

National Approach to Reducing Woodheater Emissions

Scoping Paper on Regulatory Options

1. Introduction

In March 2008 the Environment Protection and Heritage Standing Committee (EPHSC) agreed on the need for a nationally consistent approach to woodheater emissions management and requested a detailed assessment of the options. Noting the existing regulatory framework for woodheater management in many jurisdictions, EPHSC indicated a preference for a national statutory approach to ensure regulatory consistency and provide greater certainty of an environmental outcome.

This paper briefly outlines the problems associated with current management arrangements and presents an analysis of regulatory options for new action to reduce woodheater emissions and their impact on community health.

2. The Problem with Woodsmoke

Woodheaters¹ are a significant source of air pollution that produce emissions hazardous to human health. They are the major source of particle pollution in many regions of Australia during the cooler months of the year. For example in Perth woodheaters are responsible for 86% of anthropogenic winter particle emissions and in Melbourne's Port Phillip air shed and in Sydney woodheaters emit almost double the amount of particles emitted from vehicles during winter. Woodheaters are also a significant source of air toxics, including benzene and polycyclic aromatic hydrocarbons.

The impact of woodheater emissions on human health is significant. The present costs of the health impacts arising from woodheater particle emissions are conservatively estimated to be \$190 million per annum. Importantly, health studies do not show a minimum level of particle pollution where adverse health effects are not reported. Consequently, there are significant community health benefits in reducing woodheater emissions as much as practicable.

3. Existing Regulatory Arrangements

Existing regulatory arrangements are at the individual state and territory level. All Australian jurisdictions, except SA and NT, have regulations which require compliance with the Australian/New Zealand Standard for woodheater emissions AS/NZS 4013 (the Standard) at the point of sale. Five of the six Australian jurisdictions that have regulations also require that woodheaters be certified as compliant against the Standard to be sold. The industry-representative body, the Australian Home Heating Association, currently administers a certification scheme for new woodheaters that was developed in collaboration with jurisdictions.

The Standard specifies a maximum allowable particle emission limit per kilogram of wood burnt (currently 4 grams per kilogram) under controlled test conditions. New Zealand woodheater regulations call up AS/NZ 4013, but set more stringent performance requirements than specified in the Standard (e.g. 1.5 grams per kilogram).

4. Case for New Government Action

There are a number of deficiencies in existing regulatory arrangements for woodheaters that demonstrate a clear need for a new government approach to the management of woodheater emissions.

¹ 'Woodheater' in this paper means all domestic solid fuel burning appliances as defined in Woodheater Standard AS/NZS 4013. This includes appliances that burn wood or other solid fuel such as coal and briquettes.

The key issues are:

- Governments have been unable to achieve improvements to national woodheater emission standards due to industry veto in Standards Australia processes. The emissions standard was last revised in 1999 and the current level of 4 grams of particles per kilogram of wood burnt is well above levels achievable by latest technologies and the emissions standard set in New Zealand (ie. 1.5 g/kg).
- Due to the Mutual Recognition Agreement, inconsistencies in jurisdictional woodheater regulations mean that the effective level of regulation is potentially at the lowest common denominator, which currently is no regulation.
- Poor compliance of new woodheaters due in part to the limited effectiveness of the current industry-run certification procedure and limited enforcement of jurisdictional woodheater regulations.

The rationale for a new approach to address these problems accords with the EPHC Filter Criteria for national action on environment issues, namely that:

- Pollution from woodheaters is a significant problem in many jurisdictions
- A formal national approach is likely to be the most efficient and effective response to current management difficulties
- There is a clear role for government in resolving the issues, especially given the gaps in the existing policy and legislative framework
- There would be benefits to government, industry and the community from national consistency.

5. Policy Objectives and Scope

The primary objective of new government action is to reduce the emissions, and thus health impacts, from woodheaters in Australia.

The secondary objectives of a national approach are to bring about reductions in public amenity impacts (e.g. wood smoke haze and odour), firewood consumption and nuisance woodsmoke complaints.

