

Submission to the Review of the Climate Change Act 2010

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Healthy planet, healthy people.

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Who is DEA?

Doctors for the Environment Australia (DEA) is an independent, self-funded, non-government organisation of medical doctors in all Australian States and Territories. Our members work across all specialties in community, hospital, private practice and academia. We work to prevent and address the health risks – local, national and global – caused by damage to our natural environment. We are a public health voice in the sphere of environmental health with a primary focus on the health harms from environmental damage, pollution and climate change.

DEA welcomes this opportunity to submit to this review. We note that this review is for the purposes of clarifying and consolidating government-initiated measures to both mitigate and adapt to climate change by way of various imperatives, statements, principles, goals, and agreements with communities, businesses and private land-holders. DEA's main focus is prevention and awareness of health outcomes expected to be affected by climate change – and this will constitute the bulk of our submission. We will not be commenting extensively on the intent or effectiveness of legalities, or matters of soil management and carbon sequestration, although they are of course vital components of carbon balance.

Key recommendations:

The Climate Change Act should provide legislation, guidelines and principles to

- Recognise the health impacts of climate change and commit to urgent action to mitigate climate change as a public health priority.
- Set Victorian Emission Reduction Targets and Renewable Energy Targets irrespective of federal policies.
- Facilitate a rapid, managed transition from coal-fired energy generation to renewable energy and industries with extensive local community consultation.
- Implement a ban on the development and exploration of new coal resources and rule out any new coal allocations for domestic use or export.
- Stimulate the Victorian economy by establishing employment opportunities in new less carbon intensive industries.
- Institute support for broad adaptive changes, with particular reference to our health services and more vulnerable members of our society.
- Provide Victorians with readily accessible information on the state of global warming and climate change, and progress in emission reduction through independent instrumentalities.

Health and humanity impacts from global warming and climate change

Global warming is the driver of climate change, although we note that there is no mention of "global warming" in the Act of 2010. It is warming of the land, seas and atmosphere close to earth's surface and subsequent changes to our climate that is predicted to cause increasingly profound harmful effects to human health and wellbeing unless greenhouse gas emissions are reduced substantially within the next decade. <http://www2.ametsoc.org/ams/index.cfm/publications/bulletin-of-the-american-meteorological-society-bams/state-of-the-climate/state-of-climate-in-2014/>

Significant global warming has already occurred and Australia's average temperature has already risen by 0.9°C since 1920 (CSIRO and BoM, 2007). Global temperatures

are on track to rise 1-2°C by 2050 and 3-4° C by 2100. Rises of 4°C or more have not been experienced for 10-20 million years and the upper ranges of 'business as usual scenarios' predictions are most likely not compatible with human habitation. There is therefore, an urgency for swift mitigation strategies across all levels of society, as it is undisputed that our current global warming trajectory will have profound impacts on present health and lifestyle standards. Furthermore, without a significant reduction of global carbon emissions, we are heading for uncontrolled warming which will severely impact all aspects of our complex modern societies leading to unprecedented instability across many sectors and jurisdictions.

Our health is absolutely dependent on natural systems - our 'life-support systems'. We need clean air and water, a stable climate, healthy soils in which to grow our food, and rich, biodiverse ecosystems. With over half of our medicines derived from nature, the dependence of our wellbeing on ecosystems cannot be overstated. Already, environmental degradation is leading to ever increasing extinction of species. We are part of nature's complex web and cannot survive in isolation.

Climate change is the greatest threat to human health this century with climate destabilisation having both direct and indirect health impacts. Extreme weather events such as heat waves, bush fires, floods, storms and temperature-enhanced levels of urban air pollution have direct impacts on health, such as, drownings, burns, trauma due to flying and falling debris, dehydration and heat related illnesses. Indirect health impacts are those resulting from changes in ecologically-based systems and include lowered food yields, reduced access to clean water, vector-borne diseases and other infectious diseases due to displaced populations living in unhygienic conditions. Conflict resulting from large numbers of environmental refugees and mental health impacts from those affected by extreme weather events or those living in failing rural communities are also categorised as indirect health effects.

