3) the Premier’s Climate Change Council (‘the Council’) must be consulted during the course of the review. The Council provided formal advice to the Premier that the next review of the Act should be undertaken in 2011, to allow for these issues to be more fully considered. The Government accepted this recommendation and it was determined that the second review should occur in 2011.

The review provides an opportunity to update the legislation in line with key government reforms, particularly to provide greater weight to adaptation as well as take into account the significant Commonwealth Government climate change policies, particularly the carbon pricing mechanism.

In this context, the following issues are addressed in the review pursuant to subsection 21(2) paragraph (c) of the Act:

- Review of the targets in the Act
- Adaptation to the impacts of climate change
- Vulnerability and disadvantage
- Aboriginal people and communities
- Climate change in Government decision making
- Complementarity
- Minor amendments to improve the administration of the Act.

METHODOLOGY AND TIMELINE

The review process involves three phases:

Preparation of Discussion Paper (July – August 2011)

The first stage involved preliminary research and consideration of the issues. This Discussion Paper has been prepared to facilitate consultation on the review by the Department of the Premier and Cabinet, taking into account comments received from the Premier’s Climate Change Council and other South Australian Government Agencies.

Consultation (September – October 2011)

The second stage is a consultation phase.

The external consultation process will involve seeking written comment on the discussion paper from key stakeholders.

Final Report (November – December 2011)

The third stage will involve the preparation of a final report on the review for the Minister for Sustainability and Climate Change by the end of 2011. This report will be tabled in Parliament in accordance with the requirements of the Act.

DISCUSSION

This part outlines the preliminary findings of the review in four broad sections:

- Progress in achieving the objects;
- Review of the targets;
- Review of the policies; and
- Administrative issues.

PROGRESS IN ACHIEVING THE OBJECTS

This section describes progress in achieving the 11 objects of the Act since the 2009 review was completed.

This section has been prepared to address the reporting requirements of subsection 21(2) paragraphs (a) and (b) of the Act.

Object 1: Setting of Targets

Section 3(1)(a): to assist in the achievement of ecologically sustainable development in the State by addressing issues associated with climate change and, in particular—

- by setting a target (the *SA target*) to reduce by 31 December 2050 greenhouse gas emissions within the State by at least 60% to an amount that is equal to or less than 40% of 1990 levels as part of a national and international response to climate change; and
- by setting related targets (the *renewable electricity targets*)—
 - to increase the proportion of renewable electricity generated so that it comprises at least 20% of electricity generated in the State by 31 December 2014.
 - to increase the proportion of renewable electricity consumed so that it comprises at least 20% of electricity consumed in the State by 31 December 2014.

Object 1 has been met by setting the above targets in section 5 of the Act.

Progress towards achieving the targets

The DCCEE reports that South Australia's net greenhouse gas emissions, including emissions associated with electricity flows between States/Territories, were 29.5 million tonnes of CO₂-e in 2009³. This means that South Australia's 2009 net greenhouse gas emissions were 8% lower than the 1990 baseline of 32.2 million tonnes of CO₂-e.

The renewable energy generation target was met in 2010/11, three years ahead of schedule.

The Australian Energy Market Operator's ('AEMO') report on South Australian supply and demand in 2010/2011 found that *the capacity of wind generation in South Australia continues to grow and wind*

³ Commonwealth of Australia, April 2011, Australian National Greenhouse Gas Accounts – State and Territory Greenhouse Gas Inventories 2009.

*energy has now reached 20 per cent of energy production. There is now 1,150 MW of wind generating capacity in the State.*⁴

The AEMO report has the full year results for 2010/11 on a pro-rata basis. However, the confirmed results are not expected to differ materially from these estimations.

The AEMO report also comments that *wind energy currently supplies approximately 3,000 GWh annually, which equates to approximately 20% of the State’s energy consumption*⁵.

Due to sound progress in achieving each of the targets, as well as the proposals to review the targets outlined below, no additional legislative measures are considered necessary to achieve the above targets.

Object 2: Commit to action in South Australia

Section 3(1)(b): to promote commitment to action within the State to address climate change through—

- the development of specific targets (as appropriate) for various sectors of the State's economy; and
- the development of various interim targets; and
- the development of policies and programs for the reduction of greenhouse gas emissions and for other relevant purposes.

In June 2009 the Premier established a new interim target for renewable energy generation:

Increase the production of renewable energy so that it comprises at least 33% of electricity generated in the State by 31 December 2020.

Sound progress has been made against this target with the meeting of the 20% generation target in 2010/11.

Voluntary targets have been set by individual industries and organisations, in conjunction with the State Government, through the development of Sector Agreements under section 16 of the Act. These targets are not exhaustive but are the primary focus of the agreements, as set out below.

⁴ AEMO 2011, *South Australian Supply and Demand Outlook*, pvii.

⁵ AEMO 2011, *South Australian Supply and Demand Outlook*, p112

Sector Agreement Title	Key Targets
Adelaide Brighton Cement Ltd	<ul style="list-style-type: none"> • reduce greenhouse gas emissions associated with the manufacture and use of cement and lime products in South Australia • increase the use of renewable energy • encourage industry partners and other external stakeholders to implement similar measures • jointly promote the development of, and ultimately participating in, a global sector agreement for the cement and lime manufacturing sectors.
Adelaide City Council (Adelaide Green City)	<ul style="list-style-type: none"> • reduce greenhouse gas emissions through measuring, reporting and implementing a reduction target • show leadership in innovation and demonstrating new technologies • support the greening of buildings and improved urban design • explore options for a smarter and more efficient energy network • support more sustainable transport • encourage improved resource recovery in buildings and the public realm • support the efficient use of sustainable and/or alternative water supplies • improve and conserve the Adelaide Park Lands.
Anglican Church Agreement completed 30 June 2011	<ul style="list-style-type: none"> • demonstrate action to reduce greenhouse gas emissions and the ecological footprint of the Diocese, its Parishes, the Cathedral, Anglicare and other agencies, schools and church members • provide leadership to the community in caring for the environment, reducing greenhouse gas emissions and addressing the science of climate change within the Anglican philosophy • engage the broader community to reduce their ecological footprint • jointly progress projects that promote sustainability and address climate change.
Barossa Regional Agreement	<ul style="list-style-type: none"> • develop and implement a community education and behavioural change program • work with local industry and businesses to develop climate change action plans and take advantage of environmental opportunities • reduce greenhouse gas emissions from regional transport by improving transport and land use planning, investigating infrastructure improvements and exploring alternative transport options • promote sustainable urban design principles in regional development.

<p>Eyre Peninsula</p>	<ul style="list-style-type: none"> • undertake integrated adaptive option assessments for the Eyre Peninsula • assess and identify economic opportunities for the Eyre Peninsula relating to climate change • develop knowledge through science and research • develop and implement a broad-scale community education and behavioural change program • develop and implement a climate change plan for the region.
<p>Jeffries Agreement Completed 30 June 2011</p>	<ul style="list-style-type: none"> • reduce the energy consumption and greenhouse gas emissions in the composting process • increase the percentage of renewable energy used by Jeffries • increase the quantity of organic waste separated and used as high quality compost • demonstrate leadership and promoting greater collaboration between industry, government and relevant research institutions.
<p>Local Government Association</p>	<ul style="list-style-type: none"> • progress more efficient public lighting • investigate collaborative opportunities and implications for increased uptake of accredited green power • support climate change adaptation and risk assessments of council assets • support climate change adaptation and risk assessments of regional and community impacts • investigate best practice investment in carbon offsets and sequestration • work towards improved energy efficiency use and standards • develop and implement community awareness, education and behaviour change programs or initiatives • improve the information sharing and collaboration between state and local government on climate change planning, policies and initiatives.
<p>OneSteel Whyalla</p>	<ul style="list-style-type: none"> • measure and report greenhouse gas emissions • encourage product and process innovation • provide industry leadership • support the development of sustainable business • identify and develop local partnerships • explore a global agreement for the steel industry.
<p>Property Council</p>	<ul style="list-style-type: none"> • improve building energy efficiency • reduce greenhouse gas emissions • support research, development and deployment of innovative building technologies and techniques • promote increased use of recycled water and reduced waste to landfill • accelerate the up-take of performance based rating tools for assessing building greenhouse performance • provide industry leadership in sustainable retrofitting of existing commercial buildings.

<p>RAA</p>	<ul style="list-style-type: none"> • educate the motoring community and industry to help reduce greenhouse gas emissions • develop an environmental management plan across the association • support the establishment of a national centre of excellence in vehicle emissions testing.
<p>SA Water</p>	<ul style="list-style-type: none"> • reduce greenhouse gas emissions associated with the provision of water and waste water services for South Australia • increase the use of renewable energy sources • develop measures to adapt to climate change • support necessary research.
<p>Electronics and ICT Industry Association</p>	<ul style="list-style-type: none"> • demonstrate leadership in sustainability and reduce greenhouse gas emissions through energy efficient processes and product innovation • adopt a readily available reporting tool for greenhouse gases and measuring progress in emissions abatement which is consistent with national requirements • undertake research and development in product innovation • demonstrate leadership in electronic waste management and recycling through product stewardship • identify potential market opportunities for products and services that address emissions reduction and climate change adaptation.
<p>Urban Development Institute Australia</p>	<ul style="list-style-type: none"> • promote and implementing the EnviroDevelopment initiative in South Australia • develop a sustainable development reporting tool for the urban development industry • develop partnership projects with other industry bodies that reduce energy inputs and conserve resource use or waste to landfill • develop carbon footprint reduction targets for the industry.
<p>Waste Management</p>	<ul style="list-style-type: none"> • develop a carbon measurement tool for municipal waste collection • encourage industry participation in programs that promote greater energy efficiency in recycling • support industry education and climate change leadership through information and advice.
<p>Wine Industry</p>	<ul style="list-style-type: none"> • increase industry awareness and use of the Australian Wine Carbon Calculator to report industry greenhouse gas emissions • analyse and consider best practice certification standards for the wine industry to gain full market advantage from emissions reduction achievements • encourage the development of Environmental Action Plans to help improve energy efficiency, reduce greenhouse gas emissions, increase the use of recycled water and reduce waste to landfill by industry participants • support research to better understand climate change adaptation priorities and opportunities in the wine sector.