No single measure will be sufficient to resolve current policy and regulatory issues. Overall, jurisdictions consider the scope of a national regulatory approach to improve woodheater emissions performance would need to include:

- Government control over the setting of emission and efficiency limits and establishment of a new test method to ensure they keep pace with environmental objectives and technological developments.
- National consistency and coverage of woodheater regulation
- Inclusion of national certification of woodheaters as a regulatory requirement in all jurisdictions
- Provision for national audits of woodheater performance.

This scope could be expanded to include other factors that can influence woodheater performance, such as controls and/or guidance on installation, modification (ie tampering that leads to increased emissions) and operation of woodheaters.

6. The Woodheater Appliance Industry in Australia

An understanding of woodheater appliance industry is important in considering the design and potential impacts of new regulatory action.

The wood heating appliance industry has a number of components. According to the Australian Home Heating Association (AHHA), which is the industry-representative body, around 23,000 wood heaters are sold in Australia annually, of which approximately 85% are manufactured in Australia and 15% imported.

While there are 14 Australian manufacturers, four companies account for around 80% of the sales. Woodheater manufacture is predominantly in NSW and Victoria.

Imports are predominantly from NZ, Europe and USA/Canada. Eleven companies import wood heating appliances for sale in the Australian market, with 60% of imported product originating from New Zealand. The wood heater industry has a small fledgling export market estimated to be approximately \$600,000 in 2006/07 with sales anticipated to drop beyond this due to increasing costs.

There are several distributors that wholesale Australian and imported woodheaters. There is an extensive retail sector consisting of specialist woodheater retail outlets, specialist domestic heating outlets (wood, gas, electricity), regional hardware stores selling woodheaters and some major retail chains. These retail outlets are shrinking due to commercial pressure and higher retail prices. The remaining component of the wood heating appliance industry is businesses involved in woodheater installation and maintenance.

7. Regulatory Options for Addressing Policy Objectives

There are various ways of implementing a national regulatory approach to the management of woodheater emissions. Four options have been identified for assessment:

- (i) National Environment Protection Measure
- (ii) Commonwealth Legislation
- (iii) Mirror Legislation
- (iv) Referral of Powers.

This section discusses these individual options and reviews their advantages and disadvantages. It is followed by a comparative assessment of the options in terms of their effectiveness and efficiency in achieving the policy objectives.

(i) National Environment Protection Measure (NEPM)

A National Environment Protection Measure could be established for woodheaters through the National Environment Protection Council (the Council) framework. The Council may make a NEPM only if it relates to one or more of the subject matters specified in s 14(1) of the National Environmental Protection Act (1994). Woodheater emissions relate to ambient air quality, and could therefore be the subject of a NEPM.

A NEPM may have one or more goals, standards, guidelines and protocols. It is considered that emissions limits for woodheaters could be established as a 'National environment protection standard' under a NEPM as woodheater emissions are 'a quantifiable characteristic of the environment against which environmental quality can be assessed'. An agreed test method for measuring woodheater emissions could be covered by a 'National environment protection protocol', while auditing provisions could be established as a 'National environment protection guideline'. Procedures for woodheater certification would need to be established as a protocol if the provisions needed to be mandatory, otherwise they could form a guideline.

The Council can develop and make a NEPM but implementation is outside the Council's jurisdiction under the Act and is achieved by each state and territory adopting the provisions of the NEPM in their legislation. The NEPM could include provisions requiring each participating jurisdiction to report on its implementation of the Measure. Jurisdictions would be required to allocate sufficient resources to enforce the NEPM.

The establishment of a NEPM could deliver the desired national regulatory coverage which is currently lacking in Australia. National consistency in regulations could also be achieved by a NEPM provided that key provisions are made mandatory requirements under the Measure (ie. they are included as part of a NEPM goal, standard or protocol).

