



YARRA CLIMATE ACTION NOW!
10/288 BRUNSWICK ST, FITZROY VIC 3065
INFO@YCAN.ORG.AU - WWW.YCAN.ORG.AU

Submission to
State Government Inquiry into the Climate Change Act 2010

From
Yarra Climate Action Now Inc.
10/288 Brunswick Street
Fitzroy VIC 3065

Main authors:
Doug Evans
Pablo Brait (Convener)

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Executive Summary

YCAN notes the extreme severity of the climate crisis and its all-pervading nature. The climate crisis is on us now. It presents both an enormous threat to our wellbeing and an economic opportunity. It is essential that all levels of Government act with urgency to address this threat. It is common sense that Government act to take advantage of the rapidly changing economic landscape to develop renewable energy sources.

In respect of the desirability of retaining the 20% by 2020 emissions reduction goal YCAN argues that this target should be increased to 80 - 100% emissions reductions by 2020. Working to reach this new science-based target is good for our continuing environmental viability, minimises the economic damage caused by the climate crisis and optimises the economic opportunity associated with the shift to a carbon constrained future. Delaying action is a false economy. Every dollar saved by avoiding action now will require more than four dollars to make up later.

YCAN acknowledges that seen against the Federally-legislated target of 5% the legislated Victorian commitment of 20% seems disproportionately large. However we argue that in light of the rapidly worsening climatic news, well before 2020 the Federal Government will be forced to increase its GHG reduction targets probably at least to the current nominated upper level of 25% but most likely much higher (see below).

Under these circumstances the current Victorian commitment would become proportionately lower than the overall commitment. Further; so rapid is the escalation of the climate crisis that YCAN asserts that the adequacy of any target to deliver a response proportionate to the scale of the climate threat should be reviewed every four years.

In respect of the necessity to retain the requirement for decision makers to take climate change into account YCAN maintains that given the above this requirement is absolutely essential.

In respect of the necessity for government to develop and implement a climate adaptation plan every four years, YCAN maintains that so severe is the climate crisis confronting us that such a process is essential.

Finally, YCAN recognizes the implications of the growing body of research that shows that lifecycle greenhouse gas (GHG) emissions from gas are at best only marginally lower than those of the most widely used techniques of coal combustion.¹

¹ See for example:

YCAN recognizes that in Australia (and generally throughout the developed economies of the world) new gas fired generating capacity is additional to rather than a replacement for older coal fired installations. Thus they add to the atmospheric GHG burden.

YCAN argues therefore that gas has no role to play as an acceptable 'transition' fuel in the climate emergency we are faced with and supports the most rapid possible transition away from all fossil fuels to renewable energy as source fuel for power generation.

Howarth, R. W., R. Santoro, and A. Ingraffea. 2011. Methane and the greenhouse gas footprint of natural gas from shale formations. *Climatic Change Letters* 106(4):679-690, DOI:10.1007/s10584-011-0061-5.

Wigley, T. 2011. Coal to gas: the influence of methane leakage. *Climatic Change* (2011) 108:601–608 DOI 10.1007/s10584-011-0217-3

[Natural Gas Bombshell: Switching From Coal to Gas Increases Warming for Decades, Has Minimal Benefit Even in 2100](#)

Parkinson G. [Green Deals: Is CSG cleaner than coal?](#)

Introduction

The Victorian State Government under Premier Ted Baillieu has invited public submissions to its review of the Victoria Climate Change Act 2010.

The review will examine the Act in light of the introduction of the Federal Government's Clean Energy Legislative Package – which includes the carbon pricing mechanism – into Commonwealth Parliament.

Public submissions should focus on comments relevant to the terms of reference and key elements of the Act (as described below).

The Victoria Climate Change Act 2010:

1. legislates Victoria's emissions reduction target of 20 per cent by 2020 (based on 2000 levels).
2. requires decision makers to take climate change into account when making specified decisions.
3. requires the Government to develop a Climate Change Adaptation Plan every four years.
4. requires the Government to report every two years on climate change science and emissions data.
5. repeals the Forestry Rights Act 1996 and creates new arrangements for the ownership, registration and transfer of forestry and carbon sequestration rights.
6. amends the Environment Protection Act 1970 to enable the Environment Protection Authority (EPA) to recommend that the Governor in Council make regulations to allow the EPA to regulate the emission of greenhouse gas substances.
7. enables the Government to enter into Climate Covenants with communities, regions, industry and other stakeholders.

This submission from community group Yarra Climate Action Now² focuses on points 1, 2 and 3.

² Yarra Climate Action Now (YCAN) is an award-winning community group representing thousands of people who are concerned about climate change. We are based in inner Melbourne. We are ordinary people who are busy with families, friends and work, but we put energy into YCAN because we know how important it is to push for collective responses to climate change that are based on science.

The submission presupposes that the government accepts the scientific consensus³ and irrefutable evidence that:

- Rapid global warming is occurring
- Global warming is the result of greenhouse gases (primarily Carbon Dioxide and Methane) added to the atmosphere as a result of the rapidly expanding combustion of carbon-based fossil fuels (coal, oil and gas).
- Left unchecked the climatic and other environmental effects of this global warming will prove disastrous for human wellbeing and prosperity.
- The time left us to effect the necessary reductions in fossil fuel combustion is very short. If global greenhouse gas emissions are not stabilised by around 2015 and sharply decreasing by 2020 there is a real risk of runaway climate change that is beyond our capacity to control.

