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Please accept the following response to the:

National Environment Protection Council Service Corporation, Consultation regulation impact statement for reducing emissions from wood heaters, Released 11 April 2013.

This response has been generated by the Director of Fluecube Australia Pty Ltd for the purpose of conserving the wood heating industry and the wood heating consumer.

Wood heating has been around for centuries and is the only sustainable heating source we have to date. We can grow trees for the specific purpose of firewood and now we can burn sustainably with the Fluecube.

This response highlights a few grey areas within the wood heating sector. The CONDAR method used to test and approve wood heaters is a method adopted by the USA to ensure combustion wood heaters emit low particulates into the atmosphere. A major concern to examine is why these approved wood burners emit 3 to 4 times the amount of particulates once installed. Is it the atmosphere itself causing the issue? Being that it is heavier than the smoke we are attempting to push through the flue you would assume so.

Reducing or abolishing wood burner use would result in an increased demand on our already depleted natural non-renewable resources. This only highlights the importance of this document and its outcomes in exploring options to reduce emissions from wood burners.

To add extra discussion to this document I would encourage you to visit the Fluecube website or contact me and familiarise yourselves with its operation. The majority of your data trawl has included information that may now be obsolete due to the invention of this device.

Kind Regards

Brendon Thomas

1. What is your view of the wood heater industry in Australia? Are there specific aspects of the industry that require attention? Please provide details.

Aspects of the wood heating industry that require attention firstly is the method by which all new wood heaters are tested for certification. The Condar method is flawed in its purpose to ensure all heaters emit no more than 4ppm. The reality is that these heaters emit up to 3 times that amount in situ (refer John Todd's NHT funded project 'Wood-Smoke Handbook: Wood heaters, Firewood and Operator Practice', 2003).

The funding provided to local, state and federal agencies intended for purpose of supporting industry to achieve cleaner air for the community to be available to individuals to test and market ideas or products.

Organisations (including AHHA) need to be more receptive to new ideas that reduce smoke pollution. Why can't these organisations promote new ideas that do actually reduce smoke pollution?

Ensuring people who are funded through a clean air program do their market research and make contact with individuals/organisations who are actively participating in clean air activities ie selling, designing or marketing a product that achieves the goal of cleaner air.

This means getting the funding out of the bureaucratic agencies and into the hands of individuals and/or community. Government agencies have a history of performance indicators being too easily achieved and non-productive.

2. Can you provide evidence of new or different operational or marketing paradigms that would affect the stated view?

The Fluecube has consistently impressed consumers of its ability to reduce smoke from inside and outside their homes. As there are currently no scientific tests conducted on this device due to it not being considered an item requiring certification, the results are purely testimonials from satisfied customers.

Flue cowl are not considered an item that requires testing or compliance. Although testing could be conducted in conjunction with interested parties to scientifically prove its ability to reduce emissions and smoke pollution within our communities.

3. Do you consider wood heater emissions to be a significant issue relative to other forms of air pollution?

Wood heater emissions are currently a significant issue relating to air pollution.

4. Do you agree with the conclusions provided in this section? If not, please provide reasons.

I do agree with these conclusions and also agree that we must be careful – careful not to eliminate the only renewable heating source we have.

5. Are there other variables that have not been considered or not been attributed sufficient weight in the discussion?

The atmosphere in winter will cause significant problems when lighting combustion wood heaters. The air is cold and dense restricting the warm light air trying to flow upward within the flue.

With the specially designed Fluecube, the warm air is able to flow freely up the flue and outward within the Fluecube chambers. It has time to then mix with the cooler air and create an updraft to assist ignition of the fire below.

The Fluecube is the variable that needs to be considered. Heating history will be re-written with the installation of a Fluecube. It works effectively on old and new heaters and stoves. The current expensive requirement to test and accredit wood heaters may well be eliminated saving the manufacturer thousands of dollars and potentially reducing the price of wood heaters on the market.