The development of a NEPM and the subsequent implementation through jurisdictional regulation can be a costly and time consuming process. A NEPM may take approximately 2 years to develop and a further 2-3 years to implement, and the development process is likely to cost in total, including jurisdictional implementation costs, in the order of \$1 million. This estimate is based on NEPM development costs of \$250,000 plus \$800,000 for the establishment or amendment of legislation by eight jurisdictions. The estimate for legislative process work was derived from a conservative average of the \$100,000+ estimates provided by two jurisdictions. Actual costs may be significantly different.

The following table compares the advantages and disadvantages of the NEPM option:

Advantages	Disadvantages
<ul style="list-style-type: none"> • Can cover the entire industry. • Can include controls and/or guidance on a wide range of factors that influence woodheater emissions (eg installation, operation, modification). • Potential to resolve regulatory inconsistencies between States and Territories if key provisions (limits, tests, etc) are mandated under the NEPM. • NEPM provides established process for development, review and cost sharing arrangements. • Enables jurisdictions to exercise control over the policy framework (NEPM provisions). • Leaves implementing legislation, and amendments to it, within the control of each state's parliament. • Makes use of existing regulatory arrangements, with most (six) jurisdictions having relevant legislation in place. 	<ul style="list-style-type: none"> • Risk that the effective level of regulation will vary between states because of differences in administrative processes and available resources. This could affect environmental outcome and lead to unequal administration and compliance costs for industry. • Making a NEPM requires agreement of nine separate jurisdictions (or at least two thirds of NEPC) at a whole-of-government level, which may not be easily obtained. Necessary compromises can lead to a less effective approach. • NEPM development, and subsequent implementation through new or amended state regulation, can be a costly and time consuming process.

(ii) Commonwealth Legislation

This regulatory alternative involves an 'Australian Government alone' approach in which full regulation would apply. The Commonwealth could establish new legislation that would set national performance limits and either call up the Australian Standard test method or specify the method in its regulations. Other measures such as certification and auditing provisions could be included. The *Fuel Quality Standards Act 2000* is an example of Commonwealth legislation enforcing the quality of a product to achieve air quality objectives.

The most relevant heads of power under the Constitution which might support a national management framework for woodheaters are:

- the corporations power (s 51 (xx))

Under section 51 (xx) of the Constitution, the Commonwealth Parliament may enact laws with respect to 'constitutional corporations' that regulate and control the trading activities of such corporations. These laws could confer rights or impose obligations. Entities that are not established as bodies corporate are not within the reach of the corporations power.

- the trade and commerce power (s 51 (i))

Under section 51 (i) of the Constitution, the Commonwealth Parliament may enact laws with respect to 'trade and commerce with other countries, and among the states'. However this power is unable to regulate activities involving intrastate trade and commerce except in limited circumstances. On the other hand, it is not restricted to constitutional corporations.

Subject to constitutional restraints, the Commonwealth could implement a requirement that any person who offers a prescribed product (woodheater) for sale must ensure that the product complies with specified conditions (eg performance and certification requirements). This would apply to manufacturers and importers of the relevant products, as well as wholesale and retail suppliers so far as they are constitutional corporations within the meaning of section 51 (xx).

In the case of the 'current' woodheating industry, it is likely that most manufacturers, importers and wholesale suppliers are constitutional corporations or engaged in interstate trade and commerce. This may not necessarily be the case for entities engaged in retail supply, where there may be non-incorporated businesses trading within the boundaries of a single state. This is a shortcoming in relation to the 'Australian Government alone' approach, as some business entities may not be captured and hence not subject to the proposed regulatory requirements.

Alternatively, the Commonwealth could regulate to prohibit the manufacture or import of woodheaters for use in Australia unless the appliance complies with specified conditions. The only potential gap in coverage of this approach is intrastate trade of woodheaters manufactured by unincorporated businesses. However, this would not pose a serious risk, since it is likely that woodheaters produced in Australia would all be manufactured by corporations or by entities involved in interstate trade.