The review is ostensibly triggered by the passing of the Federal Clean Energy bills. These legislate a wide-ranging emissions trading scheme and a range of auxiliary measures aimed at stimulating the growth of the renewable energy industry in Australia and closing 2000MW of coal-fired power.

Worryingly the current energy and environmental policies⁴ of the Baillieu Victorian State Government suggest either that:

- The government denies the increasingly dire warnings of the climate scientists.
- or
- The government believes that the Federal Government's Clean Energy legislation makes action at the state level irrelevant.

Irrespective of this, the task of this submission is to examine appropriate action in respect of the first three 'key elements' of the Act outlined above.

3 The text of an open letter addressing the climate crisis and signed by 87 well qualified scientists and academics can be found in Appendix 1.

4 A summary of key Baillieu government environment and energy policies can be found in Appendix 2

1. The suitability of Victoria's emissions reduction target of twenty percent by 2020 (based on 2000 levels).

Premier Ted Baillieu has described the legislated commitment to a 20% reduction in greenhouse gas emissions by 2020 as follows:

'It is a legislative target set by the previous government and ... an aspirational target. As we have consistently said if there is to be a systematic approach to this then that will be taken by the Commonwealth.'

The unmistakable inference of this quote, reinforced by the suite of State Government energy initiatives outlined in Appendix 2, is that the State Government regards greenhouse gas mitigation as the responsibility of the Federal Government and, freed of this responsibility it feels able to undertake actions liable to undercut the efforts of the Federal legislation. Given the severity of the climate crisis, that is already taking Victorian lives and costing the community enormous sums of money, YCAN regards this as unconscionable dereliction of the government's responsibility.

YCAN notes that:

- The US Department of Energy⁵ has calculated that global greenhouse gas emissions jumped by an alarming 6% in the year 2010-2011.
- Several studies⁶ have shown that the current rate of global warming is unprecedented.
- The International Energy Agency (IEA) warns⁷ that globally the window of opportunity to halt global warming at or around 2°C is rapidly closing and the world is headed for irreversible climate change in five years. In the executive summary of the World Energy Outlook 2011 the IEA states in part:

5 <http://news.theage.com.au/breaking-news-world/biggest-jump-ever-in-global-warming-gases-20111104-1myf5.html>

6 See for example:

<http://www.sciencemag.org/content/331/6016/450.abstract>

<http://www.agu.org/pubs/crossref/2010/2010GL044771.shtml>

<http://www.skepticalscience.com/Unprecedented-Warming-in-Lake-Tanganyika-and-its-impact-on-humanity.html>

<http://www.sciencemag.org/content/325/5945/1236.abstract>

7 International Energy Agency, World Energy Outlook 2011 <http://www.worldenergyoutlook.org/>

"If fossil fuel infrastructure is not rapidly changed, the world will 'lose for ever' the chance to avoid dangerous climate change. Four-fifths of the total energy-related CO2 emissions permissible by 2035 are already "locked-in" by our existing capital stock (power plants, buildings, factories, etc.). If stringent new action is not forthcoming by 2017, the energy-related infrastructure then in place will generate all the CO2 emissions allowed up to 2035, leaving no room for additional power plants, factories and other infrastructure unless they are zero-carbon, which would be extremely costly. ... Delaying action is a false economy: for every \$1 of investment avoided in the power sector before 2020 an additional \$4.3 would need to be spent after 2020 to compensate for the increased emissions."

- Recent studies⁸ from an international collaboration of climate scientists reinforce the urgency of the situation.

"According to the scientists – from the Zurich Institute for Atmospheric and Climate Science, the Potsdam Institute for Climate Impact Research, the UK's Met Office Hadley Centre, and Melbourne University, among others – the world needs to reach a peak in emissions between now and 2020. But it also needs to reduce its current level of 48 gigatonnes a year to 44 gigatonnes by the end of the decade and then keep falling."

YCAN argues that whereas previously it has been assumed that extreme climate change would impact on future generations these studies show that the increasingly severe impacts of severe climate change will be felt by this generation. We are already in the midst of the climate crisis. This is the increasingly dire climatic and economic background against which the adequacy of the climate change measures of Victorian State and Federal governments must be measured.

Chief among the measures undertaken by the Federal Government is The Clean Energy Future legislation 2011.

This incorporates a wide-ranging Emissions Trading Scheme (ETS) that is due to commence in mid 2012 and is currently intended to produce a 5% reduction in greenhouse gas emissions by 2020. The ETS requires five hundred of Australia's most carbon intensive industries to pay for the carbon pollution they generate. The economic disadvantage this entails prompts these businesses to modify their

⁸ For an authoritative summary-of and commentary on this research see:

http://www.climatespectator.com.au/commentary/climate-change-now-our-problem?utm_source=Climate%20Spectator&utm_medium=email&utm_campaign=900c40005b-CSPEC_DAILY

practices to reduce carbon pollution. The rate of reduction of atmospheric carbon resulting from the ETS is a function of the carbon price. The ETS will commence with a three year fixed price period with a price of \$23 per tonne of carbon pollution. Thereafter the price will be fixed by the market except that a floor price of \$15 per tonne will apply.

