

Submission to the Energy Security Board National Energy Guarantee - Consultation Paper

March 2018



67 Payneham Road
College Park SA 5069
P 0422 974 857
E admin@dea.org.au
W www.dea.org.au

Healthy planet, **healthy people.**

DEA Scientific Committee

Prof Peter Doherty AC
Prof Stephen Leeder AO
Prof Lidia Morawska
Prof Hugh Possingham
Dr Rosemary Stanton OAM

Prof Stephen Boyden AM
Prof Michael Kidd AM
Prof Ian Lowe AO
Prof Peter Newman AO
Prof Lawrie Powell AC
Dr Norman Swan

Prof Emeritus Chris Burrell AO
Prof David de Kretser AC
Prof Robyn McDermott
Prof Emeritus Sir Gustav Nossal AC
Prof Fiona Stanley AC

Conclusions and recommendations

The consultation paper is fundamentally flawed in failing to include health considerations from air pollution and greenhouse gas emissions which have considerable costs to human health and the nation.

The National Energy Guarantee (NEG) will limit the energy sector's reduction to 26% of 2005 energy emissions by 2030 resulting in transport, manufacturing and agriculture having to take a larger part of the emission reduction load to meet Australia's Paris targets. These sectors will find emission reduction more difficult to achieve in the short term.

The NEG proposes no reduction in CO₂ emissions between 2020 and 2030, despite the fact that emissions have risen each year under the Abbott and Turnbull governments.² This delay in emission reduction will cause more deaths and sickness. The suggestion to 'back end' emission reductions to the last years before 2030 and the Paris commitment will also delay emission reduction and add to this ill-health burden.

There is an inherent injustice in passing the responsibility for emission reductions and their accumulating consequences to our children and grandchildren.

Accordingly, we recommend that

- The states reject the NEG at forthcoming Council of Australia (COAG) meetings until such time that the proposals have been reformulated taking into account health considerations and costs from air pollution and greenhouse emissions.
- A rational, effective and uniform state-based policy be prepared using full cost accounting to provide an efficient transition to renewable energy and to guarantee that Australia contributes its share of emissions reduction necessary to fulfil our commitment to the Paris Agreement.
- Meanwhile those states making headway in emissions reduction and transition to renewable energy should continue to do so in the national interest, especially since the NEG requires the agreement of the states which will be required to legislate to enable this policy. Doctors for the Environment Australia (DEA) is encouraged by some states moving towards a responsible renewable future: SA (>50% renewable energy now), VIC (40% by 2025), QLD (50% by 2030) and ACT has contracts to take it to 100% renewable by 2020.

Doctors for the Environment Australia

Doctors for the Environment Australia (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 practices. We are supported by a Nobel laureate, recipients of the Australian of the Year award and many other distinguished health professionals. We are committed to bringing health risks from climate change and pollution to the frontline of attention, to minimise public health impacts and to address the diseases local, national and global caused by damage to our natural environment.³

DEA's Energy and Health Committee has followed the debate closely since the NEG was announced last October, and has previously written to energy and health ministers, premiers and first ministers to urge them to consider what this policy might do to global and Australian health.^{4, 5}

For a decade DEA has supported bipartisanship on climate policy. However, we cannot support bipartisanship on this thoroughly bad and cynical proposal, and we encourage the states to work together to develop an effective and uniform national state-based policy, as is occurring now in parts of Australia and in many cities and states in the USA since President Trump withdrew from the Paris agreement.

Discussion

The National Energy Guarantee and the Consultation Paper

The NEG has significant adverse health implications that are avoided by government and fossil fuel interests and indeed overlooked at the recent webinar on the Energy Security Board's (ESB) Draft Consultation Paper on the NEG.

Listening to the webinar on Monday 26th February, it was reassuring to hear that DEA's difficulties comprehending this exceedingly complex document and our doubts that it will work to reduce emissions and power costs were shared by energy generators, retailers, financiers, lobby groups and consumers.

Our initial view last October that the NEG 'plan' was really just an idea, not even a policy, was confirmed by the comments of experts at Monday's meeting. NEG was developed by the ESB in indecent haste, between the 3rd and 13th October 2017. It was then uncritically adopted by the Federal Coalition.

The COAG Energy Council, to whom the ESB reports, had no input into the NEG. We now know that the NEG was developed at the request of the Federal

Government, not the COAG Energy Council, and the Energy Council has subsequently changed its rules to prevent anyone else directing the ESB. It was then presented to the States as an unpalatable fait accompli.⁶

But despite the Federal Coalition's endorsement of market mechanisms, the webinar showed that the real participants in the electricity markets were essentially unanimous in their view that the NEG was exceedingly complex, lacked transparency, would entrench the existing large operators, inhibit new entrants, reduce competition, reduce liquidity and increase prices;⁷ and would not reduce emissions.⁸ DEA believes the ESB must go back to the drawing board.⁹

Some participants noted what DEA has previously communicated: limiting the energy sector's reduction to 26% of 2005 energy emissions by 2030 means that transport, manufacturing and agriculture will all have to take a larger part of the emissions reduction load to meet Australia's Paris targets. These sectors will find such pro rata reductions much more difficult to achieve than the electricity generation market which is already in massive transition to ever cheaper renewable energy around the world and even in Australia despite 10 years of absent planning signals for that transition.