If the scope of proposed regulatory action extended to, for example, the sale of second-hand woodheaters and/or controls on woodheater installation and modifications, the gaps in coverage of Commonwealth legislation would present real risks for achievement of policy objectives.

The following table draws together the advantages and disadvantages of the Commonwealth legislation option.

Advantages	Disadvantages
<ul style="list-style-type: none"> • Provides broad coverage of the new woodheater industry. • Provides seamless and consistent national regulation. • Industry stakeholders prefer this approach. • Potentially more efficient than multiple state and territory regulations. • Reduced monitoring and enforcement for State agencies. 	<ul style="list-style-type: none"> • Some business entities may not be captured, namely unincorporated businesses engaged in intrastate trade of appliances. • Controls would apply to new woodheaters only – would not be able to cover 2nd hand woodheaters, installation and other factors that affect woodheater operation. • Possibility that the Australian Government may act unilaterally in regulatory design and implementation. • Shift of potentially significant costs to the Commonwealth from the states. • Subject to Australian Government policy approval and legislative priorities.

(iii) Mirror Legislation

The Commonwealth does not have legislative power to cover the entire field of conduct in respect of woodheater management. If there was considered to be an unacceptable risk posed by gaps in coverage of Commonwealth legislative powers, all states and territories and the Commonwealth could enact identical legislation so that there is complete national coverage of woodheater regulation.

The Commonwealth and state laws would have an interlocking design, with federal law applying to constitutional corporations and entities engaged in overseas or interstate trade, and the State laws dealing with all other persons.

A mirror legislation scheme is the only mechanism that can be relied upon to deliver complete uniformity in state and territory legislation, provided all jurisdictions enact the necessary legislation. The *Water Efficiency and Labelling Standards Act 2005* is an example of this approach. This option may require the development of a separate intergovernmental agreement to obtain commitment from all jurisdictions to enact identical legislation.

The following table draws together the advantages and disadvantages of the mirror legislation option.

Advantages	Disadvantages
<ul style="list-style-type: none"> • Can cover the entire industry. • Achieves high level of uniformity between individual state and territory legislation • Allows coverage of the entire field of conduct in woodheater appliance industry. • Shared responsibilities between Commonwealth and states 	<ul style="list-style-type: none"> • The development of mirror legislation and an intergovernmental agreement, based on past experience, would be a lengthy and costly process. • The combination of both national and state level regulation is probably more regulation than necessary to deliver policy outcomes. • Enables states to retain the right to alter their legislation independently at some point in the future. • The need to gain unanimous acceptance from participating governments for these interlocking laws might lead to a lowest common denominator approach to legislating. • There is a risk of that one or more jurisdiction(s) may refuse to enact the necessary legislation.

(iv) Referral of Powers

Section 51(xxxvii) of the Constitution enables the Commonwealth Parliament to make laws with respect to:

“matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law.”

In this option the States refer their powers to regulate woodheater emissions to the Commonwealth, enabling the Commonwealth to create a single national woodheater management scheme. The referral of powers option requires each state to pass a referral Act through their parliament.

As a general rule, governments do not refer powers to the Commonwealth unless there is no other alternative. Noting that there are effective alternatives, the referral of powers is not considered to be a realistic option.

The following table draws together the advantages and disadvantages of this option.

Advantages	Disadvantages
<ul style="list-style-type: none"> • Achieves high level of uniformity • Can cover entire industry. • More efficient than multiple state and territory regulations. • Reduced monitoring and enforcement for State agencies. 	<ul style="list-style-type: none"> • Requires new legislation in all (nine) jurisdictions. • There is a risk of that one or more jurisdiction(s) may refuse to refer powers or refer powers with different scope to other jurisdictions. • Transfers state law making powers relating to the matter to the Commonwealth. • States unable to influence or vary the Commonwealth law. • The Commonwealth law would override any existing or future inconsistent state law.

8. Comparative Assessment of the Regulatory Options

This section provides an overall assessment of the options using several criteria to aid consideration of the most effective and efficient approach to the achievement of the stated policy objectives.