YCAN argues that in the context of the climate emergency indicated above a goal of 5% emissions reductions by 2020 is pitifully small. But unlike the earlier Rudd government CPRS this legislation at least embodies mechanisms to permit the emissions mitigation target to be scaled up as required. For comparison an EU policy brief prepared by the Stockholm Environment Institute⁹ found as follows:

“Based on the Greenhouse Development Rights (GDRs) Framework for sharing the climate mitigation burden, we calculate that Europe has a total obligation to reduce emissions 103 per cent below 1990 levels by 2020 – in other words, more than its total emissions in 1990 and far more than the 20 per cent-30 per cent mitigation targets adopted by the European Union (EU) for 2020. Consequently, this 103 per cent target encompasses a two-fold obligation – mitigation actions in Europe and investment in mitigation internationally.”

In summary the situation is as follows. Australia has committed to 5% reductions by 2020. The EU has committed to targets between 20 and 30% by 2020. These are between four and five times greater than the Australian commitment. Policy recommendations supported by credible research indicates that the European target should be between four and five times greater than it is at present.

YCAN argues that the Australian Federal government should as quickly as possible recalibrate its ETS so Australia does its fair share of avoiding runaway climate change. This would mean getting close to 100% emissions reduction by 2020.¹⁰ The science clearly indicates that we are in the midst of a developing climate emergency and that as well as a climatic imperative there is a clear economic imperative to act now rather than later.

The IEA has found that *“Delaying action is a false economy: for every \$1 of investment avoided in the power sector before 2020 an additional \$4.3 would need to be spent after 2020 to compensate for the increased emissions.”*

9 Europe's fair share of the Climate Challenge www.climateshareeurope.org/EU40PolicyBrief.pdf

10 YCAN notes that credible proposals have been produced for decarbonising Australian electricity generation far more rapidly. For example Zero Carbon Australia Stationary Energy Plan produced jointly by Beyond Zero Emissions and the Energy Research Institute of the University of Melbourne sets out a Plan for moving to 100% reliance on renewable energy for electricity generation by 2020. Zero Carbon Australia Stationary Energy Plan produced jointly by Beyond Zero Emissions and the Energy Research Institute of the University of Melbourne. Downloadable at <http://beyondzeroemissions.org/>

YCAN argues that this is as true for a State Government considering abandoning its commitment to the inevitable shift to a carbon-constrained future as it is for a Federal Government that has just made the first tiny step in that direction.

YCAN argues that increasing awareness of the environmental impacts worsening climate crisis coupled with the economic penalties of delaying inevitable action in respect of both emissions mitigation and climate adaptation will quickly force all governments, including the Australian government to greatly strengthen their emissions reduction targets.

Table 1 – Victorian Net Greenhouse Gas Emissions by Sector

Sector	1990		2000		2006	
	Mt CO2e	% total	Mt CO2e	% total	Mt CO2e	% total
All Energy	80.3	74.2%	98.0	81.7%	102.7	84.3%
Stationary Energy	60.3	55.7%	78.9	65.8%	80.9	66.4%
Transport	16.3	15.1%	18.3	15.3%	19.9	16.3%
Fugitive emissions	3.7	3.4%	2.5	2.1%	1.9	1.6%
Industrial Processes	3.6	3.3%	2.2	1.8%	2.4	2.0%
Agriculture	15.0	13.9%	15.3	12.8%	15.1	12.4%
Land use, Land use change & forestry	4.6	4.3%	-1.4	-1.2%	-4.2	-3.5%
Waste	4.8	4.4%	3.9	3.3%	4.2	3.5%
Total Net Emissions	108.2	100%	120.0	100%	121.9	100%

Table 2 – Australian Net Greenhouse Gas Emissions by Sector

Sector	1990		2000		2006	
	Mt CO2e	% total	Mt CO2e	% total	Mt CO2e	% total
All Energy	287.0	52.5%	357.6	64.8%	400.9	72.9%
Stationary Energy	196.0	35.8%	252.0	45.7%	287.4	52.3%
Transport	61.9	11.3%	74.6	13.5%	79.1	14.4%
Fugitive emissions	29.1	5.3%	30.9	5.6%	34.5	6.3%
Industrial Processes	25.3	4.6%	27.4	5.0%	28.4	5.2%
Agriculture	87.7	16.0%	95.5	17.3%	90.1	16.4%
Land use, Land use change & forestry	128.9	23.6%	53.9	9.8%	13.8	2.5%
Waste	18.3	3.3%	17.2	3.1%	16.6	3.0%
Total Net Emissions	547.1	100%	555.5	100%	549.9	100%

The Victoria Climate Change Act 2010

This contains a target of 20% GHG emissions reduction by 2020. Comparison of Tables 1 & 2 above indicates that a Victorian GHG emissions reduction of 20%, by 2020 would reduce Australian emissions by around 4.5%. As Victoria currently accounts for about 22% of Australia's GHG emissions, a reduction of 4.5% of Australia's GHG emissions corresponds to about 90% of the current Federal bipartisan emissions reduction target of 5%. This might be seen as Victoria shouldering a disproportionately high share of the task of emissions reduction.

