



Parliament of Youth on Sustainability: Action for Our Future

Teacher Resource



Climate Change: What's the Story?

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It is also available on the SEE-Change website on the Parliament of Youth on Sustainability pages under 'School Resources'.

Go to: www.see-change.org.au/SchoolResources.

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Introduction

This resource provides an entry point for teachers and students to find out about the current thinking and action on climate change. It contains information on seven topics, each with a brief introduction followed by a series of accessible websites or documents.

1. The science of climate change



What is the science of climate change telling us and how settled is it?

Climate change is a topic in which science, politics and special interests are intimately interwoven. Understanding what the world's scientists are saying on this topic is important for making informed decisions about future actions.

1. *The Science of Climate Change, Questions and Answers*, Australian Academy of Science, 2010

www.science.org.au/sites/default/files/user-content/resources/file/climatechange2010_1.pdf

The authors of this 16 page document are prestigious climate scientists in Australia who have been involved with the Intergovernmental Panel on Climate Change (IPCC). Although four years old this report, prepared for the Australian Academy of Science in August 2010 remains an excellent introduction to the science of climate change and its content is still valid. (A new version is to be released in November 2015.) The current version answers the following:

1. What is climate change?
2. How has Earth's climate changed in the distant past?
3. How has climate changed during the recent past?
4. Are human activities causing climate change?
5. How do we expect climate to evolve in the future?
6. What are the consequences of climate change?
7. How do we deal with uncertainty in the science?

2. *A student's guide to global climate change*, United States Environmental Protection Agency (EPA)

www.epa.gov/climatestudents/index.html

This is a valuable website that is kept up to date by the US EPA on a wide range of logical questions that will be asked by students on this topic.

3. *Unpacking the IPCC Fifth Assessment Report: Impacts, Adaptation, and Vulnerability (Working Group II)*, The Climate Council of Australia Ltd, 2014

www.climatecouncil.org.au/uploads/cd929c5cfed40f6d7c508dd6c1f930cf.pdf

The Climate Council is an independent, crowd funded organisation that provides quality information on climate change to the Australian public. In this report published in March 2014, the Council, which is chaired by former Australian of the Year, Tim Flannery, and includes a number of leading Australian scientists, reviews the latest report of the Intergovernmental Panel on Climate Change (IPCC). In ten attractively produced pages, it describes the IPCC and its most recent findings and identifies the implications of its findings for Australia.

4. 'Summary for Policymakers' [on IPCC Report No.5] in *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, IPCC, 2013

www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf

This is a 29 page summary report which draws together the conclusions of the Intergovernmental Panel Report released early in 2014 with the information that is needed by policymakers around the world. It distils the findings of the larger report and presents key graphs and tables of the conclusions reached by the huge panels of scientists around the world. The full 1535 page report (for those who can wait for a very large download) can be viewed at:

www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf

5. *Climate Change 2014: Impacts, Adaptation and Vulnerability*, IPCC Working Group 2

www.vimeo.com/89725715

This link will take you to a valuable 12 minute video produced by the IPCC on impacts, adaptation and vulnerability to climate change.

2. The size of the problem



Global climate change will affect people and the environment in many ways. Some of these impacts, like stronger hurricanes and severe heat waves, could be life threatening. Others, like spreading weeds, will be less serious. And some effects, like longer growing seasons for crops, might even be good! However, as the Earth keeps getting warmer, the negative effects are expected to outweigh the positive ones.

The more we learn about how climate change will affect people and the environment, the more we can see why people need to take action to reduce the greenhouse gas emissions that are causing climate change. We can also take steps to prepare for the changes we know are coming. These include changes in agriculture, forests, coastal areas, health, rainfall, propensity to fire and availability of water.

A full inventory of the likely impacts of global warming on human civilisation presents a gloomy picture. Very considerable research has been done by CSIRO and other agencies in Australia on these impacts and they provide an impetus to the case for acting vigorously to prevent them. It is important in preparing student discussions on these matters to keep foremost our current understanding that many of these complications can be minimised or prevented by prompt climate action.

