

Dr Maxine Cooper

ACT Commissioner for Sustainability and the Environment
PO Box 356
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ENVIRONMENT AND HEALTH ASPECTS OF THE CANBERRA TECHNOLOGY CENTRE PROPOSAL

References:

- A. ACT Air Environment Protection Policy 1999
- B. World Health Organization. Air quality guidelines. Global Update 2005
- C. Your State of the Environment Report 2007/08, tabled in the ACT Legislative Assembly 07 Aug 08
- D. No Breathing Room: National Illness Costs of Air Pollution, Aug 2008
- E. National Environment Protection (Air Toxics) Measure, December 2004

Dear Dr Cooper,

1. We (Canberrans for Power Station Relocation inc (CPR inc)) are writing to you in your position as the ACT Commissioner for Sustainability and the Environment regarding the environmental and health issues surrounding the proposed Canberra Technology Centre at Hume. We wish to complain about the lack of independent inspection, consideration and attention paid by the ACT Department of Health and the ACT Planning and Land Authority to these issues.

2. As you would be aware, the CTC includes a supporting private power station of three 14 megawatt gas turbine engines.¹ These three 73 tonne engines are misleadingly labeled a "co-generation" facility by the proponents. There has been extensive media coverage of the issue, but the media does not seem to have grasped the size of the private gas fired power station and the extent of the pollution it will cause.

3. As the most senior ACT public servant advising the government on sustainability and the environment, you must by now be aware of the inadequacy of the standards used in determining the effects on air quality for the Draft Environmental Impact Study (EIS) for this project (which will be applied to the new site for this development at Hume). You may be aware that the Chief Planning Executive of ACTPLA, Mr Neil Savery went on public record as saying:

"We rely on the expertise of other government agencies such as the EPA, ACT Health and the Department of Environment who have assessed all of the materials submitted to us and deemed that the proposal is within

1 <http://www.galileoconnect.com/asia-pacific-canberra.html?PHPSESSID=9a87a98cf2bc2a5581657ac4c6d995e2>

*World Health standards and on that basis we have no reason to question that expertise.*¹²

4. The proponents propose to install three 73 tonne gas turbine generators to provide power for the site in Hume. The facility will increase Canberra's consumption of natural gas by 33 per cent. In the light of these figures it is remarkable that you have not commented on this significant detriment to sustainability in the ACT brought about by this foreign owned consortium. Each turbine emits 180,000 kg of exhaust gases per hour – by our estimates a point-source equivalent of 45,000 cars travelling 80 km/hr – and a conscientious assessment of the impact on the health of the Canberra community has not been completed.

5. The Air Quality Study in the EIS relies on references A and B. As an environmental specialist, you would know reference A was written in 1999 and has not been updated. Reference B was originally written in 1987 and updated in 2005.

6. References A and B discuss the effects of particulate matter, but discount the effect of PM_{2.5} - particulate matter 2.5 micrometers or less in diameter - due to a lack of definitive epidemiological evidence at the time of writing. Since references A and B were written there has become available a wealth of information on the effects of PM_{2.5}. This information is freely available to the public and readily comprehensible by the lay-person, however, it has been ignored in the Canberra Technology City (the proponents) proposals in favour of the older standards. The ACT Health Department has not raised this issue with the government or the proponents. The ACT Health Department, through its inaction on this issue, has allowed ACTPLA to reach a flawed and government-constructed conclusion.

7. The World Health Organisation (WHO) itself has recognized the issue and their website now advises:

*PM affects more people than any other pollutant. The major components of PM are sulfate, nitrates, ammonia, sodium chloride, carbon, mineral dust and water. It consists of a complex mixture of solid and liquid particles of organic and inorganic substances suspended in the air. The particles are identified according to their aerodynamic diameter, as either PM₁₀ (particles with an aerodynamic diameter smaller than 10 µm) or PM_{2.5} (aerodynamic diameter smaller than 2.5 µm). The latter are more dangerous since, when inhaled, they may reach the peripheral regions of the bronchioles, and interfere with gas exchange inside the lungs Chronic exposure to particles contributes to the risk of developing cardiovascular and respiratory diseases, as well as of lung cancer.*³

