



The New Zealand Government's energy policies need to consider public health benefits

The New Zealand Government has recently released a discussion document on "Creating a Sustainable Energy System."¹ This document is helpful in that it recognises both the approaching end of cheap oil and the threat posed by climate change (around which the scientific consensus is now very strong²). However as energy policies have links with public health, it is of concern that it fails to adequately consider the health benefits and costs of various energy policies.

In only two places does the document specifically mention energy-associated health issues: first that poorly insulated and inadequately heated homes are risk factors for poor health; and second that motor vehicle emissions contribute to the air pollution burden on health (although it does not bring a comprehensive approach to the air pollution burden as it ignores other emission sources such as thermal power stations). Although these two issues are important, there are many other ways in which a nation's energy policies may affect its citizens' health.

The health benefits that might arise from such energy policies as introducing carbon charges (scheduled for New Zealand in April 2007³) include the following:

- **Reduced harm from multiple sources of air pollution**—Carbon charges (if not blunted by negotiated agreements that allow avoidance of charges) are likely to impact on the extent of coal burning for industrial and domestic use, to encourage use of more fuel efficient vehicles, and even to slow the growth in usage rates of private vehicle transportation. For example, fuel price rises have led to greater usage rates of public transport in the past (as documented in Auckland after petrol price increases in 2000⁴).

Such changes may help to limit air pollution and to protect health, given that particulate air pollution (from vehicles and other sources) is estimated to cause around 970 premature deaths each year in New Zealand.⁵ In particular, air pollution has been associated with increased risk of hospitalisation or death in a number of New Zealand cities.⁶⁻⁹ These impacts are consistent with growing international evidence for adverse health impacts from air pollution.¹⁰⁻¹²

The harm from motor vehicle emissions would be further reduced if vehicle tuning and emission measurement as part of warrant of fitness checks were required.

- **Reduced harm from injury**—If carbon charges encouraged greater use of buses and trains, this would reduce overall road traffic injury rates as these forms of transport are much safer per kilometre travelled than car travel. In New Zealand, substantial reductions in fatal vehicle crashes were significantly associated with the fuel price increases of the 1979 oil crisis.¹³ Similarly, United States data indicates that higher fuel taxes have reduced vehicle crash fatalities.¹⁴ The Intergovernmental Panel on Climate Change has also reported that controlling road traffic would benefit health through reductions in road traffic crashes.

Any reduction in traffic volumes may also make cycling and walking relatively safer and more acceptable for commuters, and thus increase physical activity levels.

- **Potential health benefits of tax reform**—The additional revenue from carbon charges provides the Government with more opportunity to lower GST or make other tax reforms (e.g. making childcare a tax-deductible expense). If such reforms helped reduced poverty levels, then it could benefit public health as well as reducing health inequalities.

Finally, if New Zealand and other countries work together to reduce fossil fuel use globally, this will contribute to minimising the likely adverse health effects associated with greenhouse gas induced climate change. These include the expanded ranges of disease vectors such as mosquitoes;^{15,16} the adverse effects on food production (and hence nutrition); and extreme weather events such as floods, storms, and heat waves.

These potential health effects need to be considered in designing future energy policies. Given the health issues involved, health professionals should actively critique proposed government energy policies, and advocate for those policies that are both environmentally sustainable and pro-health.

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