1. *A student's guide to global climate change*, United States Environmental Protection Agency (EPA)

www.epa.gov/climatestudents/index.html

This is a valuable website that is kept up to date by the US EPA on a wide range of logical questions that will be asked by students on this topic.

2. *Climate change and health*, WHO Fact Sheet No. 266, August 2014

www.who.int/mediacentre/factsheets/fs266/en/

This is a succinct fact sheet presented by the World Health Organisation on the impact of climate change on the social and environmental determinants of health – that is, clean air, safe drinking water, sufficient food and secure shelter.

3. *Climate Change and Water in Australia*, Climate Action Network Australia

www.cana.net.au/water/index.html

Prepared by the Climate Action Network Australia, this site provides an overview of the predicted impact of human-induced climate change on Australia's water systems and rainfall, and how this will affect our cities, farmers and environment.

4. *Position Analysis: climate change, sea level rise and extreme events: Impacts and Adaptation Issues*, Antarctic Climate and Ecosystems Cooperative Research Centre, 2008

www.cmar.csiro.au/sealevel/downloads/SLR_PA.pdf

This paper outlines recent developments in the science of sea-level rise and its influence on the effects of extreme events such as high tides and storm surges. It also identifies some of the key issues around the potential impacts of sea-level rise and extreme events and the consequences they will have for Australia and its neighbours.

5. *Understanding changes in extreme weather events*, CSIRO, November 2012

www.csiro.au/Outcomes/Environment/Extreme-Events/Understanding-extreme-weather-changes.aspx

These pages on the CSIRO website briefly outline the costs and impacts of extreme weather events in Australia, examine some key weather events, and ask how we can manage the risk of climate change.

6. 'Adapting Agriculture to Climate Change', Chapter 7 in *Climate Change: Science and Solutions for Australia*, CSIRO, 2011

www.publish.csiro.au/?act=view_file&file_id=CSIRO_CC_Chapter%207.pdf

This document looks at the way agriculture will need to adapt to climate change. It is chapter 7 from the 2011 CSIRO publication *Climate Change: Science and Solutions for Australia*.

7. *An Assessment of the Vulnerability of Australian Forests to the Impacts of Climate Change*, National Climate Change Adaptation Research Facility

www.nccarf.edu.au/sites/default/files/attached_files_research_projects/Fact%20sheet%20FVA.pdf

This two page fact sheet summarises the findings of a forest vulnerability assessment conducted by the National Climate Change Adaptation Research Facility (NCCARF) and provides a list of the potential effects of climate change on forests, key areas of vulnerability among Australian forests, and policy recommendations. (NCCARF is national research facility set up to lead an interdisciplinary effort to generate the information needed by decision-makers in government and in vulnerable sectors and communities to manage the risks of climate change impacts.)

3. The human response



The role that human behaviour plays in generating greenhouse gas emissions and that they in turn play in contributing to global warming has been well known for several decades. Huge efforts have gone into scientific work to predict the likely future trajectory of global temperatures and their impact on human activities. Scientists have become increasingly confident about the role which human activities play and the consequences of not taking action to reduce emissions of greenhouse gases.

Of course there are uncertainties about the timing and severity of the consequences of not taking action but these have become less and less with each passing year.

Because climate change is a global issue, it requires collaborative action by all countries and governments. And because the changes required cut across existing interests and behaviours there is inevitably hesitation and outright opposition to taking action.

Some of this hesitation and opposition may be due to psychological responses to uncertain futures. Some is undoubtedly due to twisting of facts by special interest groups, particularly the fossil fuel industry, which stands to lose heavily from the kind of change which science indicates we must make.

Canberra is in the fortunate position of having unequivocal commitment to dealing with climate change and its origins for a number of years. Government policy in the ACT is the most progressive on this topic in Australia. But that is not the case in a number of other states nor in the current Federal government.