8. Furthermore, the Federal government states: 'Recent epidemiological research suggests that there is no threshold at which health effects [from particulate matter] do not occur'.⁴ This information is all publicly available and the published health effects include:

- toxic effects by absorption of the toxic material into the blood (e.g. lead, cadmium, zinc)
- allergic or hypersensitivity effects (e.g. some woods, flour grains, chemicals)
- bacterial and fungal infections (from live organisms)

² Louise Maher, 666 ABC Radio, 10 Mar 09

³ <http://www.who.int/mediacentre/factsheets/fs313/en/index.html>

⁴ <http://www.npi.gov.au/database/substance-info/profiles/pubs/particulate-matter.pdf>

- fibrosis (e.g. asbestos, quartz)
- cancer (e.g. asbestos, chromates)
- irritation of mucous membranes (e.g. acid and alkalis)
- increased respiratory symptoms, aggravation of asthma and premature death.

The risks are highest for sensitive groups such as the elderly, those with existing respiratory difficulties and also children and babies.

9. Alarming, Reference C, which your agency produced, indicates that:

'Monash [air monitoring station] monitors both PM 2.5 and PM 10; Civic monitors only PM 10. The NEPM permits exceedences on five days per year. PM 2.5 values were exceeded in Monash 47 times during the reporting period' [three years].⁵

10. As you know, these figures are conservative due to numerous problems with the air samplers, however, there is a *prima facie* case to indicate that Canberra already has a hidden problem with particulate matter – and the Civic air monitoring station “ ... does not reveal whether most of the particles are in the upper end of the size range or, more dangerously, the lower end”.⁶ The report discusses Ozone O₃ and the Commission concludes there is no discernible trend with this pollutant; however, the NPEM standards for O₃ were exceeded in Civic.

11. Reference D is a recent report by the Canadian Medical Association on the national illness cost of air pollution. It states:

'..... the members of the Canadian Medical Association see the impact of air pollution on their patients every day in terms of increased frequency of symptoms, medication use, emergency room visits, hospitalizations and premature deaths. Children, the elderly, and those with chronic health conditions are particularly vulnerable to the effects of air pollution. As an older ... cohort – the baby-boomers - grows, the impact of air pollution will surely increase.'⁷

12. The report focuses on the effects of PM_{2.5} and ozone O₃. The report concludes, amongst other things, that in 2008:

- 21,000 Canadians will die from the effects of air pollution - 2,682 will be the result of acute short term exposure (primarily in the over-65 and very young);
- Over 22,000,000 minor illnesses could be attributed to air pollution, climbing to over 26 million by 2031 – an alarming burden on the public hospital system; and
- the economic costs of air pollution will top CD\$10 billion and by 2031 these costs will have accumulated to over CD\$300 billion.

In the absence of better data, extrapolation to Australia on a per capita basis would mean 12,852 deaths by air pollution Australia-wide and 213 deaths within Canberra alone.

⁵ This appears conservative because the website indicates data was not collected for the full reporting period due to ongoing equipment failure. The equipment also failed repeatedly in winter when PM_{2.5} counts are highest.

⁶ <http://www.environmentcommissioner.act.gov.au/soe/2007actreport/indicators07/outdoorairquality07>

⁷ <http://www.environmentcommissioner.act.gov.au/soe/2007actreport/indicators07/outdoorairquality07>

⁷ No Breathing Room: National Illness Costs of Air Pollution, Canadian Medical Association, Aug 2008

13. Reference D goes on to state:

*There is compelling evidence that exposure of young people to air pollution during the critical stages of lung development (up to around 17 years of age) can cause irreversible damage. One of the impacts is reduced lung function, which is proportional to concentrations of air pollutants, in particular PM_{2.5}*⁸

14. Reference D concludes, '...there is a fundamental role for governments in preventing and controlling smog and poor air quality ...' which is already acknowledged by the ACT government. Reference E, endorsed by the ACT Chief Minister in 2004, discusses, amongst other relevant toxic pollutants, the effects of polycyclic aromatic hydrocarbons (PAHs), as emitted by fossil fuel power plants. This measure, and the effects of PAHs, is also ignored in the proponent's proposals. To the best of our knowledge, you have not yet acted to ensure your Department protects the Chief Minister's interests and advises him that the CTC proposals do not adequately address these issues.