The NEG proposes no further reduction in CO₂ emissions between 2020 and 2030, emissions which have actually risen each year under the Abbott and Turnbull governments since they abolished the Gillard government's price on carbon.¹⁰ This will almost certainly lead to Australia failing its commitment to the Paris Agreement.

The NEG and health: human and financial costs

DEA is appalled by the health implications of the proposed NEG plan. The policy favours coal and gas with their attendant health risks for humanity and the planet, and inhibits and disadvantages investment in the renewable energy industry. The NEG is likely to lead to less than 28-36% renewable energy in the National Electricity Market (NEM) by 2030, even less than business as usual (35%), Finkel's Clean Energy Target (42%) and Federal Labor's policy of 50% or the level of 70% that will be necessary for Australia to meet its Paris Agreement. In 2030, coal and gas will be 64-72% under the NEG, 58% under Finkel and 39% under Labor.¹¹ But the primary reason for DEA making this submission is to draw attention to health effects and their human and financial costs.¹² These health risks are both local due to pollution with toxic gases, polluting particulate matter and other toxins, and national/global due to the greenhouse effect and anthropogenic global warming.

The NEG and health: pollution is killing people

The health implications of coal are truly horrifying, with an estimated 3,000 early deaths annually in Australia from air pollution, about half from coal mining and combustion, causing asthma attacks, chronic lung disease, lung cancer, dementia, heart attacks and stroke. Multiple independent sources of evidence, overseas and in Australia, show that the incidence of low birth weight babies can be related to their pregnant mothers living downwind from coal fired power stations and these babies have seriously impaired outcomes.^{13, 14, 15, 16}

The mining and burning of coal emit toxic pollutants of particulate matter (PM), oxides of sulphur and nitrogen, and many other pollutants, all of which contribute to cancer, heart, lung and vascular disease.¹⁷

Research published in *The Lancet* reveals that 24 people die for every terrawatt hour (TWh) of coal combusted.¹⁸ The International Energy Agency (IEA) estimates that more than 7,500TWh of electricity was generated by burning coal in 2009.¹⁹ Therefore, according to this and other estimates, the toll from coal-fired power generation exceeds 200,000 deaths globally every year.

Furthermore, a report published by the World Health Organization in 2008, estimated that particulate pollution from coal could be causing over one million premature deaths annually. The more damaging fine PM from all sources contributes to over four million deaths annually world-wide and creates an enormous burden of disease that costs economies dearly in lost productivity and health costs.²⁰

All Australians appreciate the contribution of miners, power workers and their families, but wish their contribution was not required and that the government had given greater priority to the orderly closure of coal-fired power stations. Failure to make the necessary transition towards renewable energy will cost lives and add to the burden of the already stretched healthcare system. Black lung is returning to Queensland coal mines.²¹

The health costs of pollution in Sydney alone are estimated to be \$8.4B annually. Much of the pollution in Sydney arises from coal combustion.²²

This international problem is given major prominence and authority by the recently published *The Lancet Commission on Pollution and Health*²³.

The NEG and health: Anthropogenic Global Warming

Coal burning also adds greenhouse gases to the atmosphere whose consequences include: increasing deaths due to heat-stroke in heat-waves, burning in bushfires, drowning in floods and storm surges, injuries in cyclones, infection with warm-weather diseases, suicide in stressed farming communities and more.^{24, 25, 26} Gas, oil, petrol and diesel contribute greenhouse gases and have similar risks.

These causes of death may seem remote to many Australians, but they are not abstract ideas to emergency physicians, hospital clinicians and rural practitioners providing first-response care.

Gas is touted as a less emissions intensive transitional fossil fuel for electricity generation but has similar risks, is not much less significant as a cause of global warming when the poorly measured fugitive emissions of methane are included, and especially where fracking is required.²⁷

Methane is 86 times more powerful as a greenhouse gas than CO₂ over a 20-year time frame, added are pollution risks including potential damage to water tables, soil and the environment.²⁸

Farmer distress and suicide is particularly important with unconventional gas produced by fracking.

Once again, societal, human health and financial costs of ignoring anthropogenic global warming and failing Australia's Paris Targets are being ignored in this ESB Draft Consultation Document.