In Victoria, we are very familiar with the health impacts of climate change having experienced severe droughts, heat waves, bushfires and floods, the intensity and frequency of which are predicted to increase significantly relative to further rises in temperature, changes in rain fall patterns and associated climate change. (<http://www.climatecouncil.org.au/uploads/1c34cb0cfaa57bd333eb9e013c7fb6ef.pdf>) During the Victorian heatwave of February 2009 there were 374 excess deaths prior to the fires on Black Saturday. Fires brought devastation with direct loss of life and injury as well as ensuing mental health trauma for hundreds of Victorians. Furthermore with predicted future reductions in rainfall in South-Eastern Australia (<http://www.bom.gov.au/climate/current/annual/aus/>) recovery of vegetation after fires or extreme weather will be under further threat.

The Victorian coastline will also suffer the effects of increasing sea levels due to melting of the massive polar ice reserves. A small rise has already occurred and will increase to flood low-lying coastal regions in Victoria http://www.climatechange.vic.gov.au/_data/assets/pdf_file/0009/152487/CSIROReport_VictorianCoast.pdf. Globally, forced displacement of populations from low lying areas vulnerable to sea rises will cause social and economic upheaval which is predicted to impact on the health of both the millions of displaced people and the countries in which they seek residence. This is particularly relevant to Australia with its close proximity to many Pacific Island and South East Asian countries.

Terms of Reference

Comments on the *effectiveness of the current Climate Change Act 2010*

The effectiveness of the Act is difficult to judge because in 2012 the Victorian government repealed the most significant part of the Act, namely the greenhouse gas emissions target. The reason given was that this section was redundant because the then federal government had in place a price on carbon. However when that legislation was repealed, the state government did not restore Victoria's emissions target.

Theoretically an emissions reduction target should be a very effective mechanism to shape government and private business investment in renewable energy sources as it gives a degree of certainty to new investors in the state of Victoria, irrespective of federal direction. Hence the failure of the former Victorian government to reinstate Victoria's target is incomprehensible if we are to advance as a prosperous, low carbon emitting state.

Several other components of the Act 2010 were also repealed by the former Victorian government in 2012. These included the requirement for greenhouse gas emissions reporting, the EPA's greenhouse gas regulatory powers, and the facility for Climate Covenants. We believe also that the section on Policy Objectives was withdrawn from the Act.

The remaining sections of the Act appeared to have been generally ignored by the previous Victorian government or as highlighted by the Hon Mr Carbines in this Hansard transcript, 'dismantled'.
http://www.parliament.vic.gov.au/images/stories/daily-hansard/Assembly_2015/Assembly_Daily_Extract_Wednesday_11_February_2015_from_Book_2.pdf Hence it is difficult to assess what effective measures, if any, remain in the current Act, and DEA therefore fully supports this important process to re-define what should be in the Act.

Victoria requires laws to be able to act independently and effectively on mitigation and adaptation with as much immunity as possible from the vicissitudes of federal policy. Victoria must set its own targets on emissions and renewable energy that take into account the health and economic benefits of doing so.

It is particularly important to have legally binding and regular assessments of progress for both government departments and industry bodies. Climate change needs to be considered in all policies across all departments. All sectors contribute to greenhouse gas emissions and will be affected by our changing climate requiring adequate adaptation.

Hence all government departments should be required to audit and report greenhouse gas emissions and develop mitigation and adaptation goals and strategies, with legislation for non-government sectors to also comply.

What role should the Act play in:

(a) Reducing greenhouse gas emissions?

Victoria is responsible for approximately 22.5% of Australia's emissions.

<http://www.environment.gov.au/system/files/resources/255447ab-3c51-412e-9756-921ef23cb8aa/files/state-territory-inventories-11-12.pdf> Stationary energy comprises almost 70% of those emissions and Victorians have amongst the highest greenhouse gas emissions per capita globally, estimated at 22.2 tonnes of CO₂ per person in 2009. http://www.climatechange.vic.gov.au/_data/assets/pdf_file/0005/136490/DSE_Greenhouse-Report_online.pdf

Hence it is essential for Victoria to have its own ERTs which can be used to direct the uptake or winding back of particular industries as appropriate. The targets should be consistent with those supported by both DEA and the Climate Change Authority which include 40-60% reduction below year 2000 levels by 2030.