15. The EIS written by those instructed by the proponents considers PM_{2.5} very superficially and dismisses it because it is not addressed in the references chosen by the proponents. In the light of the preceding evidence, such an omission raises questions of professional competence and independence in the preparation of the report. The public has an expectation that the ACT government departments charged with protecting the environment and our health will act with independence and with the best interests of the public in mind. We expected them to adhere to the principles of accountable governance and, where there is clear evidence that action is required, act in the best interests of the public's health and wellbeing. To date, both the ACT Department of Health and your Commission have remained silent on this potentially harmful development and allowed Mr Savery's organisation to reach a flawed conclusion.

16. We wonder, should a truly independent body review this inaction by those tasked with protecting the health and well being of citizens - an inaction and silence which would appear complicit and deliberate in the face of readily available information - whether this would be considered a breach of the duty of care by both the ACT Health Department and your Commission. We believe the ACT Health Department has a duty to satisfy itself as to the accuracy of the proponent's claims and ensure the health of Australian citizens in Canberra is not endangered and that the ACT is not creating a long-term burden on the public health system. To the best of our knowledge, thus far, you have condoned through your silence the inaction of ACT Health and this development.

17. As a government environmental official representing the people of the ACT, you can reasonably be expected to already be aware of all these issues. Relying on an outdated standard is insufficient when the risks to the environment, sustainability, the public health – and the already over-stretched public health system – are so grave. CPR inc, on behalf of the community, also believe there is a failure of your duty of care to represent this problem as an issue of the environment and sustainability if you ignore this risk or fail to act to alert the ACT government, whom you advise, of the inadequacy of the CTC EIS.

18. These issues warrant proper and independent study – free of the influence of the ACT Government, by health departments both Federal and Territory - using the

⁸ Avol, E.L., W.J. Gauderman, et al. 2001. Respiratory effects of relocating to areas of differing air pollution levels. Am J Respir Crit Care Med 164: 2067-2072 cited in, No Breathing Room. National Illness Costs of Air Pollution Summary Report August 2008, p3.

latest scientific research results and tools. We urge you to act to proactively influence public health policy rather than allow public policy to evolve through poorly-advised executive decisions based on the best interests of an elite development group, such as is the case with these proponents. In particular, we urge you, in your capacity as the most senior public figure with a responsibility to safeguard the environment in the ACT, to mobilise the resources already available to you within your Commission to look into this as a matter of urgency on behalf of the people of Canberra, and placing their health and well being before a private real estate developer's profit.

19. Furthermore, a conscientious appreciation of the problem should have led you to a number of inescapable conclusions – and to articulate a number of obvious issues, such as:

a. The Garnault report states if we collectively do nothing we will see catastrophic climate change in our lifetimes. You are the ACT's leading eco-warrior – how is allowing this development to proceed without your input helping to achieve a positive outcome against catastrophic climate change?

b. This will be the ACT's single most polluting development – what opinion have you offered on the development? Where is the voice of the sustainable environment in the ACT that you represent?

c. This massive \$1bn development has not considered sustainability at all - it should be a cornerstone of its design. What is your opinion on this?

d. The power station component is not sustainable - it will increase Canberra's consumption of natural gas by 33% - how can one company be allowed to do this? What is your view on this?

e. Where is your political will and our voice, in your representation saying "Enough. We have to deliver sustainable developments. We do not want and we will not accept unsustainable, polluting, quick money-making developments." (As you know this development was originally progressed under a smoke screen of association with a power station for all of Canberra. Many people still think this is the case.)

f. A business case that relies on increasing a city's consumption of natural gas by one third in order to profit one company is bad design. We should not be building this data centre for the next five years - we (you) should be thinking for the next 30. The proponents are thinking for less than two years – their stated intention is to sell the facilities as quickly as possible after building them. They are not corporately interested in the ACT environment or sustainability. What are your views on this?

g. What emission performance targets has the EPA set and what guarantees does the public have that you will openly and actively monitor the emissions from the site? What happens when those limits are exceeded? Based on your silence to date, CPR inc has no confidence that you would act to shut down the facility, especially given that the government will claim it would cost jobs, and portray a poor image for prospective data tenants.

