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Submission
to the
Climate Change Authority
Caps and Targets Review

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Submission from
Doctors for the Environment Australia Inc.
By
Associate Professor Linda Selvey
College Park House, 67 Payneham Road
COLLEGE PARK SA 5069
Phone: 0422 974 857
Email: admin@dea.org.au
http://www.dea.org.au

Introduction

The Australian Government Climate Change Authority is currently reviewing Australia's emission reduction goals. This will influence the size of the cap for Australia's emissions trading scheme when it comes into place in 2015. In this submission, Doctors for the Environment Australia (DEA) will outline the health imperatives to reduce Australia's emissions as quickly as possible, and therefore put a strong case for increasing Australia's 2020 emissions reduction target from 5% to 25%. In this submission we will argue that increasing Australia's CO_2 reduction target will have significant health benefits for the Australian public. We will address two important sources of CO_2 – stationary energy and transportation.

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 and private practice. We work to minimise public health impacts and address the diseases – local, national and global – caused by damage to our natural environment.

Health impacts of climate change and Australia's responsibility to reduce our emissions

There is no doubt that climate change is one of the greatest threats to human health. The Climate Commission's 2011 report: The Critical Decade: Climate Change and Health[1] outlines the ways that climate change will impact on the health of Australians. Australia's per capita emissions are the highest amongst OECD countries, with only five countries being higher – Bahrain, Bolivia, Brunei, Kuwait and Qatar[2]. Therefore, Australia has a significant role to play in reducing our emissions, and, as a wealthy country, has the means to do so. Global atmospheric carbon dioxide levels have reached 400 ppm, which has not been the case in more than three million years[3]. This is a global emergency, given that emissions continue to rise. Given this, it is incumbent on all countries, including Australia, to take action to significantly reduce emissions as a matter of priority. A target of a 5% reduction in emissions by 2020 does not go far enough.

Stationary energy

Stationary energy is overwhelmingly Australia's largest source of CO_2 emissions[4]. This is largely due to the combustion of coal, which provided 77% of Australia's electricity generation in 2008[5]. Since that time, electricity demand in the states supplied by the National Energy Market (NEM) (Victoria, South Australia, Queensland, New South Wales and

Tasmania) has fallen. In addition, the share of electricity supplied by coal-fired power stations in the NEM has fallen to less than 75% following the introduction of the carbon price[6]. While this is encouraging, there is still a long way to go.

The carbon price aims to incorporate one of the external costs of coal combustion – CO_2 emissions. However, it doesn't take into account the full externalities relating to coal mining and combustion. The full costs of mining, transporting and combusting coal need to be taken into account when determining the optimal stationary energy source for Australia. These include the cost of land-degradation, threats to water security, damage to tourism and agricultural industries, traffic injuries and the health impacts of air pollution and dust.

The CSIRO has estimated that solar thermal with storage will become cost-competitive with coal for electricity generation as early as 2016[7]. If the full cost of coal externalities were taken into account, it is likely that solar thermal with storage is already competitive with coal.

A number of studies in the USA, Europe and Australia estimate the costs due to air pollution from coal mining and combustion. These are summarised at http://dea.org.au/images/general/How_coal_burns_Aust._-_True_cost_of_burning_coal_04-13.pdf. Epstein et al[8] estimated that the external costs of coal adds 18 cents per kWh to the cost of electricity generation in the USA. In Europe the health cost of air pollution due to coal combustion has been estimated to be 42.8 billion Euros per year[9]. The health impacts in Europe include 18,200 premature deaths every year due to air pollution from coal combustion, mainly due to respiratory and cardio-vascular disease. The Australian Academy of Technological Sciences and Engineering has estimated the health burden of coal due to air pollution in Australia to be $2.6 billion per year, or $13 per MWh[10].

None of these studies take into account the additional external costs of coal mining, transportation and combustion listed above, nor the cost of subsidies to the coal industry that are currently in place in Australia.

As there are readily available alternatives to fossil fuel combustion for electricity generation in the form of renewable energy sources, reduction in stationary energy emissions is the low hanging fruit for emissions reduction in Australia. A disinvestment in coal will also have significant health and economic benefits for Australia, and a significant increase in Australia's CO_2 emission target and consequent caps provides one mechanism to drive this change.

Transportation

Transportation produces a little over 15% of Australia's emissions[4]. Australia's transportation system is heavily dependent on oil, and cars and trucks are a major source of air pollution in the urban setting[11]. If it were to include transportation, a carbon pricing mechanism would provide an incentive to reduce dependence on cars and trucks for transportation. In addition to reducing urban air pollution, this could also increase opportunities for physical activity due to active transport, reduce traffic injuries, reduce urban noise and increase the amenity of our cities[12]. Therefore there are significant health benefits of reducing Australia's transport emissions by reducing our use of cars and trucks for transportation. This will also require an increased investment in public transport and rail infrastructure, and has additional benefits of reducing traffic congestion and transit time.

Conclusion

Through climate change, humanity is facing a crisis of major proportions. CO_2 levels continue to rise, and with it a momentum of warming that will affect human health across the globe, together with agriculture, water security, the global economy and the earth's ecosystems. In response to this crisis, it is not an option to wait and see how other countries will respond, or to decide upon inaction. The good news is that reducing Australia's emissions, particularly in the stationary energy and transport sectors will have significant benefits for human health[11]. This will also have economic spinoffs that will, to some extent, counter the need for investment in renewable energy technology, public transport and rail infrastructure. We strongly recommend that Australia puts in place a target of 25% reduction in CO_2 emissions on 1990 levels by 2020, and that we use all necessary means to achieve this target. This is the only rational choice in the light of the significant threats that climate change poses to current and future generations.

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