<http://www.climatechangeauthority.gov.au/files/files/Target-Progress-Review/Targets%20and%20Progress%20Review%20Final%20Report.pdf> In keeping with these targets and global scenarios Victoria should also implement a ban on the development and exploration of new coal resources and rule out any new coal allocations for domestic use or export.

There should be no provision for annulment of Victoria's ERTs should the Federal Government adopt similar targets for the following reasons.

1. Emissions in Victoria are produced mainly from the brown coal-fired power stations in the Latrobe Valley. Victoria therefore needs to progressively reduce these low efficiency greenhouse gas intense emissions from power generation and ensure that we are not benefitting from more substantial reductions in other states. Monitoring emissions from the power stations would not pose a great burden on regulatory authorities.
2. To provide clear goals for industry and business, targets need to be definite and unwavering and not dependent on the uncertain attitudes of the federal government at the time.

In addition to reducing climate change health impacts by reducing green-house gas emissions there are local health benefits to be gained from: 1) decreasing coal power production and moving to alternative energy sources, 2) developing less carbon intensive transport systems and industries and 3) protecting our forests which are also effective carbon sinks. Coupled with CO₂ emissions from coal-fired power stations is the emission of a host of potentially toxic chemical substances with adverse health effects including particulates, sulphur dioxide, oxides of nitrogen, and mercury all of which have profound adverse health effects.

<https://www.mja.com.au/journal/2011/195/6/mining-and-burning-coal-effects-health-and-environment?destination=node/221025>

There are also important economic issues to take into account. In Australia when the health costs of air pollution from coal combustion on the community are considered, there is an estimated cost to healthcare of \$2.6 billion per annum (Australian Academy of Technological Sciences and Engineering 2009) which is equivalent to an extra AUD\$13 per megawatt hour.

<http://www.atse.org.au/Documents/Publications/Reports/Energy/ATSE%20Hidden%20Costs%20Electricity%202009.pdf> For Hazelwood alone, externalities of health and social costs have been recently calculated to amount to AUD\$900 million per year.

<http://www.theage.com.au/victoria/the-hidden-cost-of-the-hazelwood-coal-power-plant-20150418-1mnmdf.html> Therefore reducing green-house gas emissions from coal fired power plants by decreasing production will also lead to significant community health and public health cost benefits.

<http://www.smh.com.au/comment/invisible-killer--need-for-better-air-quality-standards-is-urgent-20150715-gicrxn.html>

The Hazelwood coal mine fire in 2014 highlighted to all Victorians the dangerous nature of coal fired power generation and the serious health consequences of air pollution from the coal industry. It also serves as a reminder to government that careful rehabilitation of coal mines and coal power stations is essential for the long term health of adjacent communities.

It is important for the Act in addressing greenhouse gas emissions to have the power to protect Victorian forests. Our forests are some of the most carbon dense in the world and it is paramount that we protect these existing carbon sinks in addition to other carbon sequestration measures. Preservation of forests has the added advantages of protecting water quality and quantity (particularly relevant with our declining rainfall), maintaining places for healthy recreation and long term eco-tourism based jobs.

The Act should also encompass measures to encourage transformative changes to the way in which we live. Moving from vehicular transport to alternatives such as cycling, walking and public transport is an important part of green-house gas emissions reduction as well as improving public health and wellbeing.

(b) Adapting and preparing for the impacts of climate change?

Even with strong CO₂ emission reduction measures to keep global warming to within 2°C, there will still be serious health consequences for which adaptive measures need to be in place. All the climate challenges predicted to occur (IPCC Fifth Assessment Report 2015) will impact on health either directly through immediate injury or later through disease, food shortages and conflict. The young and elderly will be particularly vulnerable (No Time For Games: Children's Health and Climate Change. Report by DEA June 2015). Therefore it is essential for the Act to contain measures which will aid in adoption of steps to reduce health harms. Accurate and very accessible reporting (see later) of climate progress would be an important measure as it would enable communities and local governments to review measures under their control, such as the planning for bush fires and coastal flooding.