<p>University Sector</p>	<ul style="list-style-type: none"> • demonstrate action to reduce greenhouse gas emissions and reduce the ecological footprint of the university campuses and related infrastructure • provide leadership in climate change research and curriculum development • educate industry and the broader community in climate change mitigation and adaptation • provide leadership in the South Australian university sector in reducing greenhouse gas emissions and progressing mitigation and adaptation measures • jointly progress projects that promote sustainability and address climate change.
<p>Vocational Education and Training</p>	<ul style="list-style-type: none"> • identify and respond to SA industry skills and training needs • build the capacity of VET practitioners to deliver training packages and qualifications • develop, promote and implement new or revised training packages and qualifications • create environmental management plans across the sector • develop pilot demonstration projects that use sustainability tools to increase energy, water and waste efficiency.

Object 3: Energy efficiency and conservation

Section 3(1)(c): to encourage energy efficiency and conservation.

The State Government has undertaken a range of initiatives to encourage energy efficiency and conservation in residential, commercial, transport and Government sectors.

Residential

- The State Government operates a number of energy efficiency programs focussing on dwellings, including:
 - Water heater installation requirements
 - Air conditioning measures and Minimum Energy Performance Standards
 - Energy Advisory Service
 - Home Energy Toolkits
 - Energy Friends
- The *Residential Energy Efficiency Scheme* commenced on 1 January 2009. This program requires South Australian gas and electricity retailers to install energy saving measures such as ceiling insulation, draught proofing, and more efficient appliances as a condition of their license. Energy providers are also required to provide home energy audits to 13,000 low income households.
- Dwellings constructed under the *Nation Building Economic Stimulus Plan* achieved a minimum 6 star energy rating and included water conservation measures, and solar or heat bank hot water services.

Commercial

- The Premier released the *Cool Roofs Discussion Paper* on 7 December 2010. Analysis indicates that ‘cool roofs’, which can be achieved by simply using a lighter paint colour or by using more sophisticated coating systems, can reduce cooling demand of buildings resulting in reduced energy consumption and greenhouse gas emissions.

Transport

- The State Government has committed to a decade long, \$2.6 billion investment in public transport that will see the electrification of the rail system, extension of the Noarlunga rail line to Seaford, the extension of the tram line and the integration of all public transport to increase usage to 10% of metropolitan weekday passenger vehicle kilometres travelled by 2018.
- The State Government has supported the development of bike path projects across the state by providing subsidy funding to Councils to encourage them to improve local networks and four projects along the Adelaide to Marino Rocks Greenway. Adelaide’s network of bicycle lanes and paths has been extended from around 480 kilometres in 2002 to about 909 kilometres in 2011.

Government Operations

- The State Government has a target to increase the energy efficiency of government buildings by 30% from 2000/01 levels by 2020 with a 16.7% cumulative improvement since 2000/01.
- The establishment of a new target to reduce emissions in the State Government Fleet by 10% by 2014/15 over the 2009/10 level based on average emissions per kilometre. The program will have a flow on effect to the secondary vehicle market when they are sold to the wider public community after their relatively short fleet life.
- The State Government continues purchasing 20% accredited GreenPower™ through its electricity contracts. The State Government has also committed to meeting 50% of the government’s own electricity needs from GreenPower™ from 1 July 2014. The State Government continues to purchase carbon offsets to offset the travel and energy consumption by Cabinet Ministers in the course of their duties.
- Since July 2010 a minimum of 5kW solar power systems has been installed on new school buildings and large scale refurbished buildings funded through the Capital Works program and the Building the Education Revolution program.
- The National Solar Schools program (NSSP) enables schools to apply for funding for solar power systems, energy efficiency installations and rainwater tanks. Since 2008, 127 schools have received NSSP funding, with a further 89 schools to be included in the 2010/11 funding round. This program will continue until 2013 and allow for schools to apply for \$30,000 in the two remaining funding rounds.
- The Green School Grant program was funded by the State Government between 2000/01 to 2009/10 and in the final round 16 schools that had consistently recorded high energy use were funded \$30,000 each to install an energy management system.

Object 4: Research and development

Section 3(1)(d): to promote research and development with respect to the development and use of technology to reduce or limit greenhouse gas emissions or to support adaptation to climate change, including by developing ways to remove greenhouse gases from the atmosphere.

The State Government has supported a range of research and development initiatives, including:

- The *Microalgae Biofuels Industry Development Plan for South Australia*, which was finalised in December 2009. The final report makes 13 recommendations to the State Government for the development of R&D, market development measures and the creation of a flexible policy framework that supports innovative business models for commercialisation.
- Participation in national and international discussions regarding the regulation of, and investment attraction for greenhouse gas storage projects.
- Research and analysis of carbon sequestration from revegetation activities in the Murray-Darling Basin and Mid-North regions. Results from this work have been used to evaluate the suitability of the National Carbon Accounting Toolbox for State carbon accounting purposes.
- The National Soil Carbon Research program, which is a three-year project involving sampling agricultural soils in the Mid-north and Eyre Peninsula in order to identify and map the potential for soils to store carbon and determine the influence of management practices on soil carbon.

Object 5: Commercialisation of new technology

Section 3(1)(e): to encourage the commercialisation of renewable energy and of technologies that will reduce or limit greenhouse gas emissions or support adaptation to climate change.

The State Government has undertaken or supported a range of actions and initiatives aimed at encouraging the commercialisation of renewable energy and emissions reduction technologies have been undertaken by the State Government. These have focussed on renewable energy technologies and building innovation.

Renewables

- RenewablesSA commenced in mid 2009 to provide a single focus for the Government's efforts to draw more renewable energy to the State through the implementation of a framework for attracting renewable energy investment and management of a \$20 million Renewable Energy Fund. Funding agreements have been executed to date to support the provision of grants to:
 - Establish the South Australian Centre for Geothermal Energy Research at the University of Adelaide (\$1.6 million). Additional support of \$2 million (\$1 million from RenewablesSA and \$1 million from the departments of Primary Industries and Resources (PIRSA), and Trade and Economic Development) to continue the work of the Centre was provided in June 2011.
 - Undertake the Green Grid feasibility study which examined the market, regulatory and physical conditions needed to unlock the State's vast renewable energy resources initially in the Eyre Peninsula (\$1 million).

- Assess the feasibility of large scale solar thermal and solar photovoltaic projects as part of the Commonwealth’s Solar Flagship Program (\$150,000).
 - Research, develop and demonstrate a solar thermal air-conditioning prototype suitable for residential application (\$200,000).
 - Undertake biomass collection trials in the Yorke Peninsula (\$300,000).
 - Undertake a feasibility study to test the commercial viability of the pyrolysis of organic waste for electricity production (\$274,000).
 - Test a locally developed, small scale automatic solar tracking device (\$100,000).
- Wind generation capacity in South Australia has continued to increase. In 2010/11 South Australia’s current total installed capacity reached 1,150 MW, equivalent to approximately 54% of the Nation’s installed wind generation capacity.
 - The Solar Feed-in Scheme rewards electricity customers with eligible small-scale solar systems 44c for each kWh fed into the electricity grid. As at 30 June 2011 there was 166 MW of solar capacity, comprising 102 MW of capacity installed and connected to the grid by over 46,000 solar customers, and 64 MW of capacity from around 29,000 customers with approval to connect a solar generator to the grid.
 - Carnegie Wave Energy was awarded South Australia’s first licence to trial wave energy in February 2009. It covers an area of 17,000 ha of seabed adjacent to Port MacDonnell with a view to building a 50 MW power station.
 - Wave Rider Energy Ltd are progressing the establishment of a \$5 million wave pilot plant off the Eyre Peninsula.
 - 86% of Australia’s total \$680 million estimated investment in geothermal exploration and proof-of-concept projects to December 2010 have been in South Australia. Over \$500,000 was provided from the SA Regional Development Infrastructure Fund for half the cost of developing the transmission infrastructure for Australia’s first 1 MW ‘hot fractured rock’ geothermal power plant. It is expected to be the first pilot plant of its kind in Australia.
 - 25 companies hold a total of 210 geothermal exploration licenses (GELs) in South Australia, representing 55% of all GELs held nationally.
 - In recognition that a viable bio-energy industry requires the right combination of feedstock availability and costs, a report was prepared for the Limestone Coast Regional Development Board Inc on its alternative energy solution project.

Building innovation

- The Building Innovation Fund is a four-year \$2 million initiative that aims to demonstrate innovative ways to reduce the carbon footprint of existing commercial buildings. The Fund offers grants to owners of commercial buildings for retrofitting existing buildings, which significantly reduce the building’s energy use and greenhouse gas emissions.
- Climate Smart Precincts is an initiative of the Climate Group and aims to bring together leading companies and State Governments to fast-track low-carbon, climate resilient urban design. The initiative is focussed on generating precinct level demonstration projects of low-carbon technologies and lifestyles. The first workshop under the Climate Smart Precincts Initiative was held in South Australia in February. As a result of a high level of interest from the South

Australian Government and initiative participants, a second Climate Smart Precincts workshop was held in August 2011.

Object 6: Recognise those who commit to action

Section 3(1)(f): to provide recognition to bodies and persons who commit to addressing climate change by achieving reductions in greenhouse gas emissions, by increasing the use of renewable energy sources, by introducing emissions off set programs or by adopting other relevant initiatives.

The State Government has focussed on two programs to provide recognition to those who commit to addressing climate change. The Sector Agreement program recognises industries and regional leaders, while the Green Hubs program supports community groups.

