A price on carbon is good for health

Briefing Paper No. 2

The view of the Climate and Health Alliance: The Climate and Health Alliance (CAHA) accepts that global warming poses grave risks to human health and biodiversity and left unchecked, threatens the future of human civilisation.

What the Climate and Health Alliance seeks: CAHA advocates for urgent policy action to minimise further global warming and protect the community from the adverse consequences of climate change and environmental damage. CAHA advocates a national committment to policies and strategies that will achieve strong emissions reductions to reduce the current and future health impacts and risks associated with increasing global temperature, sea level rise, and food and water insecurity. CAHA recognises reducing the threat to human health from climate change requires an urgent transition from fossil fuels to clean renewable energy to achieve a zero emissions stationary energy supply. A price on carbon that reflects the climate and health costs associated with greenhouse gas emissions is an important and necessary step in achieving this.[1]

Climate risk: Average global temperature has increased almost 1°C over the last century.[2] Emissions to date have likely committed us to an increase beyond 2°C,[3] a level considered to pose "unacceptable risks to key natural and human systems, including significant loss of species, major reductions in food-production capacity in developing countries, severe water stress for hundreds of millions of people, and significant sea-level rise and coastal flooding".[4] CAHA therefore calls for dramatic and urgent reductions in greenhouse gas emissions and removal of excess carbon dioxide from the atmosphere to restore a climate that is safe for human health and the species on which humans depend.

The danger posed by fossil fuels: CAHA recognises policies to reduce greenhouse gas emissions have the potential to reduce climate risk as well as bring important public health benefits. However Australia's current energy and transport systems are heavily reliant on the burning of fossils 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,[5] as well as reduce the incidence of cardiovascular and respiratory diseases associated with vehicle emissions.[6]

Why pricing carbon is necessary: The current system of pricing fossil fuels fails to include the costs of environmental harm and damage to human health. For example, some estimates suggest coal-fired power generation in Australia carries a human health cost (from

associated respiratory, cardiovascular, and nervous system diseases) of $2.6 billion annually.[7,8] The annual health costs from pollution from fossil fuelled transport are estimated to be around $3.3 billion.[9] These conservative estimates put the total health costs to the Australian community from burning fossil fuels at around $6 billion annually.

Putting a price on carbon would allow these currently 'externalised' climate and health costs for Australian power generation to be accounted for, making so-called 'cheaper' fossil fuels less cost competitive with safer, clean, renewable energy resources. 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.[10] The external costs of wind power by comparison however add only around $A1.50/MWh, and solar thermal and solar PV around $A5/MWh. [11]

Outcomes from putting a price on carbon: 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 cost competitive with coal.[12] The introduction of a price on carbon emissions in Australia would assist in realising these costs and support the transition to a cleaner energy supply system and a cleaner transport system - reducing our greenhouse gas emissions and our contribution to climate risk, as well as reducing specific threats to human health.

One good policy is not a substitute for a policy suite: While a price on carbon is an important measure in reducing greenhouse gas emissions, it should not be considered the 'silver bullet' in achieving substantial and sustained emission reductions.[13] A comprehensive suite of policies is required. This includes stronger regulation of emissions, with tougher emissions standards, mandated energy efficiency standards, removal of the current perverse incentives that favour fossil fuels, and investment in zero emissions energy, transport and transmission infrastructure.[14]

There are no precedents for policies to effectively combat climate change or to reduce emissions at the rate indicated by the science; therefore the implementation of a range of policies is necessary to ensure rapid emissions reductions occur across sectors. This will also require regular evaluation of progress to enable 'learning by doing'; revising as required to achieve the emissions trajectory indicated - not only to avoid irreversible and dangerous climate change but to protect, even promote, human health.

---

1 Stern, N. *Stern Review on the Economics of Climate Change*, 2006, London, HM Treasury UK.
2 Spratt, D, and Sutton, P. *Climate Code Red*, 2008.
3 Karoly, D. The latest climate science and global impacts, in *Victorian Government Climate Change Green Paper*, 2009. p. 23.
4 W. L. Hare, leading author of the IPCC 2007 report, quoted in Worldwatch Institute, *State of the World 2009: Into a Warming World*, Washington.
5 Physicians for Social Responsibility (2009) Coal's Assault on Human Health. Available online: http://www.psr.org/assets/pdfs/psr-coal-fullreport.pdf
6 Kjellstrom, T., et al. Air pollution and its health impacts: the changing panorama, *Medical Journal of Australia*, 2002, 177, pp. 604-608.
7 ibid
8 Biegler, T. *The hidden costs of electricity: Externalities of power generation in Australia*, 2009, Report for the Australian Academy of Technological Sciences and Engineering (ATSE). Available online: http://www.atse.org.au/resource-centre/func-startdown/63
9 ibid
10 ibid
11 ibid
12 McLennan Magasanik Associates, *Comparative Costs of Electricity Generation Technologies*, Report for Australian Geothermal Energy Association, February 2009.
13 Garnaut, R. (2008) *The Garnaut Climate Change Review*, Melbourne, Cambridge University Press.
14 Diesendorf, M. *Climate action: A campaign manual for climate solutions*, 2009, Sydney, UNSW Press.