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Mr Shane Burns
General Manager
Armidale Dumaresq Council
PO Box 75A
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12th April 2010

Dear Mr Burns,

Re: POL134 – Policy for Sustainable Domestic Energy Use & Local Air Quality

I write to comment on this draft policy because I have a special interest in this area. You may recall that I wrote to you in 2008 about my concerns regarding the high level of particle pollution in Armidale which arose from domestic wood smoke in the winter months. Thank you for your reply to this.

As previously mentioned, my interest arises for 3 main reasons:

- I am a medical lung specialist and wood smoke affects the lungs,
- I represent the Australian Lung Foundation in Tasmania & I sit on the National Council of the Foundation,
- I reside in Launceston which has had the highest recorded levels of wood-smoke in Australia arising from home wood heater useage.

It is commendable that the Armidale Dumaresq Council is continuing its efforts to reduce the winter wood smoke and to improve the local air quality. I have read the Draft Policy document. It appears comprehensive in relation to wood heater usage. I would have liked to have seen some mention also of restricting vegetation burn-offs in back-yards and rural properties. These are often conducted in the autumn months and add to the particle levels as do the occasional larger forestry burn-offs. Some reference also to forestry burn-offs would be useful with a policy statement outlining how the potentially harmful effects on residents will be contained.

I have some additional specific comments about the information included within the draft policy:

On page 2, the Objectives and the Strategies appear sound. On page 3, the Policy Background is excellent. I like the acknowledgement by the Council that **“woodsmoke pollution of our local airshed is a serious health risk”**, including the reference to the groups of people at higher risk of illness from exposure (the elderly, the young and all those with lung disease or heart disease or diabetes). I also like the acknowledgement that long-term exposure can produce additional effects including cancer. I **would recommend that “lung cancer” be specified** here, rather than “cancer” alone. I also commend the referencing of the source of your information which includes the NSW Health

POL134 – Sustainable Domestic Energy Use & Local Air Quality, Page 2

Department and the Australian Lung Foundation (the latter includes information that I have contributed to).

On page 4, the Draft lists actions that the Council has taken to date and the challenges that remain. It is admirable again that the Draft openly states that: **“In spite of this wide range of actions, local air quality measurements by Council indicate that in winter 2009, Armidale was still experiencing significant air pollution, well above national recommended levels for fine particle (2.5 Microns – PM2.5) concentrations.”** I inspected the latest PM2.5 levels on the Council website. In May – August 2008, the daily PM2.5 was over 25 µg/m³ (the NEPM recommended limit) on 50 (or 63%) of the 79 days that it was measured. I did not see equivalent information for 2009. However, indirectly it does not appear to have been any better because the average daily PM2.5 for June was about 36 µg/m³ compared with about 37.5 µg/m³ in June 2008 (as I estimated from a graph on the web site). The latest information for January 2010 showed mean PM2.5 levels of 4 – 12 µg/m³, in keeping with the absence of a particle pollution problem in the summer months. **To have such high wood smoke levels persisting up to July 2009 shows that the existing measures that the Council has undertaken over the last 10 years have not been sufficiently effective. It implies that a quantum leap is needed to tackle the problem.**

The Draft then outlines some of the obstacles for correcting this by stating that “home heating and other energy systems are only occasionally replaced” and that (on page 5) a “banning of wood heaters is not possible under the current legislative framework in New South Wales”.

The Draft then follows with a list of actions to try to improve the current excessive wood smoke pollution in the winter months. The measures listed are all sound and reasonable. **However, the only new substantial step that I can see is the requirement that newly installed wood heaters have lower predicted emissions (2 gm/kg) than Australian Standard AS 4013 (4 gm/kg).** However, as your Draft also mentions, there “are concerns about testing methods under the Standard”. In fact, these are more than just “concerns”. The majority of wood heaters when tested independently did not comply with the standards when used optimally. Furthermore, whether or not they comply, there are other major issues with new wood heaters. One concern is that the emissions ultimately depend on the user rather than the device. An old wood heater, used optimally with dry wood is likely to emit less smoke than a new wood heater used incorrectly or with wet wood. Another concern is that even compliant wood heaters emit smoke, especially at start-up and whenever more wood is added. **In a region such as Armidale, if every home used a modern wood heater optimally, there would still be an avoidable excess of wood smoke in the winter months which would affect all residents, not only those who choose to burn wood.**

I believe that the absence of any new real incentives for residents to make the change to cleaner home heating is the major limitation to this Draft Policy. The Draft Policy says all the right things but it does not do enough

POL134 – Sustainable Domestic Energy Use & Local Air Quality, Page 3

in my opinion, to likely reduce the excessive wood smoke levels within the next decade.

In my letter to you of 29 September 2008, I made the following recommendations (and provided additional information about the measures used in Launceston to successfully reduce wood smoke):

#1. That Armidale Dumaresq Council becomes pro-active in reducing wood smoke in its jurisdiction.

#2. That your Council considers the measures used by the Launceston City Council to reduce wood smoke.