- Under section 16 of the Act, 17 Sector Agreements have been signed with industries and community groups as diverse as steel, tertiary education, local government and Regional Development Australia. Sector agreements are very well supported by industry partners and the State Government continues to receive requests to participate in the program. The terms of two of these agreements have been completed.
- The State Government also worked with the Conservation Council to deliver the Green Hubs community engagement program. Developed and implemented by the Council, this program worked with community clubs and societies to implement practical changes to make their facilities more environmentally sustainable and influence the behaviour of their members and local communities. The Conservation Council is exploring ways to continue this program.

Object 7: Business and community consultation and early action

Section 3(1)(g): to encourage and facilitate business and community consultation and early action with respect to issues surrounding climate change.

The State Government has consulted with businesses and communities on a range of climate change issues.

Premier's Climate Change Council

- The PCCC was established under section 9 of the Act and is currently in its second term. Current members of the Council were appointed from 1 May 2011, for a period not exceeding 3 years. The PCCC provides independent advice to the Minister about reducing greenhouse gas emissions and adapting to climate change.

Community

- The State Government worked with the Conservation Council to deliver a \$230,000 Sustainability Community Grants Program to fund 28 projects to work with the community in response to climate change.

Carbon Farming

- The State Government has been encouraging the Commonwealth Government to actively consult with South Australian stakeholders on the Commonwealth's proposed Carbon Farming Initiative. NRM Landcare facilitators across Australia have undertaken training in preparation for the commencement of the Initiative.

Industry

- The Business Sustainability Alliance (BSA) is a partnership between Department of Trade and Economic Development/Innovate SA, Zero Waste SA, Environmental Protection Agency and SA Water. The BSA has engaged over 350 businesses with a range of clean technology programs designed to accelerate the uptake of sustainable business practices. Initial results of the program have yielded annual savings of \$12.1 million and over 5,000 tonnes of greenhouse gas emissions.
- The State Government established a \$2.15 million Cleantech Partnering Program in November 2010 as part of its commitment to developing a Cleantech industry in South Australia. The program will be delivered over three years to assist small and medium enterprises to commercialise new ideas and products relevant to the rapidly growing market for environmentally responsive products. The program provides innovation grants up to \$50,000 for proof-of-concept and commercial viability testing and commercialisation grants up to \$100,000.

Education and Training

- On 1 February 2010, the State Government purchased the former Mitsubishi site at Tonsley Park with a view to establishing an integrated sustainable technologies employment precinct. A \$125 million Sustainable Industries Education Centre, which will be part of the precinct, will specialise in training more than 8,000 students a year in new green technologies associated with the burgeoning \$4.5 billion construction industry which accounts for 8.3% of overall state employment.
- The Skills for All initiative, announced on 10 February 2011, commits an additional \$194 million over the next six years to support an increase of 100,000 training places. The initiative will also provide a vehicle to meet the Commonwealth's *GreenSkills* sustainable training agenda, as well as South Australia's future sustainable training needs delivered through the Sustainable Industries Education Centre.
- The Skills in Environmental Sustainability Pilot Program has been allocated \$500,000 funding under the Government's 100,000 Jobs Strategy. The 2010/11 program provides training for existing workers in sustainable industries experiencing rapid growth.
- *Sustainable and Attainable: Tackling Climate Change* is a climate change education resource, delivered to teachers. The resource supports learning and action to address climate change in schools and preschools. The State Government is working in partnership with the Adelaide Mt Lofty Ranges Natural Resource Management Board's 'NRM Education' program to support schools to learn about, plan and take action to address climate change issues in water and biodiversity.

Object 8: Support and Facilitate Adaptation

Section 3(1)(h): to support measures to facilitate adaptation to circumstances that will inevitably be caused by climate change including by supporting measures that will improve the ability of the community species and ecosystems to deal with the effects of climate change.

The State Government has undertaken or supported a range of adaptation activities.

Planning

- Guided by advice from the PCCC and the Natural Resources Management Council, the Department of the Premier and Cabinet produced a draft *Climate Change Adaptation Framework for South Australia* ('the Framework').
- The Framework was released for consultation in December 2010. The State Government is currently in the process of revising the framework based on the outcomes of consultation and is expecting to release the final framework by the end of 2011. The Framework will assist in developing a coordinated and integrated response to climate change adaptation in South Australia. Action to address climate change will allow communities, businesses and individuals to minimise any negative impacts and also to identify opportunities.
- The Barossa and Eyre Peninsula Regions have entered into regional sector agreements under the Act. The agreements will underpin adaptation planning in the State Government regions. Other regions are in the process of negotiating agreements.
- The State Government is participating in an integrated vulnerability assessment project with the Central Local Government Region of South Australia, Northern & Yorke Regional Development Australia, and Barossa Regional Development Australia. This will identify the areas in those regions that are most susceptible to the impacts of climate change and highlight priorities for early action. The State Government has completed a first pass biophysical vulnerability assessment of the Northern and Yorke NRM region which has identified assets and sectors most vulnerable to climate change. Preliminary adaptation strategies have been developed with key stakeholders.

Research

- The State Government is funding the Transect for Environmental Monitoring and Decision Making (TREND) project in conjunction with the University of Adelaide. This Project will assist with the establishment of a network for climate change monitoring in South Australia for terrestrial and marine, natural and production systems. This network will provide the state with a climate change early warning system and a legacy of long term monitoring.
- The Premier's Science and Research Fund was established to facilitate investment in key science and research initiatives of strategic and sustainable value to the State. Funding of \$4.2 million is available per annum for new and continuing strategic R&D initiatives. Over the last 8 rounds, \$31.5 million has been awarded. Of this, \$7.1 million has been awarded to projects that focus on climate change or renewable energy.

Water

- The Goyder Institute for Water Research was established to provide independent scientific advice on the State's water supplies, improve the government's ability to forecast threats to water security, and develop an integrated approach to water management. The State

Government is providing \$25 million over five years and this will be matched in kind by CSIRO, and the three SA universities.

- State and Local Governments, together with SA Water have undertaken a range of projects to diversify South Australia's water supply, including desalination, waste water reuse and stormwater harvesting.
- As part of the implementation of *Water for Good*, the State's water security plan, an important body of work is being developed through regional-scale studies on the impacts of climate change on water resources in South Australia. A number of initiatives are being implemented under *Water for Good* to encourage the wise use of water.
- A Demand and Supply Statement for the Eyre Peninsula was released in April 2011. The statements are being developed for the eight Natural Resource Management Regions of South Australia. They will help ensure that long-term solutions are based on a thorough understanding of the state of local resources, the demand for them, and likely future pressures, including the impacts of climate change.
- In June 2010, South Australia released the *Long-Term Plan for the Coorong, Lower Lakes and Murray Mouth Region*. The plan aims to secure the region as a healthy, productive and resilient wetland system that maintains its international importance.

Public Health

- *SA Health Extreme Heat Plan* has been developed to ensure a planned, managed and effective response to an extreme heat event. The Emergency Management Unit in the Department of Health produced a comprehensive suite of heat health information for the general public.
- The State Government in collaboration with the University of Adelaide is currently investigating community risk factors during extreme heat events including a survey of the elderly that explores their experiences during recent heatwaves.

Emergency Management

- Eleven Zone Emergency Management Committees have been established based on the new State regional boundaries. The Committees have received funding in 2010 and 2011 under the Natural Disaster Resilience Program to undertake emergency management planning that includes consideration of climate change impacts.
- Extreme heat arrangements have been put in place by the South Australian State Emergency Service in collaboration with the Bureau of Meteorology to forecast and warn the community and the relevant agencies of forthcoming extreme heat events.

Natural Resources Management

- *NatureLinks* is SA's primary strategy to guide on-ground action to increase the resilience of terrestrial, marine and freshwater biodiversity to climate change through the establishment of landscape-scale biodiversity corridors. The State-wide NatureLinks Plan 2010 – 2013 has been finalised, and sets out the programs strategic directions and key outcomes. The NatureLinks Partnership Forum was held in June 2010 to further engage key stakeholder groups with NatureLinks and improve partnership arrangements for delivery.
- Over 1,000 hectares of plantings have already been established as part of the Million Trees Program. When completed, the program will have reconstructed approximately 2,000 hectares of predominantly woodland habitat. Over its lifetime, this reconstructed habitat will absorb an estimated 600,000 tonnes of CO₂-e.

- The Coast Protection Board convened a Sea Level Rise Advisory Committee to review its policies in relation to new development and sea level rise.
- Recovery planning efforts for threatened species and ecological communities in South Australia continue to identify and prioritise objectives and actions to assess threatening processes such as climate change.
- The South Australian Seed Conservation Centre is one of 14 organisations comprising the Australian Seed Bank Partnership which has been formed to safeguard Australia’s flora and plant communities against extinction. As of April 2011, seed has been collected and stored for 454 (57%) of South Australia’s rare and threatened plant species. This is ahead of the timeline target of 53%.
- The Trans-Australia Eco-Link is a joint initiative between the South Australian and Northern Territory Governments to establish a 3,500 kilometre-long wildlife corridor of connected landscapes and natural places from Spencer Gulf in South Australia to the Arafura Sea and Arnhem Land in the Northern Territory.

Agriculture

- The State Government, with support from the Commonwealth Government’s Natural Disaster Resilience Program, is installing a weather station at an inland location in the vicinity of Parndana, Kangaroo Island (three existing stations are all on the coast). The inland station will allow a climatology of central parts of the Island to be constructed, which will directly assist the understanding of forecasters of the meteorological variations across the Island.
- The State Government has completed a pilot study into the potential impact of climate change on land management strategies in the mid to low rainfall dry-land agricultural regions of the Northern and Yorke NRM region as a result of changes in land use from climate change.
- A State Natural Resources Management program project has commenced which is investigating the potential climate change impacts within SA cropping zones on wheat grain yields, stubble biomass and the frequency that stubble biomass levels may be insufficient to protect land from wind and water erosion.
- The State Government has continued its partnership with the Future Farm Industries Cooperative Research Centre (FFI CRC). The FFI CRC is developing more sustainable farming systems based on perennial plants that contribute to drought and climate change adaptation strategies in broad-acre farming areas.
- The 5 year Drought Response Program under the framework of National Drought Policy has been completed. The Program had an emphasis on improving the strategic planning and risk management of farmers through the “Planning for Recovery” program that provided grants to farmers to engage a strategic planning consultant to assist in the preparation of a plan and to implement projects identified in the plan that underpin preparedness for the next event.
- Monitoring continues of some of Australia’s longest climate change trials that are aimed at enhancing the adaptive capacity of afforestation in primary production landscapes. These trials provide data on specific genetic suitability for drier climates. Oil mallee trials are also underway in low rainfall regions of Murray Mallee and Eyre Peninsula. Here the aim is to provide farmers with the opportunity to diversify incomes e.g. oil or biofuel in changing climates as well as ameliorate soil erosion and biodiversity enhancement.