20. The Galileo Connect web site which is currently advertising this development (CTC) is proudly proclaiming three turbines. It has been a consistent "promise" throughout the life of this development that they would only ever run two 14 MW gas turbines. It does not appear to the citizens of Canberra that these developers have

any intention of abiding by that promise. Indeed it appears to the people of Canberra, with the blind, unwavering support from the government, that these developers have been given the gift of polluting Canberra without need to check, assure, or consider the best interests or the health and well being of the people of Canberra. We have not yet seen any government body, health organisation or environmental protection agency step forward and independently check or consider the reports and 'promises' made by the proponents. The people of Canberra therefore should consider themselves unprotected and any independent inspection or review silenced - unless you act now, before it is too late.

21. What happens when the developers want to add a fourth turbine? And a fifth? And a tenth? If you are not willing to consider the implications of two turbines and three turbines – the people of Canberra have no faith you will independently consider and potentially stop the owners implementing as many gas fired turbines as they have money to buy.

22. We urge you to act immediately to advise the Chief Minister that the development must be suspended whilst the following occurs:

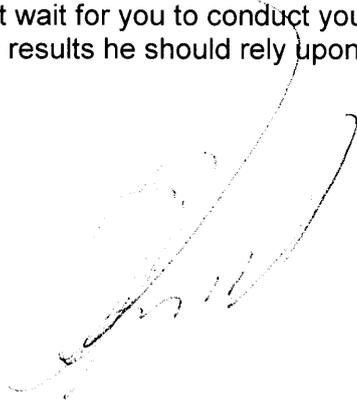
- The ACT Department of Health procures the CMA software model (ICAP - Illness Costs of Air Pollution⁹) and commissions an authoritative and impartial agency (such as the CSIRO) to apply it under Canberra conditions for an accurate local estimate of the true health and economic costs of air pollution arising from the CTC development in Hume.
- You exercise due diligence and influence within your Commission to ensure that the (non-environmental professional) decision makers whom you advise are apprised of the findings.
- You make the findings available to the public.
- You exercise your duty of care to proactively influence public health policy in order to shape government thinking on this subject rather than allowing flawed executive decision making to make public health policy by default.

23. As a professional environmental executive, you can reasonably be expected to already be aware of all these issues. Whilst it is unfortunate that the Chief Minister has unwittingly chosen to formulate defacto public health and environment policy through the construction of a private gas fired power station without adequately considering health and environmental issues, we do not consider that his decisions absolve you of the responsibility, as a member of the ACT bureaucracy, to ensure the non-professional decision makers you advise are fully aware of the health and environmental implications of this proposal. You would be failing your duty and you would be letting the people of the Territory down, if you allow the Chief Minister and the proponents to continue their reliance on outdated standards – particularly when there is clear evidence that they are outdated. It is insufficient that you allow this situation to remain when the risks to public health and the environment are so grave.

24. It would be negligent of you to ignore this risk or fail to act on the advice proposed in this letter. You should alert the ACT government, whom you advise, of the extent of the deficiencies in the CTC proposal and mobilise the resources at your disposal to independently and scientifically understand the issues. You should also

⁹ The Illness Costs of Air Pollution (ICAP) model was first developed in 2000 by the Ontario Medical Association (OMA) to estimate the health effects and economic costs of smog in the province of Ontario. Using a modified version of this model, the Canadian Medical Association (CMA) has developed estimates of health damages at the national level and for 10 Canadian provinces.

advise Mr Savery immediately that the ACT Department of Health has so far done nothing to independently validate the proponent's claims. Mr Savery should be warned by you that he should not have confidence in the reports and figures supplied by the proponents and upon which he has relied in his decision making. He should in fact wait for you to conduct your professional and independent enquiries and it is these results he should rely upon.

A handwritten signature in black ink, appearing to read 'William Reid', is written over the end of the first paragraph.

William Reid
President
Canberrans for Power Station Relocation Inc

For more information: <http://www.canberrapowerstation.info/>