



CLIMATE AND  
HEALTH  
ALLIANCE

# Submission to the Victorian Government Inquiry into the impact of the carbon price on health services

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**Contact:**

CAHA Convenor  
Fiona Armstrong  
convenor@caha.org.au  
0438900005  
[www.caha.org.au](http://www.caha.org.au)

## About the Climate and Health Alliance

The Climate and Health Alliance (CAHA) is a not-for-profit organisation that is a national alliance of organisations and people in the health sector working together to raise awareness about the health risks of climate change and the health benefits of emissions reductions.

CAHA's members recognise that health care stakeholders have a particular responsibility to the community in advocating for public policy that will promote and protect human health.

Membership of the Climate and Health Alliance includes a broad cross section of the health sector with 27 organisational members, representing hundreds of thousands of health care professionals from a range of disciplines, health care service providers, institutions, academics, researchers, and health consumers.

The Alliance aims to contribute to the development and implementation of evidence based public policy to protect the community from the adverse consequences of climate change, and promote recognition that policies to reduce greenhouse gas emissions and protect the environment have the potential to bring important public health benefits.

CAHA works to facilitate effective responses to climate change as well as promote sustainable practices in health care to reduce the sector's environmental footprint.

For more information about the membership and governance of the Climate and Health Alliance, please see Appendix A. For further information see [www.caha.org.au](http://www.caha.org.au)

## Key points

1. Climate change, driven by greenhouse gas emissions, poses serious immediate, medium term and long term risks to human health.
2. Acting on climate change requires policies that create a financial incentive to reduce emissions. This is best achieved with a comprehensive suite of policies across a range of sectors. A price on carbon is a policy that can work across sectors.
3. The carbon price has helped Australia begin to peak its emissions, and if retained, should move Australia on the necessary pathway to emissions reductions.
4. The health sector needs to transform its operations to become a low carbon sector, a scenario that is achievable, affordable and will bring many public health benefits as well as save money.
5. Victoria has the potential to be a world leader in low carbon, sustainable healthcare – if it develops policies to support hospitals and healthcare settings to move in this direction.

## Introduction

Reducing greenhouse gas emissions in the healthcare sector is recognised by all health professions and healthcare service providers as a vital contribution to acting on climate change – the most serious threat to global public health this century.

In a recent report produced jointly by the World Health Organization (WHO) and Health Care Without Harm (HCWH), the Director of the WHO Department of Public Health and Environment, Dr Maria Neira writes:

*“Hospitals are energy and resource intensive enterprises that, as they operate today, contribute substantially to climate change while inadvertently contributing to respiratory and other illnesses. Procurement, resource use, transportation and other policies and practice contribute to the health sector’s significant climate footprint. By reducing this footprint and moving toward carbon neutrality, the health sector can demonstrate the path forward in response to climate change, thereby playing a leadership role in advocating for a healthy and sustainable future.”<sup>i</sup>*

This submission comments on the importance of price on carbon as a health issue, and the opportunity that initiatives such as this offer in terms of assisting the health sector to provide long term energy security, reduce its medium to long term energy costs, reduce environmental harm (and thus risks to health), as well as contributing to improved public health.

## Climate change poses serious immediate, medium term and long term risks to human health

Climate change, driven by greenhouse gas emissions, poses serious immediate, medium term and long term risks to human health. Climate change poses serious health risks to Australians. More frequent and more severe extreme weather events, including heatwaves, floods, fires and storms will increase illness, injury and death. Other effects include an increased incidence of infectious diseases, vector borne diseases, air pollution, mental illness, poor water quality and food insecurity.<sup>ii</sup> Children, the elderly, Indigenous Australians, people with chronic illnesses, and those in coastal as well as rural, remote and regional communities are being disproportionately affected and are expected to continue to be severely impacted. Ongoing drought and water insecurity is expected to reduce health outcomes and increase morbidity and mortality for the seven million Australians in rural and remote areas as unemployment and economic insecurity contributes to a range of subsequent health issues.

Health care services in Australia are already experiencing the health effects from climate change with increases in service demand from heatwave related illnesses and deaths.<sup>iii</sup> A single heatwave in the state of Victoria in January 2009 saw a 62% increase in mortality, from both direct heat related illnesses and associated exacerbations of chronic medical conditions. The Victorian Department of Human Services reported that during this five day event, ambulances

had a 46% increase in demand; emergency departments experienced an eight-fold increase in heat related presentations; a 2.8 fold increase in cardiac arrests; and a threefold increase in patients dead on arrival.<sup>iv</sup>

As bushfires increase, more deaths, injuries and burns are likely, as well as increased prevalence of respiratory disease. Extreme weather events associated with flooding and heavy rains will cause loss of home and livelihood, fatalities, traumatic injuries and post traumatic stress disorders.