Land Use Planning and Development

- The *30-Year Plan for Greater Adelaide* was launched on 17 February 2010. The Plan's primary response to the imperatives of climate change is through the creation of a new, compact and more sustainable urban form. Research across the developed world has demonstrated conclusively that more compact urban areas generate fewer greenhouse gas emissions, consume less energy and facilitate the development of more liveable urban environments during hotter and drier conditions. The Plan also outlines specific policies and targets to address the impacts of climate change and to prepare the groundwork for mitigation and long term adaptation.
- The State Government has released the *Water Sensitive Urban Design (WSUD) Technical Manual* providing a technical base for mandating WSUD in new residential and commercial developments for local conditions in the Greater Adelaide Region by 2013

Object 9: Provide for reporting

Section 3(1)(i): to provide for reporting on progress being made within the State to meet the SA target, and other specific or interim targets associated with reductions in greenhouse gas emissions, and to meet targets associated with the use of renewable electricity.

Object 9 has been met by the establishment of reporting requirements in sections 7 and 21 of the Act.

Object 10: Promote consistency with national and international policy

Section 3(1)(j): to promote action within South Australia that provides consistency with national and international schemes designed to address climate change, including schemes that relate to emissions trading and emissions reporting.

South Australia continued to contribute to the implementation of a *National Strategy on Energy Efficiency* (NSEE), by undertaking a range of actions. NSEE aims to accelerate energy efficiency efforts and to streamline roles and responsibilities across levels of governments.

- The Eco-Innovation Program is a \$3 million program to be delivered over three years from 2010/11 to help companies develop innovative solutions that promote resource efficiency and re-use to facilitate the 'greening' of South Australia's manufacturing industry.
- The CleverGreen program promotes clean technology initiatives and activities, and has included information sharing, industry cluster formation, award for industry innovators and a grant program. It helps small and medium enterprises take new cleantech products, processes and services from conception through to market. CleverGreen, to be delivered over three years from 2010/11, is a \$2.15 million grant program funded by the South Australian Government.
- South Australia has continued its involvement in the National Minimum Energy Performance Standard and labeling program for appliances and equipment.
- From September 2010, all new homes and extensions built in South Australia must achieve a 6-star level of energy efficiency through the Building Code of Australia.

- The *Complementarity Review of South Australian Climate Change Measures* was undertaken in 2009 to determine whether existing climate change initiatives in the State were efficient, effective and complementary to the proposed Commonwealth Emissions Trading Scheme. South Australia has continued to have regard to the Council of the Australian Governments' (COAG) *Document of Shared Understanding* regarding complementarity. This document recognised the importance of developing a streamlined set of climate change measures across jurisdictions to complement the carbon price and help reduce Australia's greenhouse gas emissions at least cost.

International

Since 2008, Premier Mike Rann has been Co-Chair of the States and Regions Alliance, a group of over 50 sub-national governments that are committed to accelerating action on climate change. The Alliance meets annually at the Climate Leaders' Summit to make commitments to take action to tackle climate change and to report against previous commitments.

In December 2010, Premier Rann committed to the *Cancun Statement of Federated States and Regional Governments on Low Carbon and Climate Resilient Development*. The statement, made at the meeting of the States and Regions Alliance in Cancun, committed the South Australian Government to:

- Develop specific policies to reduce greenhouse gas emissions, stimulate green jobs and promote energy security in the following areas:
 - Decreasing energy use
 - Promoting energy efficiency
 - Supporting the transition to a sustainable transport system
 - Encouraging renewable energy generation
- Explore sectoral agreements between states and regions on renewable energy, energy efficiency, alternative fuel and electric vehicles
- Provide further support to regions in developing countries.

Object 11: Contribute and respond to national and international policy

Section 3(1)(k): to enhance the ability of the State to contribute to and to respond expeditiously to national and international developments associated with issues surrounding climate change.

The South Australian Government has been a key contributor to national and international development associated with climate change:

National

- The South Australian Government is a member of the States and Territories Forum which has been established by the Commonwealth Government to progress issues relating to the development of the carbon pricing mechanism and complementary policy measures.
- The South Australian Government has been a member of the following national processes through COAG:
 - The Senior Officers Working Group on Adaptation
 - The Complementary Measures Working Group

- Renewable Energy Target Working Group
- The Senior Officials Group on Energy Efficiency
- The South Australian Government is also a member of the Council for the Australian Federation Working Group on Adaptation and the Forum for Engagement with the National Climate Change Adaptation Research Facility for the States and Territories.
- The State Government has continued to contribute to the development of national climate change policy including the development of the National Greenhouse and Energy Reporting System and the Renewable Energy Target.
- As a member of the Australasian Procurement and Construction Council’s Government Property Group, South Australia has collaborated with other jurisdictions to develop a National Green Leasing Policy and other strategies to reduce the demand for government office space and related resources.
- South Australia in collaboration with the New South Wales Government led the development of a national workshop on co-generation, tri-generation and other distributed energy technologies that increase energy efficiency. The workshop was the first step in delivering one of the measures under the NSEE.

International

Following the Climate Leaders Summit in Cancun in December 2010, the South Australian Government committed to three Sectoral Frameworks which contain a series of commitments to work on particular policies both with partners and within the State. These Sectoral Frameworks include Renewable Energy, Efficient and New Energy Vehicles and Smart Technology. The work with partners predominantly involves working with national governments and key private sector organisations.

- The commitments under the *Renewable Energy Sectoral Framework* include: setting ambitious deployment targets; assisting the development of emerging renewable energy technologies; sharing knowledge on overcoming impediments to renewable energy take-up; and engaging business and other stakeholders to increase renewable energy deployment.
- The *Efficient and New Energy Vehicles Sectoral Framework* contains commitments to: encourage a reduction in the use of fossil fuels; increase the deployment of low emission technology; utilise low emission vehicles in the government and wider vehicle fleets; encourage information sharing; and work with business to increase sales of low emission vehicles.
- The *SMART Technology Sectoral Framework* contains commitments to: facilitate the uptake of smart technologies; work with businesses to facilitate smart cities; and adopt emissions reduction targets.

Below are some actions taken by the South Australian Government to fulfil commitments made at The Climate Leaders’ Summits in 2009 and 2010.

- In 2009, the South Australian Government, in partnership with the United Nations Development Program, provided training for Timor-Leste delegates to the United Nations Framework Convention on Climate Change Conference of the Parties in Copenhagen and supported additional delegates to attend the Conference.

- In 2010, the South Australian Government provided financial assistance to the Government of Timor-Leste, through the United Nations Development Program to help deal with significant landscape degradation issues which are likely to be exacerbated under changing climatic conditions. Through the use of this funding the Directorate of Forestry is organising technical training and materials assistance to groups of unemployed people in five Districts to operate tree nurseries and implement tree-planting/ forest area rehabilitation schemes in their local areas.
- The South Australian Government and Adelaide City Council are partners in the Climate Group LightSavers project, a global trial to test the efficacy and cost savings of outdoor LEDs in cities including Guiyang, Hong Kong, Kolkata, London, Mumbai, New York, Shanghai, Tianjin and Toronto. The Adelaide City Council has provided two pilot sites for trial with the LightSavers programme: Park 2 and Bonython Park.
- The South Australian Government is also a member of the EV20 which is an initiative to accelerate the global deployment of plug-in electric vehicles. Chaired by HSH Prince Albert II of Monaco, EV20 is building a core group of 20 EV leaders – businesses and governments committed to transforming the market for electric vehicles by 2020 – and a wider network of like-minded partners. The current working group includes South Australia, Renault, TNT, Venturi, Ener1, Quebec, Amsterdam, North Rhine Westphalia and London. Over the next three years, the EV20 group will focus on activities designed to speed up market transformation by 2020, with a particular focus on vehicle fleets, financial mechanisms and government policies.

REVIEW OF THE TARGETS

This section provides information about the need to review and update the targets to ensure they are consistent with current national and international approaches. Progress towards achieving these targets is outlined under Object 1 (above).

In addition, this section provides information on the impact of emissions reduction targets on the South Australian economy. This discussion is included pursuant to subsection 21(2) paragraph (c) of the Act.

Section 5 of the Act provides the following targets for South Australia:

The principal target under this Act is to reduce by 31 December 2050, greenhouse gas emissions within this State by at least 60% to an amount that is equal to or less than 40% of 1990 levels.

Two related targets under this Act are—

- to increase the proportion of renewable electricity generated so that it comprises at least 20% of electricity generated in the State by 31 December 2014.
- to increase the proportion of renewable electricity consumed so that it comprises at least 20% of electricity consumed in the State by 31 December 2014.

Addressing climate change requires a significant reduction in global emissions. The Commonwealth Government is best placed to set mitigation policy for the nation and has the constitutional power to do so. The Commonwealth Government's *Clean Energy Future* climate change strategy was released on 10 July 2011. The strategy proposes an initial fixed-price carbon pricing mechanism moving to a cap and trade scheme in 2015. The strategy contains a target to achieve an 80% reduction on 2000 emissions levels by 2050. Although the strategy has not yet become law, it is appropriate for this review to consider the role of South Australian targets in light of Commonwealth Government policy.