Victoria's health systems and services need to consider urgently preparing for and increasing their resilience to extreme weather events. As highlighted in DEA's submission to the 'Senate Inquiry for Recent trends in and preparedness for extreme weather events' this would include;

[http://dea.org.au/images/uploads/submissions/Extreme Weather Events Submission_01-13.pdf](http://dea.org.au/images/uploads/submissions/Extreme_Weather_Events_Submission_01-13.pdf)

1. Adequate planning within health services to cope with changed conditions and demands to enable the adequate treatment of expected increases in the numbers of injured and ill, resulting from extreme weather events, immediately and in subsequent months and years.
2. Examination of the ability of all essential health services to operate during extreme conditions which may cause loss or disruption of health infrastructure, medication and equipment supply chains, energy, water, sewerage and waste treatment and staffing levels.
3. Strengthening the role of primary care practitioners in the management and education of their patients on preventative measures aimed at minimising health risks during extreme weather events eg. tailored personal adaptation behaviours during heat waves or poor air quality periods.

The Act should also have the capacity to ensure the construction of all buildings in the state adhere to strong energy efficiency guidelines which will have the dual effect of creating more comfortable and safe conditions during heat waves whilst simultaneously reducing the need for extra power usage.

(c) Growing a globally competitive Victorian economy

The Act could have a significant role in stimulating Victoria's economy. Many of the world's major economies are moving to less greenhouse gas intensive, lower locally polluting advanced technologies and environmental management. Moving to lower or zero carbon-emitting technologies opens up a huge area for economic growth and safer employment opportunities. Sustainable forms of energy production can be cheaper than coal-fired power when all the subsidies and externalities (including health-care costs) are taken into account (Coady et al IMF Working Paper How Large Are Global Energy Subsidies? May 2015, and Australian Academy of Technological Sciences and Engineering 2009). There are also more jobs per kilowatt hour in the renewable energy power sector relative to coal-fired power plants. Aged power stations in the Latrobe Valley in particular, where Hazelwood has the highest greenhouse gas emission intensity of any power station in Australia, should be phased out urgently. http://www.sourcewatch.org/index.php/Hazelwood_Power_Station It will be important to have the support of communities for well-developed industry transition plans to retain employment and reduce social dislocation. The Guiding Principles in the Act, therefore, of "integrated decision making" and "community engagement" should help to achieve the desired employment opportunities which will help Victoria's competitiveness. Nothing in the Act should provide obstacles for communities wishing to develop more sustainable forms of power generation such as wind turbine farms or large scale solar plants.

(d) Providing accessible information to the Victorian community on climate change

Victorians across all sectors need easily accessible information in order to make rational personal and business decisions that will help in both reducing greenhouse gas emissions and adapting to the changes that are already inevitable. The Act should therefore direct an instrumentality to provide regular up-dates on information relating to Victoria's green-house gas emissions, threats to Victorians from climate change and global warming, and adaptation advice. The EPA of Victoria could take on this role and we note that a public Inquiry has commenced which will better define the EPA's role. However a specific department or unit may be better placed to provide not only scientific updates and predictions, but also mitigation and adaptation information and education within our schools.

It is essential that the people of Victoria are exposed to unbiased and uncensored facts on global warming and climate change. Other scientific organisations such as the Victorian Bureau of Meteorology and the CSIRO could also be directed to provide regular factual up-dates in order to help overcome the supply of misinformation that continues from many sectors including those with political and commercial vested interests.

Based on the TOR, what else should the Independent Review Committee consider when developing its report and recommendations

Present and future threats to our health and wellbeing should be given a greater priority in both the framing of our climate emergency and the mitigation decision-making processes. As Dr Chan, the Director General of the World Health Organization states "*the real bottom line of climate change is its risk to human health and quality of life*". Preventing adverse health impacts also makes economic sense, hence, section 2.3(C) of the TOR could state "consider the known costs and benefits to businesses, households, governments and **human health** where relevant". Perusal of the Act does not make it clear what role the EPA has in determining environmental suitability for decisions prompted by the Act. If the EPA is to have a strong role in climate change mitigation and adaptation, Health Impact Assessments and predicted future climate change impacts should always be included in Environment Impact Assessments.

Present day policy makers have a responsibility to ensure decisive, effective climate change mitigation takes place to protect not only the health of present and future generations of Victorians but also global stability and progress, as the United Nations Secretary-General Ban Ki-Moon has said, "*Climate change threatens all our goals for development and social progress*" and "*it is a true existential threat to the planet*".