Temperature rises are contributing to an increased incidence of food or water borne infectious diseases. Asthma, allergies, and respiratory diseases are increasing as a result of rising temperatures and higher CO<sub>2</sub> concentrations.<sup>v</sup> The mental health consequences of living with climate change are expected to increase in incidence and severity.<sup>vi</sup>

Other impacts include effects on our food and water supply as decreasing productivity of land leads to declines in production volumes and nutritional value.<sup>vii</sup>

## **The carbon price is good for health**

CAHA recognises policies to reduce greenhouse gas emissions have the potential to reduce risks to health from climate change, as well as bring important public health benefits. Australia's current energy and transport systems are heavily reliant on the burning of fossil fuels, such as coal, gas and oil: energy sources implicated in driving climate change as well as posing risks to human health.

Shifting away from fossil fuels to clean renewable energy will not only reduce greenhouse gas emissions but will also reduce current health risks, such as developmental disorders, cancers, heart disease and respiratory problems implicated in the mining, transportation and burning of coal,<sup>viii</sup> as well as reduce the incidence of cardiovascular and respiratory diseases associated with vehicle emissions.<sup>ix</sup> Shifting the energy supply away from fossil fuels to clean, renewable energy is the single most important activity required to avert dangerous climate change and all its impacts.

A carbon price acts as an incentive for polluting industries, organisations and institutions to invest in lower emission technologies and fuel sources. This not only reduces greenhouse gas emissions, but brings environmental, health and economic benefits.<sup>x</sup> Without a carbon price, the costs of climate change, environmental harm and damage to human health caused by burning fossil fuels are not reflected in the price of these resources. Estimates indicate coal-fired power generation in Australia carries a human health cost (from associated respiratory, cardiovascular, and nervous system diseases) of \$2.6 billion annually.<sup>xi,xii</sup>

The annual health costs from pollution from fossil fuelled transport are estimated to be around \$3.3 billion.<sup>xiii</sup> These conservative estimates put the total health costs to the Australian community from burning fossil fuels at around \$6 billion annually.

## The carbon price, along with other policies, will reduce energy prices

Acting on climate change requires policies that create a financial incentive to reduce emissions. This is best achieved by a comprehensive suite of policies across a range of sectors, including a price on carbon. Putting a price on carbon allows these currently 'externalised' climate and health costs for Australia to be accounted for. With regard to power generation, this would make so-called 'cheaper' fossil fuels less cost competitive with safer, clean, renewable energy resources. Because the cost of fossil fuels use is not incorporated into their price, they should be seen as artificially cheap, rather than renewables being relatively expensive.

For example, if climate and health costs were included, the costs of producing electricity from natural gas would rise by \$A19/MWh, black coal \$A42/MWh and brown coal \$A52/MWh, making them more expensive than renewable energy.<sup>xiv</sup> The external costs of wind power by comparison however add only around \$A1.50/MWh, and solar thermal and solar PV around \$A5/MWh.<sup>xv</sup>

Once these costs are taken into account the relative differences between the power generating technologies are much less – making renewable energy technologies such as wind power cheaper than coal.<sup>xvi</sup> A price on carbon emissions in Australia assists in realising these costs and supports the transition to a cleaner energy supply system and a cleaner transport system - reducing our greenhouse gas emissions and our contribution to global risks from climate change, as well as reducing specific threats to human health.

A carbon price is an internationally recognised mechanism that is widely considered to be essential for any jurisdiction seeking to reduce emissions and begin to position itself to participate in the global low carbon economy.

The OECD, stated its October 2013 report, Climate and Carbon: Aligning Prices and Policies.<sup>xvii</sup>

*“Explicit carbon pricing mechanisms, such as carbon taxes and emissions trading systems, are generally more cost effective than most alternative policy options in creating the incentive for economies to transition towards zero carbon trajectories.”*

A carbon price is supported by Australian businesses, climate and energy experts and economists as an appropriate mechanism to reduce emissions. Economists including Melbourne University professor John Freebairn support a carbon price as a mechanism to encourage “millions of businesses and households to shift their production and consumption choices to lower pollution, lower price alternatives.”<sup>xviii</sup>

A group of over 400 Australian businesses, known as the 'Businesses for a Clean Economy' including Westpac, AGL and Fujitsu, all support a price on carbon.<sup>xix</sup> The group says a carbon price allows companies to exercise choice in how they reduce emissions and that the carbon price helps create new industries and professions.