The process for reviewing the South Australian targets can be informed by review processes undertaken in 2008/09 with respect to the then proposed Carbon Pollution Reduction Scheme (CPRS). On 29 November 2008, COAG agreed to the Document of Shared Understanding regarding climate change mitigation measures. As stated previously, this document recognised the importance of developing a streamlined set of climate change measures across jurisdictions to complement the carbon price and help reduce Australia's greenhouse gas emissions at least cost.

The Document of Shared Understanding included a detailed set of principles to guide the assessment of all jurisdictions' mitigation measures and determine whether the policies were complementary. Mitigation measures were considered complementary if they:

- addressed a market failure that will not be adequately addressed by the pricing mechanism
- addressed a sector that is not covered by the carbon pricing policy, or
- had a clear and appropriate non-abatement objective.

The agreement required states to review their existing policies and phase out policies that were classified as non-complementary.

The Commonwealth has indicated that a similar approach is likely to be taken with respect to the *Clean Energy Future* carbon pricing package.

Setting appropriate targets for South Australia is critical to ensuring the state contributes its share of national emissions reductions. It is worth noting that, under a market based carbon pricing mechanism, emissions reductions will not be shared proportionately or equally across jurisdictions. Rather, emissions reductions will occur in jurisdictions where they can occur at lowest costs. This will be influenced by a combination of natural resource availability and economic and policy conditions.

Setting emissions reduction targets for South Australia at the right level will provide a focus for these lower cost reductions to occur in South Australia. The correct target should not result in South Australians undertaking emissions reductions which could occur for a lower cost in another jurisdiction.

Section 5 of the Act provides the Minister with power to set sector based and additional interim targets. In doing so, the Minister must seek to obtain the advice of relevant experts and take into account relevant methodologies and principles that apply within other Australian jurisdictions. The Minister must also seek to provide consistency with best national and international practices with respect to setting the baseline and determining a method for calculating reductions in greenhouse gas emissions or the use of renewable energy.

In addition to these legislative requirements, there is a range of issues that need to be considered in determining the appropriate targets for South Australia. Briefly, these include:

- The need to ensure South Australia plays a strong role in the reduction of global emissions
- The economic impacts and achievability of meeting the targets
- The range of targets that could be set, for example, greenhouse gas efficiency or absolute emissions reductions
- Whether emissions reduction pathways or interim targets should be included in the legislation
- The benefits of using aspirational ‘stretch’ targets to guide the State
- The roles of various economy-wide and sector-specific targets in reducing emissions.

Greenhouse Gas Emissions Reduction

South Australia’s current target is to reduce by 31 December 2050, greenhouse gas emissions within this State by at least 60% to an amount that is equal to or less than 40% of 1990 levels. It is proposed that the South Australian principal target should be amended to reflect the Commonwealth target of an 80% reduction by 2050, with a baseline of 2000 levels. A range of issues pertaining to this target were identified during the legislative review.

The inclusion of the headline emissions reduction target provides an indication of the South Australian Government’s long-term policy to reduce greenhouse gas emissions in the State, which provides increased certainty in relation to policy settings for business and the community. The recent South Australia’s Strategic Plan (‘SASP’) community consultation processes revealed support for the existence of a headline target. Two-thirds of survey respondents rated leadership in addressing climate change as important.

The Act places a requirement on the Minister to seek to achieve consistency between policies or programs developed or implemented under this Act and initiatives, standards, schemes or commitments at the national and international levels to address issues associated with climate change. Mirroring the Commonwealth target is appropriate given this requirement.

Currently, South Australia and Tasmania are the only Australian jurisdictions to use 1990 as the baseline year for their targets. New South Wales, Victoria, Queensland, Western Australia and the Australian Capital Territory all use 2000 as the baseline year. The Northern Territory has adopted 2007 as its baseline year. The Commonwealth proposes using 2000 as the baseline year. Under the Copenhagen Accord, the majority of Annex I parties⁶ to the United Nations Framework Convention on Climate Change use 1990 as a baseline when setting economy-wide emissions reduction targets.

The South Australian legislation requires South Australia to take into account relevant methodologies and principles that apply in other jurisdictions and to seek to provide consistency with national and international practices in setting and determining the methodology for calculating baselines. In these circumstances it is considered appropriate to amend the baseline year for South Australia to 2000 in line with the majority of Australian jurisdictions.

The Commonwealth Government's target is more ambitious than South Australia's current principal target by a considerable margin. Meeting the current State target requires a 2050 emissions level of 12,879 MT CO₂-e. To meet the Commonwealth's target, South Australia's 2050 emissions level would be around 6,847 MT CO₂-e. These numbers are likely to be subject to future revision. However, such revisions will not be material to the conclusion that the Commonwealth target is approximately twice as hard for South Australia to reach as the existing target.

The Commonwealth Government has indicated that approximately 50% of the emissions reductions required to achieve the 2050 target may be sourced through international emissions trading units. South Australia will need to develop a methodology for accounting for these units in measuring South Australia's performance against the State target. This will be subject to independent review as required for every alternate review under section 7 of the Act, which stipulates that two-yearly reports on the operation of the Act must be prepared by the Minister.

The review found that there are some views that an emissions reduction target in South Australian legislation may fail the test of complementarity. A ratio target of overall emissions intensity compared with GSP has been suggested as an alternative principal target for South Australia that may be more complementary.

The State Government has recently undertaken an extensive consultation process to facilitate the 2011 update of the SASP, released on 8 September 2011. SASP contains 100 targets, including nine targets under the vision – *South Australians think globally, act locally and are international leaders in addressing climate change*. The following three targets are relevant to the review of the Act.

SOUTH AUSTRALIA'S STRATEGIC PLAN

Goal: We reduce our greenhouse gas emissions.

Target 59: *Greenhouse gas emissions reduction*

Achieve the Kyoto target by limiting the state's greenhouse gas emissions to 108% of 1990 levels during 2008-2012, as a first step towards reducing emissions by 60% (to 40% of 1990

⁶ **Annex I** Parties include the industrialized countries that were members of the OECD (Organisation for Economic Co-operation and Development) in 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European States.

levels) by 2050.

Goal: South Australia has reliable and sustainable energy sources, where renewable energy powers our homes, transport and workplaces.

Target 64: *Renewable energy*

Support the development of renewable energy so that it comprises 33% of the state's electricity production by 2020

Target 66: *Emissions intensity*

Limit the carbon intensity of total South Australian electricity generation to 0.5 tonnes of CO₂/MWh by 2020

The targets proposed by this paper for renewable energy and emissions intensity directly mirror those in the SASP.

The emissions reduction target in the SASP is similar to that currently in the Act. This is due to the fact that the Commonwealth's proposed emissions reduction target was released on 10 July 2011. The consultations for the updated SASP were undertaken from July – December 2010. The Community Engagement Board Report was released on 20 April 2011. It was not possible to conduct consultations on an updated target prior to the release of the updated SASP. It is also appropriate to amend South Australian policy after the carbon pricing legislation has been passed by the Commonwealth Parliament. Due to the timing of this review it is appropriate to consider the issues arising from a proposal to update the emissions reduction target to mirror the Commonwealth target.

Subject to the outcomes of community consultation, the South Australian Government will obtain the advice as outlined in section 5 of the Act before updating the target. Feedback is sought on the proposal to update the headline target for South Australia to:

Reduce by 31 December 2050 greenhouse gas emissions within the State by at least 80% to an amount that is equal to or less than 20% of 2000 levels.

Emissions Reduction Pathway

There is currently no emissions reduction pathway or interim emissions reduction target established under the Act. The review has found that the introduction of such a target is not warranted.

In 2009 South Australian climate change measures were assessed for complementarity to the proposed CPRS. The power to set interim and sector based targets were classified as non-complementary, as they may be inconsistent with the national carbon pricing policy or cause confusion for industry and the community. It is likely that the setting of an interim target would similarly be found to be non-complementary to the Commonwealth's proposed carbon price.

The 2020 targets for renewable energy generation and emissions intensity of electricity generation indicate the early policy intentions for the State as well as achieving other objectives, such as supporting industry development in renewables. Given the relatively short timeframe to 2020, an additional interim target may not add value.

The review also found that there were some alternative views that setting an interim emissions reduction target for South Australia could provide a signal of the need to control peaking of global

emissions this decade. It would demonstrate South Australia’s commitment and leadership in national and international mitigation efforts.

Feedback is sought on the proposal not to include an emissions reduction pathway in the Act.

Renewable Energy Generation Target

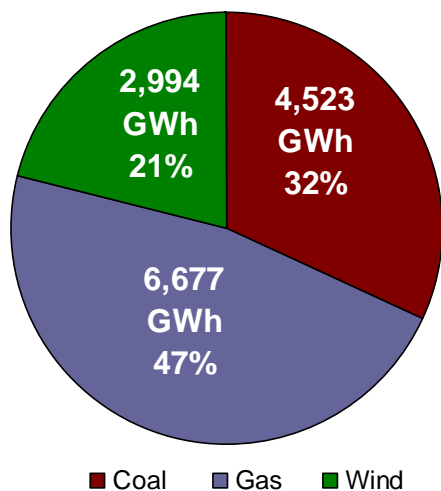
It is proposed that the two current renewable energy targets in the Act should be amended as follows:

Increase the production of renewable energy generated so that it comprises at least 33% of electricity generated in the State by 31 December 2020.

This target was recently adopted in the South Australian Strategic Plan following extensive community consultation processes.

The requirement to amend the generation target arises from the early achievement of the target in 2010/11, three years ahead of schedule. The target has been achieved early because of the high levels of installed wind power capacity in South Australia to date. In 2010/11, installed wind capacity reached 1,150 MW, which at the time represented 54% of Australia’s total wind generating capacity. The growth in the installed capacity of wind in South Australia translates into an increasing proportion of the State’s electricity generation by wind, as depicted by the following graph:

Electricity Output by Fuel Source in South Australia in 2010-11



It is also expected that electricity produced by domestic solar photo-voltaic installations in the State would add to levels of generation from renewable energy sources.⁷ In terms of installed capacity, as at

⁷ Electricity production from domestic solar photo-voltaics has not been reported as the mechanisms to support the collection of data is not readily available. In its latest report of the South Australian Supply and Demand Outlook 2011, the Australian Energy Market Operator indicates that the State’s domestic solar photo-voltaic installations contribute more energy annually than diesel-fired generation.