The questions then for a climatically responsible Victorian State government¹¹ are:

How to determine what is a proportionate response to this challenge?

How to tailor policy to enable timely delivery of this response?

¹¹ The policies outlined in Appendix 2 cast doubt on whether this government can be regarded as climatically responsible.

YCAN argues that:

The Victorian Government's responsibility is to promote a response to the climate crisis proportionate to the threat posed as outlined by the science rather than proportionate to the Federal government's response. It might be argued that the current target embodied in the Victoria Climate Change Act 2010 of 20% GHG emissions reduction by 2020 might be argued to be disproportionately large in light of current Federal emissions reduction targets (as set out above). However when/if the Federal targets increase by a factor of at least four or five as indicated above the current Victorian targets will become proportional in respect of Victoria's contribution to Australia's total GHG emission burden, while still being about 4 – 5 times less than what the science demands of Australia and Victoria.

This being the case we believe that the current target of 20% GHG emission reduction by 2020 is far too low and should be increased to 80 – 100%.

2. The requirement for decision makers to take climate change into account when making specified decisions.

YCAN argues that in light of the urgency and all pervading nature of the climate emergency that we are subject to **it is vital that climate change be central to decision making.** We wish to highlight two areas as illustrations.

Building, town planning and urban design.

Many municipal authorities recognize the responsibility to address the climate change implications of the construction and deployment of the built environment. However the fact that these measures are not enshrined in the relevant State Government legislation (eg The Planning Act) and given the scale of the climate crisis outlined above and the obvious implications for our output of greenhouse gases of our energy use within the built environment it is vital to retain the requirement for decision makers to take climate change into account as a central factor in decision making.

Mineral Resource extraction and processing

Chief among the Victorian mineral resources available for extraction, processing and potential export are brown coal and gas. Given the scale of the climate crisis outlined above and the obvious implications for our output of greenhouse gases of extracting and processing these it is vital to retain the requirement for decision makers to take climate change into account as a central factor in decision making.

3. The requirement for the Government to develop a Climate Change Adaptation Plan every four years.

YCAN argues that in light of the urgency and all pervading nature of the climate emergency that we are subject to it is vital that the government adhere to its legislated commitment to develop (and implement) a Climate Change Adaption Plan every four years . We have seen what climate change is bringing in Victoria via extreme droughts, bushfires and floods in the last few years. Lives have already been lost. The scientific predictions show that it will only get worse.

Appendix 1: Climate Change Open letter from scientists.

This statement was published by [‘The Conversation’](#) on June 14 2011.

The overwhelming scientific evidence tells us that human greenhouse gas emissions are resulting in climate changes that cannot be explained by natural causes.

Climate change is real, we are causing it, and it is happening right now.

Like it or not, humanity is facing a problem that is unparalleled in its scale and complexity. The magnitude of the problem was given a chilling focus in the most recent report of the International Energy Agency, which their chief economist characterised as the “worst news on emissions.”

Limiting global warming to 2°C is now beginning to look like a nearly insurmountable challenge.

Like all great challenges, climate change has brought out the best and the worst in people.

A vast number of scientists, engineers, and visionary businesspeople are boldly designing a future that is based on low-impact energy pathways and living within safe planetary boundaries; a future in which substantial health gains can be achieved by eliminating fossil-fuel pollution; and a future in which we strive to hand over a liveable planet to posterity.

At the other extreme, understandable economic insecurity and fear of radical change have been exploited by ideologues and vested interests to whip up ill-informed, populist rage, and climate scientists have become the punching bag of shock jocks and tabloid scribes.

Aided by a pervasive media culture that often considers peer-reviewed scientific evidence to be in need of “balance” by internet bloggers, this has enabled so-called “sceptics” to find a captive audience while largely escaping scrutiny.

Australians have been exposed to a phony public debate which is not remotely reflected in the scientific literature and community of experts....The individuals who deny the balance of scientific evidence on climate change will impose a heavy future burden on Australians if their unsupported opinions are given undue credence.

Signatories

1. Winthrop Professor Stephan Lewandowsky, Australian Professorial Fellow, UWA
2. Dr. Matthew Hipsey, Research Assistant Professor, School of Earth and Environment, Centre of Excellence for Ecohydrology, UWA