The following paragraph is from the 'Wood-smoke Handbook', John J Todd Eco-Energy Options 2003 page 4:

'Another critical design feature in residential wood heaters is the fact that most rely on natural draught up the flue to draw air into the combustion chamber. Natural draught is a function of the height of the flue and the temperature of the flue gas. If too much heat is extracted from the heater itself, the flue gases will be too cool to induce good draught and insufficient air will be drawn into the heater. This means there will always be some heat 'lost' out the flue and so a wood heater can never be 100% efficient. In practice an upper limit of around 80% is the best efficiency possible with a natural draught heater. Very few heater models achieve this because sophisticated heat exchanges are required and these add to the cost.'

It becomes apparent the missing element is oxygen. Oxygen through up draught is created via the design of the Fluecube.

6. Do you agree that the current policy measures for the abatement of wood heater emissions are not successful in realising the policy objectives? Can you provide other evidence to support this?

Yes they are not successful. The answer is not to create more political red tape to heating people's homes. There needs to be further education imposed through local government agencies to ensure people really understand how their wood heater best functions, ie dry seasoned wood, and correct stacking of wood inside fire box, the addition of a Fluecube.

The Fluecube cowl will assist in the education of burning wood heaters efficiently and smoke free. It is one of the best educational tools on the market.

7. Which policy delivery method do you believe should be adopted by government and why?

A national policy for local government to implement educational programs, distribute funds for individuals/business to research and develop new systems/items/approaches to abate smoke pollution.

8. Do you agree that the policy measures listed for the abatement of wood heater emissions will be successful in realising the objectives? If not, please provide your reasons including supporting evidence.

Firstly, people should not have to purchase new wood heaters to become compliant. This is a bold statement, but someone has to raise the question. This relates directly back to the testing methods of the heaters themselves. Wood heater manufacturers are paying ridiculous amounts of money to ensure their heaters are compliant. The main issue is these heaters fail once installed and exposed to the outside elements. It falls back on the testing method credibility, it is failing and the manufacturer and consumer are footing the bill.

9. Do you believe that the “nudge” programs will be helpful in reducing wood heater emissions?

I agree that we need to ensure, to some extent, people are operating their wood heaters in a manner to reduce smoke pollution. The idea of punishing people should be a last resort; after all, they had nothing to do with adopting the flawed Condor method – did they?

10. Are there other measures that are not listed in the document that should be considered?

As I mentioned earlier, public education through local government should be the main focus. There are programs through some schools which is good for the younger generation to get an understanding and take the message home.

Fitting a Fluecube to all wood heaters would significantly reduce smoke emissions in Australia. The Fluecube needs to be seriously considered, for the sake of the wood heating industry and all those who depend on it.

11. Which of the listed policy combinations do you favour in addressing a reduction in wood heater emissions? Why do you favour these measures?

Policy combination 1. No one can put any tags on their heaters stating they will achieve x amount of PPM, or contribute x emissions with the current testing methods! Also replacement of heaters is not the answer to reducing emissions. Note: The Fluecube reduces visual smoke from both new certified and very old wood heaters.

Testing needs to be completed on the Fluecubes ability and function in reducing smoke pollution. As a small entity the costs are great and support is required and welcomed.

12. Are there policy combinations that you would not support? Please provide reasons.

See above

13. Do you believe the base case has been correctly identified, or are there other variables that need to be considered?

Other variables are the use of the Fluecube on wood heater flues to reduce the emissions identified in your data.

14. Have all health, environmental, economic and social impacts been identified? If not, please suggest others that need to be included. Has sufficient weight been given to these impacts within their relationship to the policy options being proposed?

Economic impact – growing our future firewood.

15. Have all key assumptions been correctly identified and included in the analysis? If not, please suggest others that need to be included.

One key assumption is that the timber used is coming from space. I would like to propose and discuss the importance of growing our firewood and how we go about sustainably supplying the tonnes of wood required.

16. Do you agree with the conclusions? If not, please provide reasons.

The expectation that smoke emissions will fall under a 'business as usual' scenario is nonsense. The information is based on figures gained through a flawed testing method; once new compliant heaters are installed they contribute in some cases more pollution than non-compliant heaters.

17. Can other conclusions be made based on the outcomes of this analysis?

These outcomes are based on the current information you have at this time. If you consider the Fluecube as something that will reduce smoke emission across all regions when fitted to every wood heater, your conclusions would be somewhat different.