30 June 2011, there were 166 MW of solar capacity eligible to receive a feed-in tariff under the South Australian Government's Solar Feed-in Scheme, comprising 102 MW of grid-connected installed capacity and 64 MW of capacity with approval to connect.

In June 2009, the South Australian Government made a commitment to a target of having one-third of the State's electricity generation coming from renewable sources by 2020. This announcement coincided with establishment of RenewablesSA to provide a single focus for the Government's efforts to draw more renewable energy investment to the State and the creation of the \$20 million Renewable Energy Fund to be applied to these efforts.

This target reflects the progress to date and the State's commitment to remaining an international leader in supporting deployment of renewable energy.

In setting the 33% target, the South Australian Government was informed by expert advice received in May 2009 from McLennan Magasanik Associates (MMA) and the National Institute of Economic and Industry Research (NIEIR). There are some views that the State could aspire to a higher target for renewable energy generation. In fact, the MMA report refers to a renewable energy target of 40% being achievable by the State under certain conditions, including the development of geothermal technology as a major source of renewable energy in 2020. The report stated:

"The general conclusion from the study is that a renewable energy target of up to 40% of total generation in 2020 in South Australia is possible under some plausible and favourable circumstances but that the expected rate of technological development and the Commonwealth commitment to a 20% renewable energy target for Australia will likely see a lower level achieved. Achievement of this potential rests on the further development of the transmission system within South Australia and between South Australia and adjoining States. South Australia could also take the lead in some facilitating technologies such as energy storage to maximise the potential for its renewable energy resources."

The MMA analysis provides some confidence in the feasibility of a 33% target as it identifies the factors that need to come to fruition for 40% to be achieved. While the study includes some conservative assumptions surrounding the 40%, further confidence is provided by an additional discount to bring it to 33%.

The analysis projects continued growth in renewables generally but does not take into account adverse outcomes that have emerged in one or more of the factors being relied on to achieve 40%. The main such element is the slower than expected growth of the geothermal sector which is largely the consequence of the difficulty in raising capital in the post Global Financial Crisis environment.

The availability of transmission infrastructure to connect and transfer power to load centres in other States is the other key factor affecting the realisation of the higher target identified by the MMA analysis. At the same time, there are a number of offsetting factors, including an increased rate of growth in local demand (e.g. associated with mining) and potential developments in energy storage to maximise the potential for renewable energy.

Since the release of the MMA report, regulatory developments to address barriers to the connection of renewable energy distant to existing networks and interstate sharing of costs of transmission development have not progressed according to the original scope or timeframes. The effect of this is to

render it more difficult to open up vast new renewable energy provinces such as the wind rich Eyre Peninsula.

The review found that the 33% target is still reasonable. The down-side of the slow progress of geothermal energy and unfavourable regulatory outcomes is counterbalanced by the up-side of achievements that were not considered by the consultants. The precursor to setting a higher target was South Australia achieving the target of 20% of energy supply coming from renewable sources 3 years earlier than the 2014 date. The growth in wind energy in South Australia has been faster and greater than projected.

The 20% target was met with an installed wind energy capacity of 1,150 MW, representing 99% of the installed renewable energy generation. Assuming a simple pro-rata increase, the 33% target could be met by 1,900 MW of wind energy capacity. To meet the target from wind energy requires an additional 750 MW by 2020.

As at August 2011, there was a 52.5 MW wind farm under construction, 701 MW already approved for development and a further 753.3 MW currently the subject of development applications and related processes. Only half of this portfolio of projects needs to be delivered by 2020 to meet the 33% target. Additionally there is over 1 GW of projects in development that have not yet sought planning approval.

To investigate MMA's recommendations the Government has committed to a major study into electricity storage as recommended by the report. This study will help inform the economics of the Green Grid project which aims to treble South Australia's existing wind generating capacity.

The specific focus is high quality wind sites identified on the Eyre Peninsula. A major study commissioned by RenewablesSA has found that a commercial case exists for building 2,000 MW of wind generation and electricity transmission. This project was not included in the original MMA analysis. It moderates some of the risks to achieving the 33% target that have arisen from factors such as the development of energy from geothermal being slower than forecast originally.

While geothermal has been slower to develop, wind energy has been delivered at a faster than expected rate. Recent changes to planning regulations in Victoria are likely to lead to a greater proportion of the wind energy portfolio being brought on stream in South Australia. The deployment of this capacity is capable of being slowed by network constraints. However, strong investor desire to develop projects in the State will help to bring on network investment and interstate connections.

Feedback is sought on the proposal to update the renewable energy generation target in the Act.

Renewable Energy Consumption Target

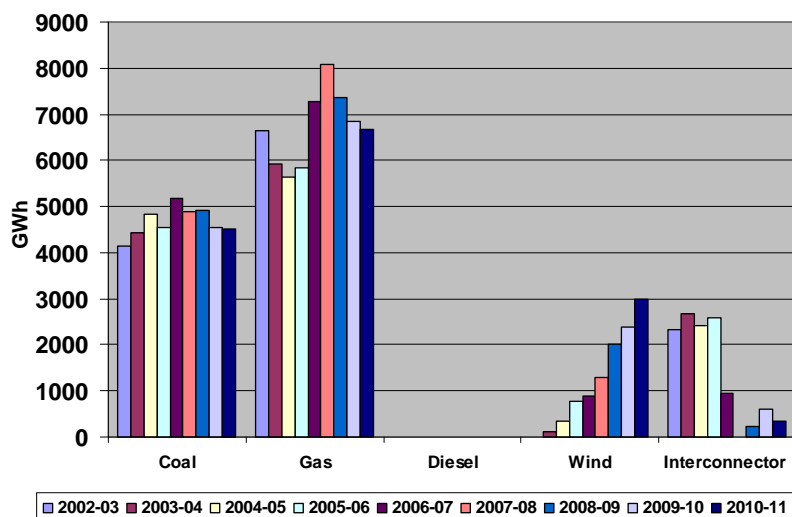
Amending the renewable energy generation target also invites consideration of the benefit of having a consumption target. The target of having renewable energy making up 20% of electricity consumed within South Australia was first developed in 2007.

The review has identified several issues with the consumption target. Firstly, most consumers exercise no discretion over their renewable energy consumption. The national policy settings for increasing renewable energy seek to impose the requirement to purchase electricity from renewable energy sources on electricity retailers and other wholesale purchasers of electricity from the national market. Given these circumstances, the only effective public policy action available for achieving the target is the South Australian Government's own consumption. The use of renewable energy for the desalination plant and the Government's 50% GreenPower™ purchase, which will be an increase in 2014 from the current 20% commitment, will account for around 6% of the 20% target.

In 2009 South Australian climate change measures were assessed for complementarity. The consumption target was assessed as non-complementary to the National Mandatory Renewable Energy Target.

In addition, the review determined that the consumption target is not a useful statistic. Ensuring that South Australia reaches its renewable energy production target is the key and it should not matter where that consumption occurs given that it displaces fossil-fired energy in the National Electricity Market.

Historically, South Australia has been a net importer of electricity. For example, between 2003 and 2006, South Australia imported over 2,000 GWh per annum between across two interconnectors. The following graph demonstrates that the increase in wind generating capacity in South Australia has effectively substituted for net inflow of electricity. Using the data on prospective wind investment set out previously, it is reasonable to expect this trend to continue. Without a significant difference between generation and consumption, the consumption target adds little value.



Note: In 2007-08, South Australia exported 5 GWh of electricity interstate.

In these circumstances, the Review has found that the existing consumption target is not complementary to national policy and is unlikely to serve any practical purpose in changing behaviours. Feedback is sought on the proposal to remove the consumption target.

Emissions Intensity of Electricity Generation

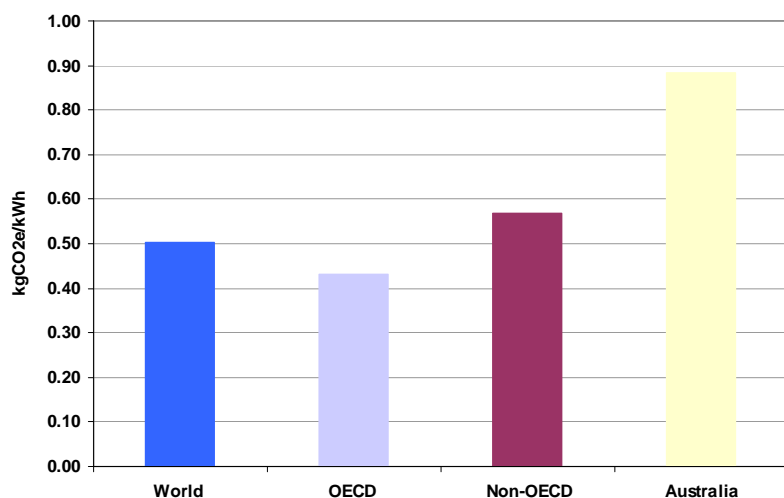
It is also proposed to add a new target to complement the targets for emission reduction and renewable energy. This target was adopted in the 2011 update of the South Australian Strategic Plan. This target is:

Limit the carbon intensity of total South Australian electricity generation to 0.5 tonnes of CO₂-e per megawatt hour by 2020

The competitive advantages of a low-carbon economy are starting to emerge. Australia is not positioned well at present to compete in carbon-sensitive export markets. Assuming the national target of 20 per cent renewable energy is met, the carbon intensity of electricity in Australia is projected to fall to 0.79 tonnes CO₂-e /MWh at 2020.⁸ By way of comparison the emissions intensity of electricity in South Australia is currently 0.68 tonnes CO₂-e /MWh⁹ and is projected to fall to 0.53 by 2020¹⁰.

