



Is California dreaming?

Lessons for Victoria from California's efforts to reduce greenhouse gas emissions

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The year 2006 is being viewed by many as a watershed in which the public, politicians and industry alike awoke to the dangers of human-induced global warming. A combination of widespread scientific consensus, former World Bank chief economist Sir Nicholas Stern's pivotal review of the economics of climate change, Al Gore's acclaimed documentary film *An Inconvenient Truth* and a worsening drought throughout Australia have helped crystallise the now overwhelming view that steps need to be taken to reduce our emission of greenhouse gases to avert serious, large-scale disruptions to the world's environment and economics. The key question, however, is how should this be done?

Despite the Bush administration's reticence on this issue, the state of California, led by former action-hero Governor Arnold Schwarzenegger, is being lauded as a pioneer in the fight to slow the rate of climate change.

California

In 2001, California, the most populous state of the United States, was the world's 12th largest producer of carbon dioxide. While California clearly dwarfs Victoria in both carbon dioxide emissions and size, it is far ahead of Victoria in its attempts to curb its contributions towards climate change.

Following a landmark bipartisan deal agreed to late last year, California has undertaken to reduce its carbon dioxide emissions by about 25 per cent by 2020. The *Global Warming Solutions Act* is vague on details of how this ambitious target is to be reached, but foreshadows unprecedented change in the way Californians use power, drive cars and grow food. The changes will continue California's market-based approach to emissions reduction that rewards businesses for cutting emissions, while penalising others that fail to meet target levels. The trading of carbon credits will also allow companies that cut their emissions to sell those credits to other polluting companies.

Other significant legislative changes that have been introduced or are awaiting the Governor's signature include:

- ensuring that, by 2010, 20 per cent of the energy sold in California comes from renewable sources;
- barring energy utilities from entering into long-term contracts to procure power from plants which produce higher greenhouse gas emissions than a modern natural-gas fired power plant – this attempts to reduce the state's reliance on high emission coal-generated electricity, which currently supplies 20 per cent of California's energy demands;
- requiring vehicle makers to reduce the average emissions of the cars sold in California by 2009, while light trucks and the ever-popular sport utility vehicles must meet the same standard by 2016; and
- forcing California's petroleum refiners and sellers to cut by 10 per cent the emission of greenhouse gases associated with the production and use of their products.

Many have heralded these changes as visionary and an indicator of the steps the wider world will soon need to take. Critics, however, believe the reforms will endanger California's economy as businesses flee to less regulated states and hurt consumers who will be exposed to higher energy costs and possible lack of supply. The automobile industry in California has hit back particularly hard, claiming the legislative changes regarding emission standards are unconstitutional and impose unfair burdens on car manufacturers.

Although it is clear that such measures will increase the cost of energy, others counter that, in addition to our obligation to minimise human-induced climate change, such laws have the potential to add billions of dollars to the Californian economy – in fields like alternative energy – by attracting investment. While this may result in higher energy costs for consumers, it is expected that pricing will regulate consumer behaviour and promote greater energy efficiency.

In addition, California also has ever stricter energy-efficiency standards for electronic devices and appliances, which since the 1970s have reduced its consumption of electricity by the equivalent output of more than 20 average power plants.

Can California inspire Victoria to follow its example?

The reforms recently taken in California are a good indication of the type of legislative change that can be achieved at state level, but should they be adopted in Victoria?

There are signs that Victoria is already attempting to embrace a low carbon future. In the lead-up to the recent state election, Labor introduced the Victorian Renewable Energy Target scheme, which aims to require that 10 per cent of Victoria's energy to come from renewable sources by 2016.

However, unlike in California, or across the border in South Australia, Victoria has not yet legislated to reduce its total emissions, and the increase in renewable energy targeted by Victoria's scheme is far more modest than that adopted in California. Considering Victoria's abundance of solar and wind resources, this state has the potential to at least match California's target. Any such

scheme will result in an increase in the price of electricity (the current scheme is predicted to add \$12 to annual household electricity bills) but would also attract investment in renewable energy.

Electricity generation accounts for approximately 70 per cent of Victoria's emissions, about 90 per cent of which comes from brown coal, one of the dirtiest forms of electricity generation. Without major changes in the means by which electricity is generated, it is clear that a substantial reduction in Victoria's emissions will be difficult.

It is this dilemma which will most test the Victorian government's resolve. This is especially so considering that plans for a new power station are being drawn up by the state government to meet increased demand and the Energy Supply Association of Australia predicts that at least \$35 billion of new investment in power generation will be needed by 2030.



Photo: Lisa Stein

Like in California, Victoria should ensure that future demand is not met with high emission brown coal plants. A coal-fired base load plant, however, costs about \$35–\$40 per megawatt of capacity to build, compared to approximately \$45 for a gas-fired plant. Will the Victorian government, like that of Governor Schwarzenegger, accept a higher electricity price for consumers?

Conclusion

Research conducted by the CSIRO indicates that, in order to slow the pace of global warming, developed nations will need to slash their greenhouse gas emissions by at least 60 per cent by 2050. The measures adopted by California are only a start towards achieving this goal, but while the debate in Australia as to what should be done continues, Victoria should consider following California's proactive approach as part of its attempts to reduce Victoria's carbon footprint.

Postscript

As this edition goes to print, the Howard government has indicated the possibility of introducing a national carbon trading scheme, and the six states and two territories have signed a declaration to introduce an emissions trading scheme by 2010 if the federal government declines to do so.