



COVER SHEET FOR SUBMISSIONS

Overview

Feedback is invited on the discussion paper: *Updating the 2009 National Waste Policy: Less waste, more resources*. Submissions should be provided by 5pm (AEST), Friday 5 October 2018.

Contact details

Updating the 2009 National Waste Policy: Less waste, more resources

Organisation (if applicable)		Centre for Air pollution, energy and health Research (CAR) and UNSW	
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Submission instructions

Submissions are due by 5pm (AEST), Friday 5 October 2018. Late submissions may not be considered.

Where possible, submissions should be sent electronically, preferably in Microsoft Word or other text-based formats, to the email address below.

All submissions must include this cover sheet.

Submissions should be sent to:

Email: nationalwastepolicy@environment.gov.au

Post: GPO Box 787, Canberra ACT, 2601



Submission from the Centre for Air pollution, energy and health Research (CAR)

Date: 5 October 2018

Thank you for the opportunity to comment on the *Updating the 2009 National Waste Policy: Less waste, more resources* Discussion Paper.

The Centre for Air pollution, energy and health Research (CAR) brings together researchers at the forefront of their respective fields to research the impacts of air pollution and new forms of energy on health.

CAR is supportive of reducing Australia's waste via the proposed waste hierarchy

CAR is supportive of the use of the waste hierarchy (Figure 2) for decision-making processes. Specifically we agree that emphasis should be on reducing waste in the first place- i.e. Principle number 1 of the circular economy- rather than on energy recovery. Furthermore, when trying to increase Australia's waste recovery rate to 80 per cent CAR suggests this hierarchy should be adhered to. That is, CAR does not recommend the increased uptake of waste to energy recovery at the expense of waste avoidance and reduction.

Health impacts of waste to energy processes need to be considered in decision-making processes

Our stance is because further investigation needs to be done on the health impacts of waste to energy processes. Initially waste to energy may seem like a viable economic option for both reducing waste and generating relatively cheap electricity. However, greater thought needs to be given to longer term economic costs derived from potential health impacts to the population. Any combustion of material will generate pollutants which may be deleterious to human health and combustion of waste is no exception.

Of primary concern in waste to energy processes is the release of dioxins and furans given their toxicity, ability to accumulate and production from combustion. Additionally the release of heavy metals such as lead, cadmium, thallium and mercury is problematic. It appears however, that levels released are highly dependent on feedstock and any mitigation strategies put in place by waste to energy plants. The key therefore is better integrating likely health impacts from particular plants or technologies into decision making process around waste to energy and waste disposal more generally.

In this same vein, CAR is supportive of Strategy 11 to better manage chemicals and hazardous waste to minimise their health impacts.

More broadly, CAR feels that although we must transition to newer energy sources (such as waste to energy) the health impacts of these new technologies must be investigated, and this must be done from a life cycle point of view. These findings should in turn inform



management strategies to mitigate any health impacts. As such, we are undertaking a program of research investigating the links between energy transitions and health.

Product stewardship is important in mitigating any negative health impacts of waste disposal

CAR supports the Discussion Paper's Strategy 4: 'Product stewardship' under Principle 2 of the circular economy. CAR has previously provided a submission to the *Proposed national approach to product stewardship action on environmental impacts of products* which can be found via <http://www.environment.gov.au/submissions/protection/product-stewardship/national-approach/car.pdf>

Under Strategy 4, CAR particularly supports the end-of-life management system for photovoltaic panels and batteries. But much like our previous submission on stewardship we recommend that the management system have an emphasis on the health impacts of photovoltaic panel disposal and that it be extended to look at all stages of a panel's lifecycle rather than just the end-of life stage.

About CAR

The Centre for Air pollution, energy and health Research (CAR) is a Centre of Research Excellence funded by the National Health and Medical Research Council. CAR brings together over 30 researchers at the forefront of their fields to investigate how air pollution and new forms of energy affect our health. Our vision for a healthier community is the driving force behind our research.

CAR supports teams of researchers in the fields of epidemiology, exposure assessment, toxicology, chemistry, biostatistics and clinical respiratory medicine to pursue collaborative projects and to develop their capacity. We are based in seven of Australia's leading universities and research institutions.