

Media Release

Scientific and Medical letter to the Premier of New South Wales – unflued gas heating in NSW public schools and the recent Woolcock report

11 August 2010

Dear Premier Keneally,

We the undersigned:

1. endorse the NSW Minister for Education's announcement of 27 July 2010 to the extent that it recommends the removal of ALL unflued gas heaters (UGHs) in NSW public schools,
2. express our concern that any delays in announcing the statewide replacement program for UGHs are unjustified given the state of scientific knowledge about the impact of UGH combustion by-products upon human health,
3. advise that over reliance by the NSW Government upon the 'Woolcock' report for anything other than a signal to replace the heaters is mistaken. The Woolcock study showed that the "lowNOx" heaters resulted in exposure to increased levels of NOx and Formaldehyde and that these exposures were associated with an increase in respiratory symptoms. These findings occurred despite the study being conducted during a very mild winter with the heaters only being used on average one hour per day per week. Thus the findings of the study must be considered to be an underestimate of the effect during normal usage,
4. are concerned that any agenda that attempts to downplay the necessity for downplay the necessity for rapid action to replace the UGHs in public schools is not based on established science and is, itself, unethical.

Our comments above are based on the following points:

1. Existing scientific research shows that UGHs are hazardous to human health,
2. Mr. Ferrari (then NSW Government SPCC) managed the first major study in classrooms using UGHs in NSW Public Schools in 1988/89. The report showed the majority of classrooms exceeded today's current WHO Guideline for nitrogen dioxide (NO₂). Despite this the Education Department decided to embark on a program to replace heaters with "low NOx" unflued gas heaters,
3. NSW Department of Health warnings urging the removal of UGHs should be respected by organisations such as the DET,
4. Dr Steve Brown (CSIRO Principal Research Scientist) has tested the so-called "low NOx" UGHs in a state-of-art indoor environment chamber and published

internationally that in typical use these heaters will cause NO₂ and formaldehyde levels to exceed World Health Organisation (WHO) health-based air quality goals,

5. Professor L S Pilotto, Nitschke M, Smith BJ, Pisaniello DL, Ruffin RE, Elroy HJ, Martin AJ, Hiller JE tested “lo NO_x” UGHs in a landmark classroom study, several years ago – such study details being forwarded to the DET in 2007. The “Pilotto” study resulted in the removal of UGHs in South Australia. That study also found that any increase in exposure to NO₂ above 70ppb exacerbates respiratory illnesses and affects lung function. Many NSW public school classrooms are much in exceedance of that maximum recommended level of exposure,
6. Professor Jonathan Samet, internationally recognised epidemiologist (UCLA, formerly John Hopkins University) endorsed the “Pilotto” study,
7. The Woolcock study of 2009 was conducted after one of the warmest winters on record in Sydney (being August and September),
8. The coldest period of that unseasonably warm year (May, June and July) was well and truly past by the time the testing began,
9. The heaters were only on, on average, for one day per week during the study period because of the unseasonal warmth of that period, thus not providing an accurate reflection of normal usage,
10. Mr Flear (former President the Clean Air Society of Australia and New Zealand (CASANZ), the peak body of air quality professionals) states that the Woolcock testing method did not allow the assessment of 1 hour average NO₂ peaks, the period used to assess human health impacts. There would therefore have been 1 hour average peaks that significantly exceeded the reported 6 hour average values,
11. The DET’s own tests (using the same heaters as used across NSW) released from the “Blackheath study” in May 2008 showed at least 30% of classrooms failed to meet WHO Guidelines,
12. The results of the Blackheath study, conducted in May under winter conditions, showed NO₂ concentrations were almost three times higher than those found in the extremely conservative figures and findings of the Woolcock study,
13. When testing unflued gas heaters in 2003 for the Federal Department of the Environment and Heritage, Mr. Flear and Mr Ferrari found that the majority of the small number of “low NO_x” UGHs encountered in the study failed to meet WHO guidelines. In addition they found that there was no decrease in NO₂ levels in homes with newer heaters, despite a 67% decrease in the allowed heater NO₂ emission rate,
14. Professor Peter Sly from the University of Western Australia and Emeritus Professor Richard E Ruffin of the University of Adelaide have advised the Asthma Foundation that the Woolcock study was unnecessary and that UGHs should be removed from public schools,

15. The Western Australian Government, aware of the UGH issue in NSW removed UGHs from its public schools in 2009, and
16. The US Environmental Protection Agency recently reduced the 'safe' exposure level to NO₂ to 100ppb significantly below the WHO standard of 110ppb.

We ask that you and your Government endorse the plan to remove all UGHs as a matter of urgency. We also ask that this plan be implemented immediately and the rollout of works be conducted in the minimum time possible, preferably two years.

Yours sincerely,

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NH&MRC Senior Principal Research Fellow

Emeritus Professor Richard E Ruffin

Deputy Head, Discipline of Medicine, University of Adelaide

Mr Len Ferrari

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Clean Air Medal Winner for Significant Contributions to the Prevention of
Atmospheric Pollution

Mr Frank Fleer

Former President [CASANZ]
Clean Air Medal Winner for Significant Contributions to the Prevention of
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