References

-
- ¹<http://www.coagenergycouncil.gov.au/publications/energy-security-board-national-energy-guarantee-consultation-paper>
 - ²<http://www.tai.org.au/publication/national-energy-emissions-audit>
 - ³<https://www.dea.org.au/>
 - ⁴<https://www.dea.org.au/coag-modelling-confirms-neg-will-fail-the-health-of-australians/>
 - ⁵<https://www.dea.org.au/the-states-must-continue-their-strong-leadership-at-coag/>
 - ⁶http://reneweconomy.com.au/know-your-nem-bad-news-keeps-coming-on-neg-66122/?utm_source=RE+Daily+Newsletter&utm_campaign=dc451c6aa3-EMAIL_CAMPAIGN_2018_02_27&utm_medium=email&utm_term=0_46a1943223-dc451c6aa3-40350433
 - ⁷http://reneweconomy.com.au/were-here-to-listen-says-esb-but-not-to-you-11092/?utm_source=RE+Daily+Newsletter&utm_campaign=b9a085a1ae-EMAIL_CAMPAIGN_2018_02_26&utm_medium=email&utm_term=0_46a1943223-b9a085a1ae-40350433
 - ⁸<http://reneweconomy.com.au/abbott-1-consumer-0-turnbulls-energy-fudge-locks-in-high-prices-11158/>
 - ⁹http://reneweconomy.com.au/gold-plating-energy-markets-even-incumbents-not-comfortable-with-neg-99133/?utm_source=RE+Daily+Newsletter&utm_campaign=b9a085a1ae-EMAIL_CAMPAIGN_2018_02_26&utm_medium=email&utm_term=0_46a1943223-b9a085a1ae-40350433
 - ¹⁰<http://www.tai.org.au/sites/default/files/NEEA%20Electricity%20Update%20February%202018.pdf>

-
- ¹¹ http://reneweconomy.com.au/turnbull-dumps-clean-energy-target-for-national-energy-guarantee-32239/?utm_source=RE+Daily+Newsletter&utm_campaign=fc7d260f5f-EMAIL_CAMPAIGN_2017_10_16&utm_medium=email&utm_term=0_46a1943223-fc7d260f5f-40350433
- ¹² https://www.dea.org.au/wp-content/uploads/2017/07/DEA-Health-Toll-of-Coal-Fact-Sheet_final.pdf
- ¹³ <https://www.dea.org.au/wp-content/uploads/2018/02/VIC-Brown-coal-fired-power-stations-licence-reviews-submission---02-18.pdf>
- ¹⁴ <https://www.dea.org.au/the-agenbsphealth-minister-promises-answers-on-health-of-latrobe-valley-babies/>
- ¹⁵ Li X, Huang S, Jiao A, Yang X, Yun J, Wang Y, et al. Association between ambient fine particulate matter and preterm birth or term low birth weight: An updated systematic review and meta-analysis. *Environmental Pollution*. 2017;227:596-605.
- ¹⁶ Rich D.Q., Liu K., Zhang J., Thurston S.W., Stevens T.P., Pan Y., et al. Differences in birth weight associated with the 2008 Beijing Olympic air pollution reduction: results from a natural experiment. *Environ Health Perspect*. 2015;123(9):880-7
- ¹⁷ 2 Mannucci P.M. 2013. Air pollution and cardiovascular disease: burden and causes of an epidemic *Eur Heart J*. 34, 1251-3
- ¹⁸ <https://www.ncbi.nlm.nih.gov/pubmed/17876910>
- ¹⁹ <http://www.iea.org/media/statistics/co2highlights.pdf>
- ²⁰ <https://www.sciencedirect.com/science/article/pii/S0140673617305056>
- ²¹ <https://www.smh.com.au/business/careers/black-lung-disease-returns-to-queensland-mines-20151201-glqzoz.html>
- ²² https://envirojustice.org.au/sites/default/files/files/Submissions%20and%20reports/Envirojustice_air_pollution_report_final.pdf
- ²³ [http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(17\)32345-0.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(17)32345-0.pdf)
- ²⁴ https://www.dea.org.au/wp-content/uploads/2017/02/DEA_Climate_Change_Health_Fact_Sheet_final.pdf
- ²⁵ <https://www.dea.org.au/coal/>
- ²⁶ <https://www.dea.org.au/lets-end-the-propaganda-war-on-coal/>
- ²⁷ Hays, J., Shonkoff, S.B.C. Toward an understanding of the environmental and public health impacts of shale gas development: an analysis of the peer-reviewed scientific literature 2009 – 2015 Physicians, Scientists and Engineers for Healthy Energy: Working Paper 12-2014, Revision June 2015
- ²⁸ McCarron, G.P. & King, D.; (2014). Unconventional natural gas development: economic salvation or looming public health disaster? *Australian and New Zealand Journal of Public Health*, 38(2): 108-109