3. Dr Julie Trotter, Research Assistant Professor, School of Earth and Environment, UWA Oceans Institute, UWA
4. Winthrop Professor Malcolm McCulloch, F.R.S., Premier's Research Fellow, UWA Oceans Institute, School of Earth and Environment, UWA
5. Professor Kevin Judd, School of Mathematics and Statistics, UWA
6. Dr Thomas Stemler, Assistant Professor, School of Mathematics and Statistics, UWA
7. Dr. Karl-Heinz Wyrwoll, Senior Lecturer, School of Earth and Environment, UWA
8. Dr. Andrew Glikson, Earth and paleoclimate scientist, School of Archaeology and Anthropology, Research School of Earth Science, Planetary Science Institute, ANU
9. Prof Michael Ashley, School of Physics, Faculty of Science, UNSW
10. Prof David Karoly, School of Earth Sciences, University of Melbourne
11. Prof John Abraham, Associate Professor, School of Engineering, University of St. Thomas
12. Prof Ian Enting, ARC Centre for Mathematics and Statistics of Complex Systems, University of Melbourne
13. Prof John Wiseman, Melbourne Sustainable Society Institute, University of Melbourne
14. Associate Professor Ben Newell, School of Psychology, Faculty of Science, UNSW
15. Prof Matthew England, co-Director, Climate Change Research Centre, Faculty of Science, UNSW
16. Dr Alex Sen Gupta Climate Change Research Centre, Faculty of Science, UNSW
17. Prof. Mike Archer AM, School of Biological, Earth and Environmental Sciences, Faculty of Science, UNSW
18. Prof Steven Sherwood, co-Director, Climate Change Research Centre, Faculty of Science, UNSW
19. Dr. Katrin Meissner, ARC Future Fellow, Climate Change Research Centre, Faculty of Science, UNSW
20. Dr Jason Evans, ARC Australian Research Fellow, Climate Change Research Centre, Faculty of Science, UNSW
21. Prof Ove Hoegh-Guldberg, Global Change Institute, UQ
22. Dr Andy Hogg, Fellow, Research School of Earth Sciences, ANU
23. Prof John Quiggin, School of Economics, School of Political Science & Intl Studies, UQ
24. Prof Chris Turney FRSA FGS FRGS, Climate Change Research Centre and School of Biological, Earth and Environmental Sciences, UNSW
25. Dr Gab Abramowitz, Lecturer, Climate Change Research Centre, Faculty of Science, UNSW
26. Prof Andy Pitman, Climate Change Research Centre, Faculty of Science, UNSW
27. Prof Barry Brook, Sir Hubert Wilkins Chair of Climate Change, University of Adelaide
28. Prof Mike Sandiford, School of Earth Sciences, University of Melbourne
29. Dr Michael Box, Associate Professor, School of Physics, Faculty of Science, UNSW
30. Prof Corey Bradshaw, Director of Ecological Modelling, The Environment Institute, The University of Adelaide
31. Dr Paul Dargusch, School of Agriculture & Food Science, UQ
32. Prof Nigel Tapper, Professor Environmental Science, School of Geography and Environmental Science Monash University

33. Prof Jason Beringer, Associate Professor & Deputy Dean of Research, School of Geography & Environmental Science, Monash University
34. Prof Neville Nicholls, Professorial Fellow, School of Geography & Environmental Science, Monash University
35. Prof Dave Griggs, Director, Monash Sustainability Institute, Monash University
36. Prof Peter Sly, Medicine Faculty, School of Paediatrics & Child Health, UQ
37. Dr Pauline Grierson, Senior Lecturer, School of Plant Biology, Ecosystems Research Group, Director of West Australian Biogeochemistry Centre, UWA
38. Prof Jurg Keller, IWA Fellow, Advanced Water Management Centre, UQ
39. Prof Amanda Lynch, School of Geography & Environmental Science, Monash University
40. A/Prof Steve Siems, School of Mathematical Sciences, Monash University
41. Prof Justin Brookes, Director, Water Research Centre, The University of Adelaide
42. Prof Glenn Albrecht, Professor of Sustainability, Director: Institute for Sustainability and Technology Policy (ISTP), Murdoch University
43. Winthrop Professor Steven Smith, Australian Research Council Centre of Excellence in Plant Energy Biology, UWA
44. Dr Kerrie Unsworth, School of Business, UWA
45. Dr Pieter Poot, Assistant Professor in Plant Conservation Biology, School of Plant Biology, UWA
46. Adam McHugh, Lecturer, School of Engineering and Energy, Murdoch University
47. Dr Louise Bruce, Research Associate, School of Earth and Environment, UWA
48. Dr Ailie Gallant, Postdoctoral Research Fellow, School of Earth Sciences, University of Melbourne
49. Dr Will J Grant, Australian National Centre for Public Awareness of Science, ANU
50. Rick A. Baartman, Fellow of the American Physical Society
51. William GC Raper, Senior Principal Research Scientist, CSIRO (retired)
52. Dr Chris Riedy, Research Director, Institute for Sustainable Futures, University of Technology, Sydney
53. Ben McNeil, Senior Fellow, Climate Change Research Centre, UNSW
54. Paul Beckwith, Department of Geography, University of Ottawa
55. Tim Leslie, PhD candidate, Climate Change Research Centre, UNSW
56. Dr Peter Manins, Chief Research Scientist, CSIRO Marine and Atmospheric Research (post-retirement Fellow)
57. Prof Philip Jennings, Professor of Energy Studies, Murdoch University
58. Dr John Tibby, Senior Lecturer, Geography, Environment and Population, University of Adelaide
59. Prof Ray Wills, Adjunct Professor, School of Earth and Environment, UWA
60. Jess Robertson, Research School of Earth Sciences, ANU
61. Dr Paul Tregoning, Senior Fellow, Research School of Earth Sciences, ANU
62. Dr Doone Wyborn, Adjunct Professor, Geothermal Centre of Excellence, University of Queensland
63. Dr. Jonathan Whale, Director, National Small Wind Turbine Centre (NSWTC), Murdoch University
64. Dr Tas van Ommen, Australian Antarctic Division, Cryosphere Program Leader, Antarctic Climate & Ecosystems CRC
65. Dr Jim Salinger, Honorary Research Associate, School of Environment, University of Auckland
66. Dr P. Timon McPhearson, Assistant Professor of Urban Ecology, Tishman Environment and Design Center, The New School, New York
67. Prof Deo Prasad, Director Masters in Sustainable Development, UNSW