[Dozens of countries, provinces, states and cities around the world](#) have recognised the importance of pricing carbon, and have implemented carbon pricing schemes. These include states and provinces in the US, Canada, and China. India, Korea, Japan, Finland, The Netherlands, Sweden, Norway, Denmark, the UK, Ireland, and New Zealand all have national carbon price schemes.

While a price on carbon is an important measure in reducing greenhouse gas emissions, a comprehensive suite of policies is required.<sup>xx</sup> This includes stronger regulation of emissions, with tougher emissions standards, mandated energy efficiency standards, removal of subsidies for fossil fuels, and investment in zero emissions energy, transport and transmission infrastructure.<sup>xxi</sup>

The policy that is currently proposed to replace the carbon price, the Direct Action Plan, will not even achieve the inadequate emissions reduction target of a five per cent cut on 1990 levels by 2020, let alone the Climate Change Authority's recommended [19 per cent cut](#). No independent analysis to date has shown that the policy framework as outlined can achieve Australia's international obligations and emission commitments.<sup>xxii</sup>

### **The carbon price has helped Australia peak emissions**

A report from the Australian Climate Commission demonstrates that the carbon price has helped to slow Australia's growth in emissions.

The Climate Commission's 2013 report reveals that 2012 emissions from electricity generation dropped by 4.7 per cent on the previous year, and emissions from electricity hit the lowest levels seen since 2001-02 in the last six months of 2012. Investment slowed in fossil fuel energy infrastructure, but increased in renewables.<sup>xxiii</sup>

The claim that the carbon price and "green schemes" are responsible for the bulk of electricity price rises is misleading and disingenuous: a paper on Victoria's electricity market from the Essential Services Commission in Victoria in 2013 indicates that network costs (largely composed of investment in the distribution network and new metering services) were responsible for almost 50% of the increase in wholesale electricity costs between 2006/07 - 2011/12. Price increases have also been driven by increases in the retailers' gross margins, and account for between 20-30% of the price increases over the period from 2006/7 - 2011/12.<sup>xxiv</sup>

### **A low carbon health sector is a healthy health sector**

The health sector needs to transform its operations to become a low carbon sector, a scenario that is achievable, affordable and will bring many public health benefits as well as save money.

Health care buildings such as hospitals, nursing homes and clinics can realise significant economic and health benefits from the implementation of sustainability strategies to reduce energy use.

Examples of healthcare institutions implementing low carbon and sustainability initiatives that lead not only to emissions reductions, but reduced costs and better public health are emerging all the time.

A study of nine hospital systems in the US in 2012 demonstrated significant savings from the implementation of just three key initiatives in waste, energy and procurement, which if implemented nationally, would deliver over US\$1 billion savings annually.<sup>xxv</sup>

Energy savings were realised through initiatives such lighting upgrades, installation of high efficiency electric motors, solar film on windows, and changing temperatures in the operating room. Streamlined waste processes reduce waste disposal costs, and repackaging of unused single use devices saved \$12 per procedure.

Study author Dr Blair Sadler from the Institute for Healthcare Improvement and former CEO of the Rady Children's Hospital in San Diego says:

*“This study turns on its head the belief that introducing environmental sustainability initiatives increases operating costs. In fact, it is just the opposite.”*

In 2008, the Gundersen Health System in Wisconsin had energy costs that were rising at \$300,000/year. An investment of US\$2 million in energy efficiency initiatives (retrofitting lighting fixtures + reprogramming cooling system controls) is now realising annual savings of more than US\$1.2 million every year. In addition, the health service has worked with a local council to turn wasted methane from landfill into an energy source – making one of their medical campuses 100% energy independent. Gundersen Health System has partnered with an organic farming cooperative on a wind farm which provides enough electricity for 1000 homes and provides a source of income for both Gundersen and the cooperative.<sup>xxvi</sup>

Supply chains emissions are being reduced by reprocessing of single use items, saving Gundersen US\$400,000 annually, while a recycling program for paper and cardboard has become a revenue source.