Regulatory consistency

Regulatory consistency in terms of both commencement dates and legislative provisions is critical. Given MRA provisions, regulatory inconsistencies can result in the effective level of regulation being low and insufficient to achieve stated policy objectives.

While options that involve multiple state and territory legislation can pose a risk of regulatory inconsistency, this risk can be managed effectively by ensuring that key provisions and commencement timeframes are mandated by a head agreement. In the case of NEPM, this could be achieved by ensuring that key provisions are established as a NEPM goal, standard or protocol. For mirror legislation, the risk of inconsistency is low provided each jurisdiction adopts an identical set of regulations.

Commonwealth legislation and, perhaps, the referral of power option provide the most certainty in ensuring regulatory consistency as they involve a single legislative instrument. The latter option could potentially introduce inconsistency in provisions if there were differences between jurisdictions in the scope of powers referred to the Commonwealth.

The real risk of regulatory inconsistency is likely to arise from differences in administration where multiple state and territory legislation is involved (ie NEPM, mirror legislation options). Each jurisdiction is likely to have different administrative systems and apply different levels of resources to manage regulations. While these administrative inconsistencies are not likely to have MRA implications, they can impact on the environmental effectiveness of the regulations and lead to unequal costs to business.

Coverage of the industry

The regulatory coverage of the industry needs to be sufficiently broad to ensure that achievement of the policy objectives is not constrained by having key players or their activities not subject to the regulatory requirements.

The NEPM, mirror legislation and referral of power options can effectively cover the entire field of conduct in relation to management of woodheater emissions. While the Commonwealth alone does not have the legislative power to cover all potential players, it can cover in practical affect a large part of the existing industry sector involved in import, manufacture and sale of new woodheaters. If the proposed scope of national regulation was

to be broader than new woodheaters, the potential gaps in Commonwealth coverage would be much greater and present a real risk to achievement of the policy objectives.

Efficiency considerations

The efficiency of the regulatory development processes and subsequent administration are important considerations in any assessment of the identified options, given the potential cost and timing implications.

Development costs

Commonwealth legislation is probably the simplest, and therefore less costly, regulatory development process as it involves a single jurisdiction enacting one piece of legislation. In contrast, the mirror legislation and referral of power options would involve new legislation by all nine jurisdictions, and thus can be expected to be the most costly options. The NEPM approach is likely to fall somewhere between these two groupings as it would incur development costs for the Measure itself and for new legislation in two jurisdictions, with legislation in the other states and territories only requiring amendment.

The NEPM development process is estimated to cost about \$274,000, including approximately \$97,000 for costs associated with preparing the (regulatory) impact statement. This estimate includes in-kind costs for a six person Project Team (a smaller team would incur lower in-kind and lower travel costs). Establishing or amending legislation in each jurisdiction to implement the NEPM provisions is estimated to cost an average of \$100,000 per jurisdiction.

The development costs for the Commonwealth legislation option are estimated to be approximately \$100,000 for a Regulatory Impact Statement (RIS) process and \$350,000 in mainly salary costs for the legislation development process.

Administration costs

Options based on a single regulatory instrument administered by a single agency (ie Commonwealth legislation and referral of power) can be expected to be the least costly to administer. Single legislation provides efficiencies by avoiding the duplication of effort inherent in multiple legislation options associated with:

- administration of certification procedures and auditing
- running education campaigns and providing information
- collection of business information
- monitoring and enforcement

Single legislation may also make the scheme easier to change and therefore potentially more responsive to changing industry circumstances.

In contrast, options involving regulation by each jurisdiction (ie NEPM and, to a lesser extent, mirror legislation) can lead to:

- increased administration costs for businesses associated with complying with and/or reporting on multiple regulatory requirements.
- costs in relation to changes required in production or marketing due to different regulatory requirements
- increased total expenditure by governments from establishment and maintenance of administrative systems duplicated in each jurisdiction.