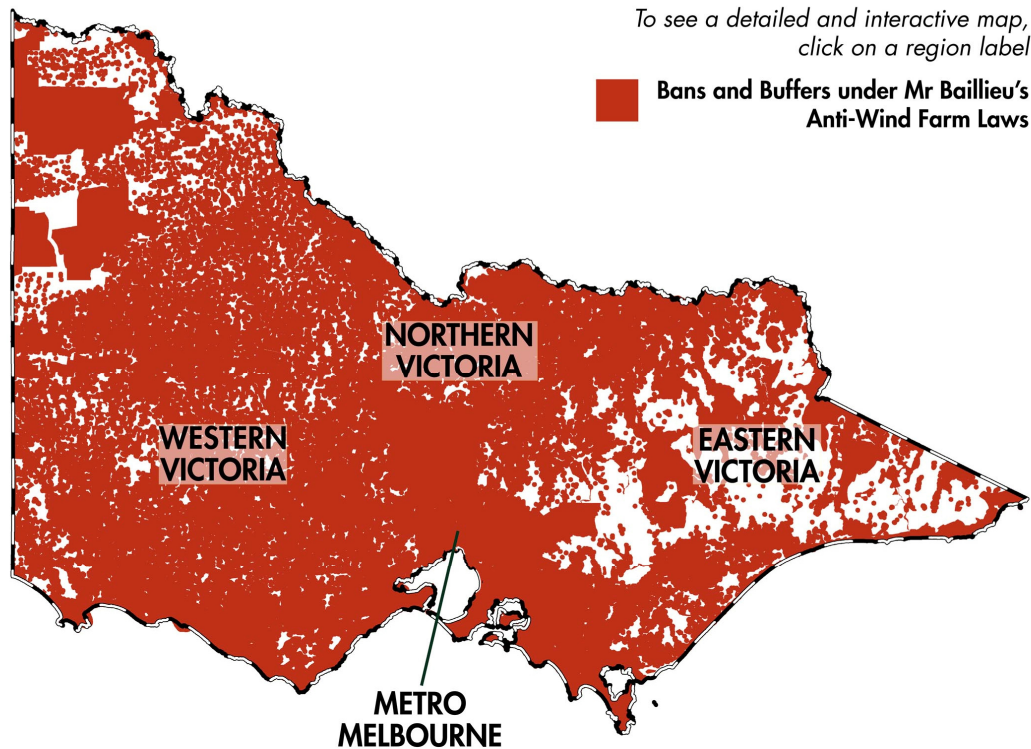
68. Prof Rob Harcourt, Facility Leader, Australian Animal Tagging, Monitoring System Integrated Marine Observing System and Professor of Marine Ecology, Macquarie University
69. Dr John Hunter, Antarctic Climate & Ecosystems CRC, University of Tasmania
70. Dr Michael Brown, ARC Future Fellow & Senior Lecturer, School of Physics, Monash University
71. Dr Karen McNamara, Pacific Centre for Environment and Sustainable Development, University of the South Pacific
72. Dr Paul Marshall, Director – Climate Change, Great Barrier Reef Marine Park Authority
73. Dr Ivan Haigh, Post-doctoral Research Associate, UWA Oceans Institute and School of Environmental Systems Engineering
74. Dr Ian Allison, Antarctic Climate and Ecosystems CRC
75. Dr Jennifer Coopersmith, Honorary Research Associate Department of Civil Engineering and Physical Sciences, La Trobe University
76. Professor Emeritus Peter Kershaw, School of Geography and Environmental Science, Monash University
77. Professor Peter Gell, Director, Centre for Environmental Management, University of Ballarat
78. Prof David A Hood, Adjunct Professor, Faculty of Built Environment and Engineering, Queensland University of Technology
79. Professor Lesley Hughes, Head of Biological Sciences and Co-director of Climate Futures at Macquarie, Macquarie University
80. Dr Melanie Bishop, Senior Lecturer, Department of Biological Sciences, Climate Futures at Macquarie, Macquarie University
81. Dr Jane Williamson, Senior Lecturer, Department of Biological Sciences, Climate Futures at Macquarie, Macquarie University
82. Associate Professor Grant Wardell-Johnson, Director of the Curtin Institute of Biodiversity and Climate, Curtin University
83. Associate Professor Ralph Chapman, Director, Graduate Programme in Environmental Studies, Victoria University of Wellington
84. Dr Malcolm Walter, Director, Australian Centre for Astrobiology, University of New South Wales
85. Dr Darrell Kemp, Senior Lecturer, Department of Biological Sciences, and Co-leader of Terrestrial Adaptation Research, Climate Futures at Macquarie, Macquarie University
86. Dr Liz Hanna, Fellow, National Center for Epidemiology & Population Health, ANU
87. Dr. Patrick J. Conaghan, Honorary Associate, Department of Earth and Planetary Sciences, Macquarie University.