The installation of solar panels at Hospital Cl'nico de la Universidad de Chile in Santiago in Chile is realising savings of \$100,000 a year in water heating costs, and a reduction in over 100,000 litres of oil annually.

Improving the energy efficiency and thermal design of buildings can not only save money and reduce emissions; it can improve public health.

Research shows patients require less medication, are less prone to depression, and recover more quickly, when nursed in rooms with increased sunlight.<sup>xxvii</sup> Other benefits to health can be realised through improving ventilation in health care settings as this can reduce cross-infection of airborne diseases.<sup>xxviii</sup>

Improved procurement practices can reduce emissions and save on resources. There are significant opportunities for organisations to reduce emissions through changing practices in their supply chain; however this is likely to require incentives from climate policies to be most effective.<sup>xxix</sup> Evidence suggests this should be a priority for healthcare services, as a significant proportion of emissions in the healthcare sector are likely to be attributable to a service's supply chain. An analysis of greenhouse gas emissions in a UK healthcare service found the supply chain was responsible for 72% of total emissions.<sup>xxx</sup>

Improved management of waste offers health benefits as well as emissions reductions through composting, recycling, more environmentally responsible purchasing and minimising transport of waste. Large quantities of waste can be avoided, and disposal of toxic waste reduced.<sup>xxxi</sup>

The use of information and communications technology to provide services can reduce emissions as well as also improve health outcomes: through targeted and individualised consultations, 'telehealth' has been demonstrated to be associated with effective management of mental health issues, heart and lung conditions, diabetes and high risk pregnancies.<sup>xxxii</sup>

Realising these benefits of reduced carbon pollution from the health sector requires the cost of carbon to be incorporated into the price of health sector inputs. As noted above, a carbon price is a transparent and economically efficient way of doing this. In the absence of a carbon price that reflects the combined social and private costs of carbon emissions, the incentive to reduce emissions will be reduced.

## **Victoria: Future leader in sustainable healthcare**

Several hospitals in Victoria are demonstrating the benefits of a sustainable healthcare agenda, realizing savings in waste and energy budgets, and enjoying the reputational gains of an environmentally responsible health service.

Austin Health is a leading example of sustainable healthcare in Australia and is contributing to the global development of sustainable healthcare through its membership of the Global Green and Healthy Hospitals network.

Austin Health has implemented initiatives in the areas of energy, waste, water, and gardens; developed strategies to engage staff; and developed a manual and policies to support efficient use of resources. Its new environmental management strategy outlines initiatives across ten interconnected goals that will be implemented over four years.

Examples include that of water efficiency projects saving 40,000 kilolitres of water; significant reductions in the volume of clinical waste; and installation of energy efficient devices that will realise significant energy savings in coming decades. This work is assisting Austin Health to manage its consumption of resources, and improve the health and wellbeing of staff, while contributing to the worldwide movement of improved environmental practice in healthcare.



Western Health reports the carbon price has complimented its existing environmental agenda and created a stronger incentive for the implementation of energy efficiency initiatives.

This demonstrates the carbon price is working as it should i.e. encouraging organisations and businesses to reduce energy use through the adoption of energy efficiency strategies and behaviour change programs.

Uncertainty regarding continuity of existing policies however serves to undermine these efforts.

The retention of the carbon price and implementation of additional policies to encourage sustainability in healthcare could help accelerate the uptake of these initiatives and contribute, over time, to reduced energy costs and a smaller environmental footprint across the entire sector.

Koowerup Regional Health Service is an inspiring example of a healthcare service leading community sustainability initiatives in a regional community. The service consisting of a small hospital, residential and community care, health promotion, nursing and allied health services has created initiatives to reduce carbon emissions within its own service and in the wider community.

Systematic reduction of energy consumption and the installation of solar panels are helping the service reduce greenhouse gas emissions and energy costs, and the service reported reductions in expenditure on energy and water of 10.5% in 2012/13 from the previous year.

The establishment of a community hub at the health service has enabled partnerships with many other local agencies, schools and community groups, leading to sustainability initiatives reaching beyond the grounds of the hospital.

Western Health and Koowerup Regional Health Service are also members of the Global Green and Healthy Hospitals network.

Barwon Health is home to the world's leading example of a green dialysis program. This initiative is the world's first solar powered dialysis system which reuses and recycles the water from reverse osmosis systems, significantly reducing energy costs and water use to provide more affordable and more sustainable dialysis services for patients.