1. AP2: A new climate change strategy and action plan for the Australian Capital Territory, ACT: Environment and Sustainable Development Directorate, 2012

www.environment.act.gov.au/___data/assets/pdf_file/0006/581136/AP2_Sept12_PRINT_NO_CROPS_SML.pdf

AP2 is a second action plan and update to the ACT's 2007 Climate Change Strategy: *Weathering the Change*. AP2 sets out a pathway to achieve ACT's legislated 2020 greenhouse gas reduction targets, and a set of actions to progress the strategy to its next review point in 2015.

AP2 outlines the 'sectoral' approach adopted by the ACT Government to identifying and targeting emission reductions across the ACT community, with the sectors relating to the major sources of ACT emissions – that is:

- residential sector energy use,
- non-residential sector energy use,
- transport sector emissions,
- waste sector emissions, and
- energy supply sector emissions.

2. ‘How human psychology is holding back climate change action’ in *The Sydney Morning Herald*, 28 August 2013

www.smh.com.au/environment/climate-change/how-human-psychology-is-holding-back-climate-change-action-20130828-2sp1b.html

This article looks at some of the psychological factors preventing humans from acting on climate change and argues that we are unlikely to make much progress until human psychology is addressed.

3. *Climate change – what you can do*, Australian Psychological Society

www.psychology.org.au/publications/tip_sheets/climate/

This is a ‘tip sheet’ from the Australian Psychological Society covering common reactions to learning about environmental problems, managing the feelings climate change can generate, how to change your own behaviour, and encouraging others to change.

4. *What inhibits us from acting on climate change?*, Citizen Action Monitor, 8 October 2010

www.citizenactionmonitor.wordpress.com/2010/10/08/what-inhibits-us-from-acting-on-climate-change/

This is another article on the psychology of human inaction and denial related to climate change, and what it is that seems to inhibit us from taking the kinds of action that scientists are firmly recommending should be undertaken.

5. ‘Conservative groups spend up to \$1bn a year to fight action on climate change’ in *The Guardian*, 21 December 2013

www.theguardian.com/environment/2013/dec/20/conservative-groups-1bn-against-climate-change

The article looks at the efforts being made to promote disinformation and to fight action on climate change.

4. What can be done?



The good news is that there is a great deal we can do to alter the trajectory of climate change because we now understand that the greatest contribution comes from our own behaviours in emitting greenhouse gases.

Four major strategies are being considered or introduced by communities all over the world. They are:

1. emission reductions through a range of strategies including renewable energy and energy efficiency,
2. biosequestration or geosequestration of greenhouse gas emissions,
3. adaptation to the inevitability of climate change, and
4. solar geo-engineering.

Global warming is already occurring and we are experiencing its effects in Australia both through changes in the likelihood of severe climatic events such as flooding and heat waves, and increased propensity to bushfires. The challenge is to very rapidly restrict global greenhouse emissions in an effort to restrict the global temperature rise to no more than 2°C above the preindustrial baseline temperature.

Even at a 2°C rise there will be major adaptations and difficulties. Many scientists believe it will be almost impossible to avoid the 2° rise but that with vigorous global action undertaken quickly, we can avoid the catastrophic consequences of the global temperature rising even further.

1. *Australia's Abatement Task and 2013 Emissions Projections*, Commonwealth of Australia, 2013

www.environment.gov.au/system/files/resources/51b72a94-7c7a-48c4-887a-02c7b7d2bd4c/files/abatement-task-summary-report_1.pdf

This document presents projections and analysis of domestic greenhouse gas emissions out to 2030 prepared for the Climate Change Authority's (CCA's) 'Target and Progress Review'. It provides an emissions projection scenario for domestic emissions along with analysis of key sectors including stationary energy (both electricity generation and direct combustion), transport, fugitive emissions from fuel production, industrial processes, agriculture, waste, and land use, land-use change and forestry.