Appendix 2 The Baillieu Government – Policy and Initiatives to restrict the growth of renewable energy and promote the growth of fossil fuel based extraction industries.

Since coming to power the [Baillieu government](#) has steadily backed away from its legislated commitment to reduce carbon emissions by 20 per cent this decade, repeatedly describing this legislated, and therefore legally binding, target as 'aspirational'.

Premier Ted Baillieu has distanced himself from it by labelling it as old Labor government policy. *"[It's] a legislative target set by the previous government and as we've said, that is an aspirational target,"* he said. *"As we have consistently said if there is to be a systematic approach to this then that will be taken by the Commonwealth. We happen to disagree with the [carbon tax] model that's been rolled out by the current government."*

Since coming to power the Baillieu Government has introduced draconian restrictions on the siting of wind power seemingly designed to destroy that industry. These include 2km setback from houses and 10km buffers around national parks (which is not in the new laws, but seems to be based on Coalition policy that calls for "The exclusion of wind farms in or near national and state parks"). Any house within 2 kilometres of a proposed wind power development has an effective right of veto. If all of these restrictions are applied there is virtually nowhere in Victoria available for siting wind power developments. Further the Baillieu Government has given planning controls to local councils ensuring that local self-interest will always take precedence over the greater good. The brown areas on the Map of Victoria reproduced below show where wind power developments have become impossible as a result of the Baillieu Government's restrictions on siting.



The [Baillieu government's energy policies](#) are likely to cost Victoria \$3.6 billion in clean energy investment according to the Clean Energy Council. Friends of the Earth says up to \$955 million of wind projects in Victoria, costing almost 2000 jobs, have been lost or stalled since the laws came in. Many currently valid planning permits for wind power projects will expire in March.

In September 2011 the Baillieu government [broke an election promise](#) and greatly slowed the expansion of the small-scale solar power industry in Victoria by reducing the solar feed in tariff available as an incentive to households and small businesses to install solar power.

The Baillieu Government – Fossil Fuel Policies

The Baillieu government is plainly prepared to sacrifice jobs and revenue in the coming green economy but appears to be happy to make any shortfall up by expanding brown coal mining and coal seam gas extraction.

The mining industry has been repaid handsomely for the millions of dollars it contributes to the Liberal Party through “blind” trusts. Until Australians demand total transparency on political donations, vested interests will continue to dictate their own agenda with dire consequences like those described below:

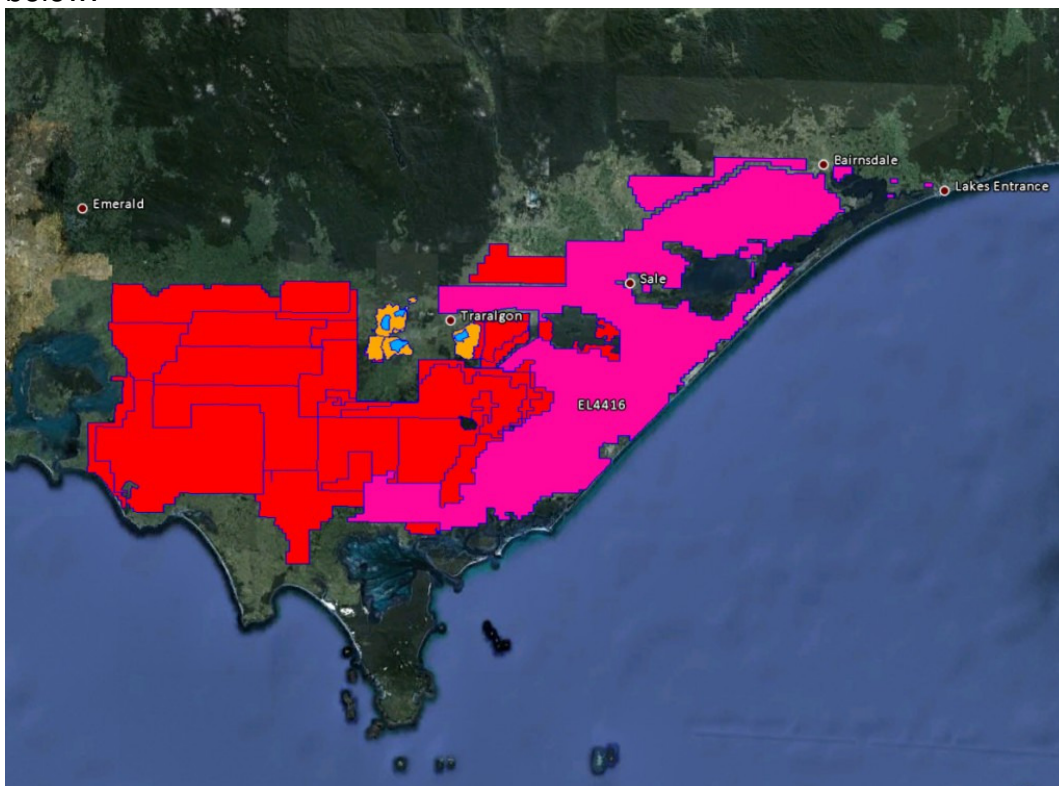
On March 3 this year, The Age [reported](#) that a controversial scheme to mine and export brown coal (regarded as today's asbestos and shelved by the Brumby government in 2009) had been dusted off by the Baillieu government. When Big

Mining saw the coming bonanza with the election of the Baillieu government, it responded with a flurry of activity.