These examples demonstrate the opportunity provided for the health system in Victoria to help lead the global transition to a low carbon health system worldwide.

The implementation of policies to support environmentally responsible healthcare would help accelerate the progress of hospitals and healthcare services in reducing energy and waste disposal costs and reduce the adverse environmental impacts of healthcare, while contributing to improved public health and the creation of healthier, sustainable communities.

## Conclusion

The Climate and Health Alliance supports the retention of the carbon price as a key mechanism to reduce Australia's greenhouse gas emissions.

However a range of policies, including a carbon price, are necessary to ensure rapid emissions reductions occur across all sectors, including the health sector.

This will allow the health sector to begin to take advantage of Australia's abundant renewable energy resources, as well as provide incentives to choose healthier, low emissions energy sources, and in doing so, support the development of low carbon industries and contribute to improved public health.

## Recommendations

The Climate and Health Alliance calls for:

1. The Victorian Government to support the retention of the federal carbon price, or in the event of its abolition to consider a state-based levy on greenhouse gas emissions.
2. The Victorian Government to develop incentives for the health care sector to reduce its greenhouse gas emissions, and reduce its environmental footprint, through initiatives to:
  - improve energy efficiency
  - reduce waste
  - reduce energy use
  - reduce water use
  - reduce emissions through its supply chain through mandating the purchase of low carbon goods and services
  - promote and support the use of public transport by health sector workers
  - require all renovation and new builds of healthcare infrastructure to use low emissions, low toxic materials, and recycled materials wherever possible
  - for new buildings to be the highest possible energy rating, include renewable energy generation, recycled water and grey water facilities, and onsite food waste recycling
  - promote the purchase of local, organic food for health care services
  - safely dispose of pharmaceuticals and chemicals
  - substitute toxic chemical with safer alternatives
3. For the Victorian Government to encourage its healthcare services to participate in the growing network of [Global Green and Healthy Hospitals](#) and healthcare settings around the world that are working together to reduce their environmental footprint, and in doing so, reduce pollution, reduce waste, reduce healthcare costs, and contribute to improved public health.

## **APPENDIX A**

### **Climate and Health Alliance Committee of Management**

Liz Hanna, CAHA President (Australian College of Nursing)  
Fiona Armstrong, CAHA Convenor  
Erica Bell (Australian Rural Health Education Network)  
Brad Farrant (Australian Research Alliance for Children and Youth)  
Bret Hart (Alliance for Future Health)  
Peter Sainsbury (Public Health Association)  
Kristine Olaris (Women's Health East)  
Alice McGushin (Australian Medical Students Association)

### **CAHA Organisational Members**

Australian Association of Social Workers (AASW)  
Australian College of Nursing (ACN)  
Australian Council of Social Service (ACOSS)  
Australian Hospitals and Healthcare Association (AHHA)  
Australian Health Promotion Association (AHPA)  
Australian Medical Students Association of Australia (AMSA)  
Australian Physiotherapy Association (APA)  
Australian Institute of Health Innovation (AIHI)  
Australian Women's Health Network (AWHN)  
Australian Nursing and Midwifery Federation (ANMF)  
Australian Psychological Society  
Australian Research Council for Children and Youth (ARACY)  
Australian Rural Health Education Network (ARHEN)  
CRANApus  
Doctors Reform Society (DRS)  
Friends of CAHA  
Health Consumers' Network (Qld)  
Health Issues Centre (HIC)  
Kooverup Regional Health Service Public Health Association of Australia (PHAA)  
North Yarra Community Health (NYCH)  
Services for Australian Rural and Remote Allied Health (SARRAH)  
Women's Health East  
Women's Health in the North  
World Vision Australia

### **Expert Advisory Committee**

Dr Erica Bell, University Department of Rural Health, University of Tasmania  
Associate Professor Grant Blashki, Nossal Institute for Global Health  
Associate Professor Colin Butler, College of Medicine, Biology and Environment, Australian National University  
Professor Garry Egger, School of Health & Human Sciences, Southern Cross University  
Professor David Karoly, Federation Fellow in the School of Earth Sciences, University of Melbourne  
Professor Stephan Lewandowsky, School of Psychology, University of Western Australia  
Dr Peter Tait, Convenor, Ecology and Environment Special Interest Group, Public Health Association  
Professor Simon Chapman, Professor of Public Health, University of Sydney  
Dr Susie Burke, Senior Psychologist, Public Interest, Environment & Disaster Response, Australian Psychological Society

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