(Note: The Abbott government has sought to abolish the CCA but has so far been blocked in the Senate by Labor, the Greens and the Palmer United Party.)

2. *Reducing Australia's Greenhouse Gas emissions – Targets and Progress Review, Draft Report, Commonwealth of Australia (Climate Change Authority), 2013*

www.climatechangeauthority.gov.au/sites/climatechangeauthority.gov.au/files/files/Target-Progress-Review/cca-targets-and-progress-report.pdf

This draft report provides a review of Australian progress and recommendations for new Australian targets by the Australian Government Climate Change Authority. It includes an excellent summary of the science and effects of climate change, with projected impacts for selected Australian locations.

3. *Pathways to Deep Decarbonisation: Interim 2014 Report, Sustainable Development Solutions Network and Institute for Sustainable Development and International Relations, July 2014*

www.unsdsn.org/wp-content/uploads/2014/07/DDPP_interim_2014_report.pdf

The Deep Decarbonisation Pathways Project is a collaborative initiative to understand and show how individual countries can transition to a low-carbon economy and how the world can meet the internationally agreed target of limiting the increase in global mean surface temperature to less than 2 degrees Celsius (°C). This interim report summarises the preliminary findings.

4. 'IPCC report: Adapt to cope with climate change' in *The Conversation*, 1 April 2014

www.theconversation.com/ipcc-report-adapt-to-cope-with-climate-change-25037

and

5. 'IPCC expert wrap: costs of climate change mounting, time to adapt' in *The Conversation*, 31 March 2014

www.theconversation.com/ipcc-expert-wrap-costs-of-climate-change-mounting-time-to-adapt-24939

Both of these articles from *The Conversation* talk about adaptation to climate change.

6. *An Analysis of Greenhouse Gas Mitigation and Carbon Biosequestration Opportunities from Rural Land Use*, CSIRO, 2009

www.csiro.au/Outcomes/Climate/Reducing-GHG/carbon-and-rural-land-use-report.aspx

This CSIRO report provides an in-depth assessment of the greenhouse gas sequestration/mitigation potential likely to be achieved through change in rural land use and management, based on a review of current knowledge and consultation with a cross-section of scientists and land management experts.

7. ‘Explainer: what is carbon capture and storage?’ in *The Conversation*, 20 August 2013

www.theconversation.com/explainer-what-is-carbon-capture-and-storage-16052

This article describes the process of carbon capture and storage. Many people have high hopes for this method of dealing with CO₂, however at present the model is not working at a scale anywhere sufficient to make it a central plank of national policy.

8. ‘Geo-engineering: should we change the face of the planet to combat climate change?’ in *The Conversation*, 26 September 2011

www.theconversation.com/geo-engineering-should-we-change-the-face-of-the-planet-to-combat-climate-change-3483

and

9. ‘Carbon-dioxide hits a new high, but geo-engineering won’t help’ in *The Conversation*, 11 May 2013

www.theconversation.com/carbon-dioxide-hits-a-new-high-but-geo-engineering-wont-help-13840

These two articles look at geo-engineering – ‘making sometimes planetary-scale physical or chemical changes to alter the amount of heat coming into, or getting out of our atmosphere’ – and discuss whether we should consider geo-engineering as an option to deal with carbon emissions.

5. What are the Australian Government and other countries doing?

Australian Government

Climate change policy in Australia has, in the past decade, been heavily politicised. Different governments have different attitudes to both the science and the policies advocated to deal with it. The last Labour government introduced an interim carbon tax as a prelude to an Emissions Trading System and funded a number of agencies to guide policy and promote the development of renewable energy. Many of these are now being disestablished by the current Coalition government, which maintains that it will meet its modest international commitment of 5% greenhouse gas reduction by 2020 through methods of 'Direct Action'. Others argue that the 5% target is not nearly ambitious enough and that Australia is not playing its proper part in the effort to keep global temperatures within safe limits.