Based on the latest available data from the International Energy Agency (‘IEA’), there were 0.88 tonnes of carbon dioxide emissions for each megawatt hour of electricity and heat generation in Australia in 2008. In comparison, as shown in Figure 4, the IEA estimates for 2008 show the world average is 0.50 and OECD average is 0.43 kilograms of carbon dioxide emissions per kilowatt hour of electricity and heat generation.¹¹

CO₂ emissions from electricity and heat, 2008



Source: IEA 2010, CO₂ emissions from fuel combustion and Department of Climate Change and Energy Efficiency 2010, National Greenhouse Account Factors

South Australia has experienced a changing electricity generation base in recent years with the increasing contribution of wind to electricity supply. Data from the National Greenhouse Accounts shows CO₂-e emissions associated with electricity consumed in South Australia have reduced from 11,063 gigagrams in 2005 to 9,802 gigagrams in 2009.¹²

These reduced emissions have been attributed to the increased contribution of wind generation, reduced levels of imported electricity and lower average greenhouse emissions of South Australian generators relative to interstate counterparts.

⁸ Projected Carbon Intensity for South Australian Renewable Energy Target in 2020” McLennan Magasanik Associates, January 2010

⁹ Department of Climate Change and Energy Efficiency, National Greenhouse Accounts Factors, July 2011

¹⁰ McLennan Magasanik Associates *ibid*.

¹¹ CO₂ Emissions from Fuel Combustion Highlights (2010 Edition), International Energy Agency, December 2010. IEA estimates for intensity are based on emissions from electricity generation and heat.

¹² Scope 2 emissions – indirect emissions from purchased electricity. National Greenhouse Gas Inventory Accessed from <http://ageis.climatechange.gov.au>

The South Australian Government is committed to accelerating the de-carbonisation of the economy for two reasons. First, to minimise the costs to the economy of a carbon price, which the Federal Government is seeking to establish in 2012. Secondly, to better prepare our industries to compete in carbon sensitive markets.

An independent report prepared by McLennan Magasanik and Associates (MMA) in February 2010 concludes that the carbon intensity of South Australia’s electricity generation can fall to 0.5 tonnes of CO₂-e /MWh by 2020¹³. As noted above, this level is two-thirds of the level projected for the rest of Australia. The report is available from the RenewablesSA website at www.renewablesa.sa.gov.au

Setting a target of 0.5 tonnes of CO₂-e/MWh is ambitious yet achievable. In effect, the State’s reliance on renewable and gas-fired electricity generation frees it from the relatively high carbon intensity of the Australian economy as a whole.

Setting a target requires consideration be given to the monitoring and reporting that is required to track progress against the target. The Commonwealth’s National Greenhouse and Energy Reporting Scheme (NGERS) provides annual factors to assess emissions. The intention is to use the National Greenhouse Accounts Factors for Scope 2, indirect emissions from consumption of purchased electricity, or similar metric, to measure progress against the target. An independent body will assess this approach in 2013 as part of the next independent report undertaken under section 7 of the Act.

An Emissions Intensity Limit for New Electricity Generation under the *Electricity Act 1996*

On the basis of advice from WorleyParsons¹⁴, the Premier announced on 6 December 2010 the intention to introduce an emissions intensity limit for new electricity generation of 0.7 tCO₂-e/MWh.

The Government is intending to amend the Electricity Act to enact a limit on the emissions intensity of new generation following public consultation.

This proposed limit for new electricity generation is not within the scope of the review of the *Climate Change and Greenhouse Emissions Reduction Act 2007*.

¹³ MMA is now part of the global consultancy group SKM.

¹⁴ WorleyParsons, Emission Intensity Limit New Utility Scale Electricity Generation South Australia December 2010 <http://www.renewablesa.sa.gov.au/files/arp001sagovtemissionlimitspaperrev2-final.pdf>

Targets and the South Australian Economy

Economic impact of SA targets on growth

During the last review queries were raised regarding the effect of the targets in the Act on the South Australian economy. To address these issues, the review included a consideration of the performance of the South Australian economy since the introduction of the Act.

The South Australian economy has grown solidly since the introduction of the Act. Average annual growth in Gross State Product over the 3 years to 2009/10 averaged 3.0% per annum — ½ a percentage point higher than national average annual Gross Domestic Product growth of 2.5% over the same period. This recent performance is impressive considering it was achieved in spite of the global financial crisis in 2008/09 and the Clark shaft accident which disrupted production at Olympic Dam in 2009/10.

The agriculture, forestry and fishing industry, boosted by favourable weather conditions, was the lead contributor to overall South Australian economic growth over the three years to 2009/10, increasing output at an average annual rate of 16%. The construction industry was the second largest contributor in dollar terms, growing by 5.9% per annum on average over the same period. All industries except two — accommodation and food services, and administrative and support services — recorded growth over the three year period. While manufacturing output grew at an average annual rate of only 0.3%, this was nonetheless a better performance than its average over the past ten years which was flat.

Average Annual Economic Growth

Selected South Australian industries (2006/07 to 2009/10) — per cent change per annum

Agriculture, Forestry and Fishing	Mining	Manufacturing	Construction	'Other'	Total
15.5	8.4	0.3	5.9	3.0	3.0

Consistent with solid growth in Gross State Product, South Australian employment has grown strongly over the period since June 2007.

Over the four year period from June 2007 and June 2011, total trend employment increased by 58,400, representing an annual average growth rate of 1.9% per annum. This rate of growth was broadly comparable with national annual average growth over the same period of 2.0% per annum.

The unemployment rate has varied considerably over the past four years, primarily due to the impacts of, and subsequent recovery from, the global financial crisis. In trend terms the unemployment rate in South Australia was 5.3% in June 2011, higher than in June 2007 (4.9%). However, the unemployment rate has been declining since reaching a global financial crisis induced high of 5.7% in February 2009. The national trend unemployment rate currently stands at 4.9%.

This strong economic performance has occurred as South Australia moved towards a net greenhouse gas emission level in 2009 that was reported to be 8% below the 1990 baseline and a whole of economy emissions intensity level that was approximately 57% of 1990 levels.

Greenhouse gas intensity of the SA Economy (tonnes CO₂-e per \$m GSP)		
1990	2008	2009
670	418	382

Economic Impacts of the Proposed Commonwealth Target on Growth

On 10 July 2011, the Prime Minister announced the proposed carbon pricing mechanism, also known as the Australian Government’s Climate Change Plan ‘*Securing a Clean Energy Future*’, negotiated within the Multi-Party Committee on Climate Change.

The carbon price will start at \$23 per tonne of CO₂-e and rise at 2.5% per annum in real terms during the fixed price period from 2012/13 to 2014/15. On 1 July 2015, the carbon pricing mechanism will become a cap and trade system.

According to Commonwealth Treasury modelling, South Australia is the least affected of all States by 2050 and is also modelled to have the second lowest emissions intensity of Gross State Product after Victoria. The Commonwealth Treasury states this modest impact is because South Australia, like Tasmania and Victoria, is less emissions intensive ‘*due to a greater concentration of industries, such as motor vehicles and parts production, textiles, clothing and footwear, and forestry, which grow somewhat faster with carbon pricing*’.

Economic modelling of this nature is, however, only broadly indicative based on current industry structure and emissions intensity, and cannot realistically anticipate all market responses to the package.

Nonetheless initial assessments indicate that many of the anticipated impacts of the carbon price on South Australian emissions intensive trade exposed industries, particularly key regional industries, have been mitigated by government transitional assistance. A range of subsidy programs to assist households and industries that are affected by the scheme will be sustainably funded through revenue generated by the scheme.

REVIEW OF THE POLICIES

In addition to setting targets, the Act supports a range of policy measures which challenge our current practices. Such policies are an important mechanism to achieve appropriate responses to the need to reduce emissions and to adapt to the inevitable impacts of climate change. This section outlines a range of suggested legislative amendments to ensure that the Act reflects and supports the most up-to-date policies and approaches to addressing and managing the impacts of climate change. This discussion is included in the review pursuant to subsection 21(2) paragraph (c) of the Act.

Possible legislative amendments are outlined under each policy section. Enshrining actions in legislation outlines clearly the Government's policy intentions and provides certainty to stakeholders and the community. It should be noted that some of these amendments are proposed as alternatives.

Adaptation to Climate Change

Adaptation to climate change includes activities undertaken by communities and industries to reduce the costs and take advantage of opportunities arising from these inevitable changes. This includes the management of physical exposure and resulting business impacts. To date, national and international efforts to address climate change have concentrated on mitigating or reducing greenhouse gas emissions. To effectively address the many complex challenges of climate change however, it is now accepted that mitigation and adaptation are complementary and equally necessary approaches – not alternatives.

South Australia's Strategic Plan includes a target for South Australia to adapt to the long-term changes that climate change presents.

Target 62: Develop regional climate change adaptation plans in all State Government regions by 2016.

The draft Climate Change Adaptation Framework for South Australia was released for consultation by the Premier in December 2010. That document outlines the management approach for supporting South Australian's to adapt to climate change.

The current legislation focuses on mitigation. The review found that the operational sections of the Act should also provide for adaptation.

Feedback is sought on the following suggested amendments to support adaptation to climate change in South Australia:

- Include a provision for regional agreements that facilitate planning for climate change adaptation, and other purposes. This would provide greater clarity and longevity than the current practice of undertaking regional agreements pursuant to section 16 of the Act (sector agreements).
- Provide an increased emphasis on adaptation in the Act to ensure that adaptation is given an appropriate amount of prominence in the Act, compared with mitigation activities. This could include, for example, amending the functions of the Minister to provide a greater focus on adaptation.
- A key aspect of the draft Adaptation Framework is regional based adaptation planning decisions. The Act should reflect the principle that adaptation planning and risk management decisions will remain the responsibility of asset (or systems) owners or operators. The objects of the Act and functions of the Minister should include ensuring the State's regulatory and

policy instruments support regions, individuals and businesses to undertake their own adaptation planning in their areas of responsibility.