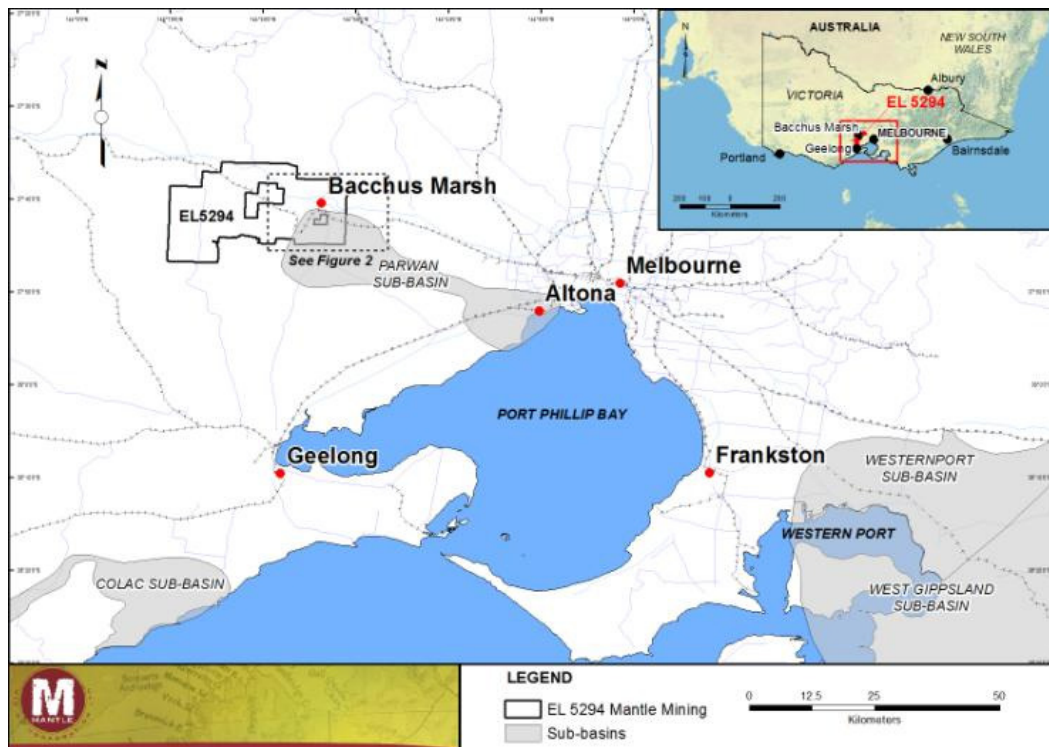
Hundreds of brown coal mining leases have now been issued by this government for the very areas out of bounds to wind farms — coastal regions and areas of significant environment value....This also applies to Victoria's prime agricultural land, as Phil Piper, president of the Mirboo North Landcare Group and owner of a property in rolling green hills of South Gippsland discovered, via an article in The Age.

It would appear that the company, Mantle Mining, was granted a licence by the Baillieu government this year to explore for coal over 19,000 hectares at Mirboo North. According to Piper, no-one knew about it as no applications were ever advertised, a legal requirement. Australia needs to preserve its prime agricultural land for food production.

The massive EL4416 lease to Ignite Energy Resources issued earlier this year shows that the Baillieu government doesn't share this view. Covering nearly 4,000 sq km of Gippsland's prime coastal and tourism region, the lease, which includes the mining of brown coal, covers the spectacular 90 Mile Beach, continues then all the way to Wilsons Promontory up to part of the Gippsland Lakes and surrounds the towns of Bairnsdale, Sale and Traralgon. See the map below:



The Baillieu Government's support of the sunset coal and gas extraction industries in Gippsland includes tacit support for the beleaguered HRL Dual Gas Plant currently mired in legal action at VCAT. The \$50 million of State funds earmarked for the HRL Plant has not been withdrawn and is thought likely to be directed to [Mantle Mining](#) to support their proposed export oriented brown coal mining and dewatering venture at Bacchus Marsh should the HRL Dual Gas Gippsland project fail.



At Anglesea the Baillieu government [despite the obvious environmental impact on nearby environmentally significant heath land](#), and without consideration of [the greenhouse gas burden](#) of combustion of the [more than fifty million tonnes](#) of brown coal that are expected to be extracted from the open cut mine have simply signed off on a pre-existing option to extend Alcoa's mining activity by fifty years.