Whereas the current ACT government is firmly committed to extensive reductions of greenhouse gas emissions (40% by 2020) and a large increase in renewable energy (90% by 2020) other states and territories are considerably less committed to dealing with the problem in this way.

Because the Australian economy is heavily dependent upon its coal exports and because Australia has some of the richest coal and natural gas resources in the world, the current Prime Minister has stated that he recognises the need to respond to the challenge of climate change, but that he will not 'clobber the economy' to do so. Australians are divided in their views about what needs to be done and how quickly.

While climate scientists are virtually unanimous in the view that aggressive reduction of greenhouse gases and movement away from burning of fossil fuels is urgent, strong special interest groups have rallied to play down the climate change threat and the concerns of the scientists.

1. *International Climate Action – Priorities for the Next Agreement, Research Paper*, Commonwealth of Australia (Climate Change Authority), June 2014

www.climatechangeauthority.gov.au/sites/climatechangeauthority.gov.au/files/files/priorities%20for%20the%20next%20agreement/Post-2020%20international%20agreement_Final_Web%20version_2.pdf

The international community is negotiating a framework to support greater global emissions reductions beyond 2020, with key elements planned to be agreed in Paris at the end of 2015. This paper discusses some of the key elements of the Paris meeting and the broader post-2020 framework and their implications for Australia.

2. *Canberra’s key climate change policies and programs*, ACT Government: Environment and Sustainable Development, May 2014

www.environment.act.gov.au/___data/assets/pdf_file/0019/602551/Canberras-key-climate-change-policies-and-programs_22May.pdf

This factsheet outlines the ACT Government’s current climate change policies.

3. ‘Australia in danger of being left out in cold over global warming’ by Maurice Newman in *The Australian*, 23 June 2014

www.theaustralian.com.au/national-affairs/opinion/australia-in-danger-of-being-left-out-in-cold-over-global-warming/story-e6frgd0x-1226962987316

The author of this article, Maurice Newman, is the Chairman of the Federal Government’s Business Advisory Council and a self-proclaimed climate change sceptic. He argues that the proof of human-induced global warming is ‘evaporating’ and that the IPCC is ‘primarily a political advocacy group, funded by the UN and dedicated to wealth distribution from the developed to the developing world’. He cites examples of scientists who have questioned anthropogenic climate change being marginalised and attacked for their views.

4. *Turn Down the Heat: Why a 4° C World Must be Avoided*, The World Bank, 2012

www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/12/20/000356161_20121220072749/Rendered/PDF/NonAsciiFileName0.pdf

This report provides a snapshot of recent scientific literature and new analyses of likely impacts and risks that would be associated with a 4° Celsius warming within this century. It is a rigorous attempt to outline a range of risks, focusing on developing countries and especially the poor.

5. Ross Garnaut Q&A: 'There is no doubt Australia is out of step' in *The Conversation*, 14 July 2014

www.theconversation.com/ross-garnaut-ganda-there-is-no-doubt-australia-is-out-of-step-29099

Ross Garnaut, the architect of the Labor government's carbon pricing scheme, comments on the demise of the scheme, the Government's Direct Action plan, and other tools Australia might use to cut emissions.

6. *Emissions Reduction Fund – White Paper*, Commonwealth of Australia, 2014

www.environment.gov.au/system/files/resources/1f98a924-5946-404c-9510-d440304280f1/files/emissions-reduction-fund-white-paper_0.pdf

The 2014 White Paper on the Emissions Reduction Fund sets out the Australian Government's final positions on the design, implementation and development of the fund, the centrepiece of the Government's Direct Action Plan.

7. 'Abbott's environment agenda is even harsher than he promised' by Ian Lowe in *The Conversation*, 29 August 2014

www.theconversation.com/abbotts-environment-agenda-is-even-harsher-than-he-promised-30796

Ian Lowe, former president of the Australian Conservation Foundation, argues that under the Abbott government environmental protection is being given a lower priority than it has by any federal government since the first environmental legislation was introduced around 40 years ago. He lists the changes to environmental policy the government is trying to make.