- To ensure the regional planning mechanism works successfully, it is proposed to amend the Act to provide a mechanism through which the State Government is required to consider what changes might be required to regulatory and policy instruments to enable the implementation of the plans by the community. In addition, it is proposed that the Act will provide a regulation making power to allow the Minister to regulate further the governance and implementation arrangements to support adaptation planning if necessary.
- Other roles for the Government may include improving or formalising climate change information and communication processes, including for adaptation options and development opportunities.
- Section 7 should be amended to provide an explicit requirement to report on adaptation action undertaken as it relates to areas where government has a direct lead role e.g. protection/planning for government assets. In addition, a requirement may be created in this or another act to require reporting on the state of preparedness of South Australia for the likely impacts of climate change.

Vulnerability and disadvantage

As the understanding of factors affecting the adaptive capacity of communities to deal with climate change impacts increases, it becomes clearer that communities which are socially or economically disadvantaged have a high vulnerability to climate change impacts. In addition, disadvantaged members of the community may be affected disproportionately by carbon pricing.

This discussion paper does not propose changes to the Commonwealth Government’s responsibility for the development and implementation of social security policies. In particular, the Clean Energy Future policy contains a range of measures aimed at supporting vulnerable and disadvantaged members of the community. However, in developing policy for South Australia, the Act should support a consideration of the needs of these members of the community and the potential impacts of those policies.

Feedback is sought on the following possible amendments to the Act:

- Inclusion of a consideration of the needs of the most vulnerable and disadvantaged members of the community in relation to both the costs of carbon and the effects of climate change in the objects of the Act.
- Inclusion of a consideration of the needs of the most vulnerable and disadvantaged members of the community in relation to both the costs of carbon and the effects of climate change as a requirement in subsections 6(3) and/or 14(2). Subsection 6(3) sets conditions on how the Minister should perform their functions under the Act and subsection 14(2) sets out considerations the Minister must make prior to developing a policy in accordance with the Act.
- Inclusion of a requirement to report on how action taken under the Act to address the needs of the most vulnerable and disadvantaged members of the community in relation to both the costs of carbon and the effects of climate change when reporting under section 7 of the Act. This aspect of the report may be undertaken by an independent body with an understanding of the social policy issues.

- Subsection 9(2) provides a list of sectors from which members of the Premier’s Climate Change Council can be appointed. It is suggested that this list be amended to include the social services sector.
- Provision of further guidance as to who would constitute ‘the most vulnerable and disadvantaged members of the community in relation to both the costs of carbon and the effects of climate change’. This definition should be based on best available evidence and methodology. Vulnerability criteria may be different in different sectors or circumstances.

Aboriginal people and Communities

The IPCC has described Indigenous communities as being at risk of being unable to adapt and cope with the impacts of climate change because of economic and social disadvantage. In addition, the IPCC comments that *many [Indigenous] communities strongly connect the health of their ‘country’ to their cultural, mental and physical well-being. Direct biophysical impacts, such as increases in temperature, rainfall extremes or sea-level rise, are likely to have significant indirect impacts on the social and cultural cohesion of these communities. There is recent recognition of the untapped resource of Indigenous knowledge about past climate change which could be used to inform adaptation options.*

Recent consultation with Aboriginal committees on the draft Adaptation Framework has highlighted that the IPCC comments are relevant in South Australia. It is desirable for the Act to consider these issues.

Feedback is sought on the following proposed amendments to the Act:

- Inclusion of a consideration of the needs of Aboriginal people and communities in relation to the effects of climate change in the objects of the Act.
- Inclusion of a consideration of the needs of Aboriginal people and communities in relation to the effects of climate change as a requirement in subsections 6(3) and/or 14(2). Subsection 6(3) sets conditions on how the Minister should perform their functions under the Act and subsection 14(2) sets out considerations the Minister must make prior to developing a policy in accordance with the Act.
- Inclusion of a requirement to report on how action taken under the Act addressed the needs of Aboriginal people and communities in relation to the effects of climate change when reporting under section 7 of the Act. This aspect of the report may be undertaken by an independent body with an understanding of the issues faced by Aboriginal people and communities.

Climate Change in Decision Making

Climate change is a multifaceted issue which affects nearly all public policy decisions. However, to date action on climate change has overwhelmingly been driven or undertaken by administrative units and Ministers with specific roles in relation to climate change or natural resources management.

Therefore, it is important to ensure the need to reduce greenhouse gas emissions and adapt to the effects of climate change is considered in all relevant Government decisions. Such a process should be efficient and effectively targeted to ensure improved practices are implemented without an unnecessary increase in the time or resources required to develop policy and undertake reporting. Interactions with Commonwealth policy and law should also be considered when determining a process under this section.

Feedback is sought on the following options to encourage consideration of climate change issues in all relevant State Government decisions:

- Requiring that planned reviews of all South Australian legislation and regulations should consider whether the instrument adequately takes into account the need to reduce greenhouse gas emissions and adapt to the effects of climate change.
- Amending the Act to provide the Minister with a power to direct another Minister, Agency or Statutory Authority to prepare a report containing any of the following—
 - a. an assessment of the current and predicted impact of climate change in relation to the body's functions;
 - b. a statement of the body's proposals and policies for reducing greenhouse gas emissions and adapting to climate change in the exercise of its functions and the time-scales for introducing those proposals and policies;
 - c. an assessment of the progress made by the body towards implementing the proposals and policies set out in its previous reports.

The Act should also provide conditions for the exercise of this power.

- Amending the Act to require State Government Agencies and legislative bodies to undertake a review of their own operations and assess opportunities for improving energy efficiency, reducing greenhouse gas emissions or adapting to the impacts of climate change.

Complementarity

As outlined above, the Commonwealth Government announced its proposed carbon pricing policy on 10 July 2011. Prior to this, on 29 November 2008, COAG agreed to a set of principles to guide the assessment of emission reduction measures and determine whether the measures complement emissions trading.

These principles remain relevant in ensuring the carbon pricing mechanism operates to ensure reductions in emissions are made at the least cost to the economy. The Act currently does not fully reflect the need for the State's climate change policies to be complementary to the Commonwealth Government's climate change related legislation and policies. Feedback is sought on the following suggested amendments:

- Inclusion of a consideration of the complementarity to the Commonwealth Government's climate change related legislation and policies as a requirement in subsections 6(3) and/or 14(2). Subsection 6(3) sets conditions on how the Minister should perform their functions under the Act and subsection 14(2) sets out considerations the Minister must make prior to developing a policy in accordance with the Act.
- Object 10 of the Act sets out a requirement to promote action within South Australia that provides consistency with national and international schemes, including schemes that relate to emissions trading and emissions reporting. This object could be amended to require the promotion of action that provides consistency and complementarity to national and international schemes.

ADMINISTRATIVE ISSUES

Since the Act came into operation in 2007, areas for improvement relating to the administration of the Act have been identified. These issues are set out in the table below.

It is desirable that while the Act is being amended to reflect the revised policies outlined above, these administrative issues are also addressed. Feedback is sought on the suggested amendments.

Administrative Issue		Suggested Amendment
1	<p>Subsection 7(5) of the Act designates the CSIRO as the body to provide an independent report that assesses the extent to which the targets and determinations made under section 5 are being achieved.</p> <p>This requirement is overly prescriptive and reduces competition.</p>	<p>Amend the Act to remove the unqualified requirement for the CSIRO to provide all independent reports under subsection 7(5).</p>
2	<p>Section 7 of the Act provides for two-yearly reporting on the operation of the Act. Section 21 provides for four-yearly review of the Act. However, section 21 also requires a report on the extent to which the objects of the Act are being achieved and an understanding of progress towards the targets.</p> <p>The reporting aspects of section 21 tend to duplicate the requirements of section 7.</p>	<p>The reporting requirements of sections 7 and 21 should be revised to address duplication.</p> <p>Section 7 should focus on reporting progress in accordance with the Act.</p> <p>Section 21 should focus on reviewing the Act for effectiveness.</p>
3	<p>Section 7 of the Act provides that every second report should include a report from the CSIRO (see issue 1 above) that assesses the extent to which any determination or target made or set under section 5 is being achieved and, if it appears relevant, should be revised.</p> <p>Section 21 should focus on reviewing the Act for effectiveness</p>	<p>Amend the Act so that the section 21 review is undertaken in the year following the section 7 CSIRO report.</p>
4	<p>Subsection 11(4) paragraph (a) of the Act provides that any advice that the Premier’s Climate Change Council provides to the Minister must be confirmed by instrument in writing. It is unclear whether this applies to informal advice of a Council member or members.</p>	<p>Amend the provision to clarify that it applies only to formal advice given pursuant to the Act.</p>

5	<p>Subsection 11(4) paragraph (b) of the Act provides that any advice that the Premier’s Climate Change Council provides to the Minister must be tabled in Parliament.</p> <p>The Council should be able to provide confidential advice, in order to provide greater flexibility in the matters the Council can deal with, including financial, legal or matters which may be subject to public interest immunity.</p>	<p>Provide that in some financial, legal or public interest matters, Council advice (or part of the advice) may remain confidential and not be tabled in parliament.</p>
6	<p>Under subsection 11(4) paragraph (c) of the Act, the Government is required to publish its response to advice received from the Premier’s Climate Change Council. There is no further mechanism to ensure the Government acts in accordance with the response set out.</p>	<p>Include a requirement that the Premier’s Climate Change Council Annual Report includes an update on action taken in accordance with Premier’s Climate Change Council Advice and Government responses to that advice.</p>
7	<p>Subsection 24(5) paragraph (a) of the <i>National Greenhouse and Energy Reporting Act 2007 (Cth)</i> (‘NGERS Act’) prevents South Australia from publishing certain information relating to South Australia’s greenhouse and energy reporting unless:</p> <ul style="list-style-type: none"> • the publication of the information is required under a law of the State, and • the Greenhouse and Energy Data Officer has agreed, in writing, to the publication of the information. 	<p>Include provisions in the Act which require the publication of such data and outline appropriate conditions. This amendment would meet the first requirement of the NGERS Act.</p>