#3. That your Council provides an information brochure to residents with information about the health hazards of wood smoke and with practical suggestions about how to reduce these risks. This should include advice promoting a change to cleaner energy sources.

#4. That your Council considers financial incentives to encourage residents to change to cleaner home heating.

#5. That your Council considers financial dis-incentives for residents to burn wood (eg an annual permit for each household to burn wood such as \$100 per year). The funds from this source could be directed to the above incentives.

#6. That your Council work towards a total ban on the installation of new wood heaters in urban dwellings by 2011 or as soon as practical afterwards.

I can see that you have **progressed with #1 & #2**. **In regards to #3**, I have looked at the information you have available in brochures and DVDs about the correct useage of wood heaters. Much of this information is sponsored by organizations with a financial interest in the promotion of wood heaters. That may not be inappropriate when giving information about the best way to use a wood heater. However, it does provide **a conflict of interest when the main message should be to switch to alternative cleaner sources of home heating** that do not pollute the air shed in Armidale. In fact, **I have not found enough information from the Council recommending other forms of heating**. **In relation to #4**, I believe you have tried financial incentives before. I do not know if these persist nor their magnitude. They are important to help some people to make the change now and they are **worthy of further consideration**. **Recommendation #5 is one that I believe you should seriously consider**. We have not used it yet in Launceston because our wood smoke levels fell with the high proportion of residents who switched to cleaner home heating. It remains an option if we do not meet PM2.5 guidelines. In the case of Armidale, knowing that your PM2.5 levels are high, then I would recommend that you introduce a fee for the pollution caused by using a wood heater. This has an advantage that it would apply to all wood heaters in use. I recommended \$100 per house per year for permission to use a wood heater. Perhaps the value should be higher in Armidale. You could reduce the fee for

home owners on lower incomes (pensioners and welfare payment recipients). **In relation to #6, I note that the Draft dismisses the option of banning all wood heaters on legal grounds.** If that is the case, then it should strengthen the case to adopt stricter measures above to place the onus on all those who burn wood to make a change.

There is one final point that I wish to make. I believe that a Council has a responsibility to all residents to provide a safe and healthy community to live in. People who burn wood (be that via wood heaters or via burn-offs) affect the health of all residents in the vicinity and often the entire air shed. **The health effects of wood smoke are similar to those of environmental tobacco smoke (ETS) and are of equal concern.** This should not be a surprise, given that both involve the slow combustion of wood or plant material. It may be legal to burn wood, just like it is legal to smoke, but a Government (local, state or national), in my opinion, should not permit an activity by one group which adversely affects the health of others (especially when they are in the majority), even if it not yet banned altogether. In the case of tobacco smoking, its health dangers and those from ETS are clearly documented. Governments in Australia have responded to this concern by **legislating to reduce the exposure to ETS in public places for the majority who choose not to smoke.** Some states (including my home stae of Tasmania) also have legislation banning people from smoking in private cars if a child is present. Some hospitals (including the Launceston general Hospital, where I work) have banned all tobacco smoking within its premises (even outdoors). Tobacco smoking remains a legal activity but that does not give smokers a legal right to expose others to their smoke. **In the case of wood smoke from home heating or burn-offs, the user inflicts his or her smoke on everyone in the air shed.**

There are some other important lessons from this appropriate comparison with tobacco smoking:

1. The first is that it is not sufficient to protect non-smokers from ETS. There is also a community cost to support the ill-health of smokers. Some estimate that one-third of the current national health expenditure is directed to the consequences of tobacco smoking. **For this reason, there is now a high tax placed upon the sale of tobacco products. This helps offset the health costs to the community and it acts as a dis-incentive for people to smoke.** This tax has been shown to be effective in both regards.
2. **The second point is that tobacco is not essential for life but home heating in winter is essential and there are healthier affordable options.**
3. **The third point is that there is no threshold safe level of tobacco smoke nor wood smoke.**
4. **The fourth point is that 15 – 20 % of Australians continue to smoke despite all the information now readily available about the health cost and despite the taxes.** Compared with other countries, Australia's smoking rates are close to the lowest, in part because of the extensive anti-smoking

efforts. So some people will continue with a habit even if convinced that it is harmful. Yes, tobacco smoking is highly addictive, in part because of the nicotine component. In my opinion, there is also a core group of wood heater users who will not change their habit, no matter how much information is provided and unless regulated to do this. Fortunately for this minority (perhaps 10 – 20 % of the population), the considerate actions of the majority of residents may allow the local pollution levels to meet current standards even if that minority continues to burn wood. Alas, there is no real safe level of particle pollution, even within “standards”, given that no threshold safe level has been identified.

Wood smoke is the main cause of particle pollution in the winter in Armidale and other populated regions of Australia with cold winters and inversion layers. If we can lower the pollution to the minimum possible, then we can truly say we have reduced our risk of ill-health from that exposure to the minimum possible. For those who choose not to burn wood, their only practical options to avoid local wood smoke pollution are to move elsewhere or to wait for governments to do more. I think Armidale Dumaresq Council should do more than is planned in the current Draft Policy to achieve the desired effect within a few years rather than over decades.

Yours sincerely,

Dr James Markos