Other Governments

Climate change is a global phenomenon and human efforts to mitigate it need to be internationally collaborative. Efforts to reach global consensus have, to this point, been elusive but the year 2015 is shaping as one in which a number of important forces are coming together.

First, the two biggest greenhouse gas polluters, China and the United States are now, for the first time, making strenuous efforts to reduce their emissions. Second, the speed with which global warming is resulting in reduced sea ice, warmer oceans and the melting of the Siberian tundra (and its release of methane) is causing growing alarm at the need for concerted action.

The 21st Conference of Parties (COP21) which will take place in Paris in December 2015 will mark a decisive stage in negotiations on the future international agreement on a post-2020 regime, and will, as already agreed by the parties, adopt the major outlines of that regime. By the end of the meeting, for the first time in over 20 years of UN negotiations, all the nations of the world, including the biggest emitters of greenhouse gases, are expected to be bound by a universal agreement on climate.

Assuming there is a global agreement about the way forward, it is highly likely that Australia will be in the spotlight and that, as one of the highest per capita emission emitters and one of the largest exporters of fossil fuels, the pressures to strengthen our targets and switch away from our allegiance to coal will become irresistible.

1. Background on the United Nations Framework Convention on Climate Change (UNFCCC): The international response to climate change

www.unfccc.int/essential_background/items/6031.php

This web page provides information about the United Nations Framework Convention on Climate Change, the international treaty to which 195 countries are now a party.

2. 'Climate hope in China coal turnaround: Ross Garnaut' by Tom Arup in the *Sydney Morning Herald*, 26 August 2014

www.smh.com.au/environment/climate-hope-in-china-coal-turnaround-ross-garnaut-20140825-1086tp.html

This article reports on the view of Ross Garnaut, the author of two climate reviews for the Rudd-Gillard governments, that the international goal of halting global warming at 2 degrees is now within reach because China has slowed the growth of its coal use, despite continuing to economically develop.

3. *The President's Climate Action Plan*, Washington: The White House, June 2013

www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf

The President's Climate Action Plan outlines progress on climate change in the United States and planned future action.

4. *Reducing the UK's greenhouse gas emissions by 80% by 2050*, UK Government, updated 6 March 2014

www.gov.uk/government/policies/reducing-the-uk-s-greenhouse-gas-emissions-by-80-by-2050

This web page provides information on the climate change policies in the United Kingdom.

5. 'Australia is going backwards on climate change', interview with Lord Deben on ABC TV's *Lateline*, 8 July 2014

www.abc.net.au/lateline/content/2014/s4042037.htm

Lord Deben, the chairman of the UK Committee on Climate Change discusses Australia's policies on climate change from an international perspective.

6. *The Garnaut Climate Change Review: Synopsis of key points*, 2008

www.garnautreview.org.au/synopsis.htm

This web page provides a synopsis of the 24 chapters of Ross Garnaut's 2008 *The Garnaut Climate Change Review: Final Report* which was commissioned by the Australian Government and the state/territory governments. It is an independent study of the impacts of climate change on the Australian economy.

7. *The Garnaut Review 2011: Australia in the Global Response to Climate Change*, Commonwealth of Australia, 2011

www.garnautreview.org.au/update-2011/garnaut-review-2011/garnaut-review-2011.pdf

This book is the full text of Ross Garnaut's update to his 2008 review (above). It examines key developments in the two and a half years between reviews across a range of areas – the climate science, global greenhouse gas emissions, international progress on climate change mitigation, Australia's land and electricity sectors, innovation and technology, and carbon pricing.

6. Our energy options



There is a great deal of discussion in the newspapers and on the political scene about the economics of climate change. Much of the discussion tends to focus on the costs of renewable energy compared with the costs of depending on fossil fuels for our energy supply. But much of the debate fails to take account of the costs to society of failing to act to impede the progress of climate change.

There are a range of ways of producing energy which do not contribute to carbon emissions. They include solar energy, wind energy, tidal wave energy, geothermal energy, and nuclear energy. As scientists have become more confident in the live predictions about the effects of carbon emissions on global warming, they have begun to estimate how much of the available fossil fuel reserves in the world we can afford to burn without pushing the global temperature rise above 2°C.

In recent months, debate has taken place on the relative importance of renewable energy targets in Australia. At the time of preparing this resource, a major government inquiry into renewable energy targets has reported back to, and it is being debated and considered by, the federal government.

1. *Australia's Renewable Energy Future*, Australian Academy of Science, 2009

www.science.org.au/sites/default/files/user-content/ausrenewableenergyfuture.pdf

This report by the Australian Academy of Science in late 2009 provides scientific analysis of existing and emerging renewable energy technologies, and the strategies that can be used to replace power generation based on the use of coal and oil. The costs, advantages and problems associated with solar power, wind power, biomass, fuel cells, geothermal energy and wave energy are compared and analysed.

2. *Renewable Energy Target Scheme: Report of the Expert Panel*, Executive Summary, Commonwealth of Australia, 2014

www.retreview.dpmc.gov.au/executive-summary

This web page provides the summary and recommendations of the recent federal government review of the Renewable Energy Target (RET), finding that the RET is a high cost approach to reducing emissions and that, 'in the presence of lower cost alternatives, the costs imposed by the RET are not justifiable'.

3. 'Renewable Energy Target review confirms influence of coal and climate sceptics' by Rosemary Lyster in *The Conversation*, 2 September 2014

www.theconversation.com/renewable-energy-target-review-confirms-influence-of-coal-and-climate-sceptics-31094

The author of this article, Rosemary Lyster, suggests the Government's report on the review of the Renewable Energy Target shows the 'disproportionate influence of the fossil fuel industry and climate sceptics on governments in Australia'.

4. 'Renewable Energy Target review – experts respond' in *The Conversation*, 29 August 2014

www.theconversation.com/renewable-energy-target-review-experts-respond-31050

This article provides responses from four commentators, including academics in the field of sustainable energy, on the report on the Renewable Energy Target review.

5. 'Setting a carbon budget to keep below two degrees' in *The Conversation*, 29 October 2013

www.theconversation.com/setting-a-carbon-budget-to-keep-below-two-degrees-18841

This article describes the concept of the carbon budget, the need for us to limit the amount of fossil fuel reserves we burn if the global temperature is to be kept below 2°C, and the possible timeframe in which the carbon budget may be exhausted.

7. What ACT students said in 2013



In 2013, 123 students from 27 ACT primary schools, high schools and colleges, took part in the Centenary 2020 Vision Parliament of Youth on Sustainability.

The ACT Government has committed, through legislation, to reducing Canberra's greenhouse gas emissions by 40 per cent on 1990 levels by the year 2020. Student teams at the Parliament of Youth presented proposals for action for reducing our greenhouse gas emissions and living more sustainably under eight major topic areas:

- transport
- water
- urban planning
- smarter buildings
- food
- energy
- waste and CO2 reduction
- lifestyle and human systems

Out of 173 proposals presented at the Parliament, the student parliamentarians voted and chose the best 24 proposals for inclusion in the final Parliament White Paper.

1. *How should Canberra change by 2020 to meet its ambitious carbon emission targets and become more sustainable?*, White Paper from the ACT Centenary 2020 Vision Parliament of Youth on Sustainability, November 2013

www.see-change.org.au/sites/default/files/Final%20White%20Paper%20071113_0.pdf

The Parliament of Youth on Sustainability White Paper has eight chapters, one for each of the broad topics areas students studied. Each chapter has a collation of the facts and issues researched and written up by the students and a list of the top three proposals for action chosen by the students for each of the topics.