Regulatory Impact Statement for the proposed Environmental Management and Pollution Control (Smoke) Regulations 2017

May 2017

epa TASMANIA
ENVIRONMENT PROTECTION AUTHORITY

It is proposed that the *Environmental Management and Pollution Control (Smoke) Regulations 2017,* when made*,* will replace the *Environmental Management and Pollution Control (Distributed Atmospheric Emissions) Regulations 2007*. The accompanying Regulatory Impact Statement has been prepared in accordance with Schedule 2 of the *Subordinate Legislation Act 1992*.

Citation:

Department of Primary Industries, Parks, Water and Environment (2017) *Regulatory Impact Statement for the proposed Environmental Management and Pollution Control (Smoke) Regulations 2017*, EPA Tasmania, Hobart, Tasmania.

Date:

May 2017

Enquiries:

EPA Tasmania
Department of Primary Industries, Parks, Water and Environment
GPO Box 1751, Hobart, Tasmania 7001
Telephone: (03) 6165 4599
Email: Enquiries@epa.tas.gov.au
Web: www.epa.tas.gov.au

Copyright:

Disclaimer:

SUBMISSIONS

Submissions are invited on any aspect of this Regulatory Impact Statement and accompanying draft Smoke Regulations in Appendix 4. Comment is especially invited on the potential costs and benefits of the proposed Regulations for business and other sectors of the community.

Please note that any specific complaints about smoke pollution should not be sent as a submission, but should be lodged with your local Council or EPA Tasmania.

Submissions will be considered and copies provided to the Subordinate Legislation Review Committee of the Tasmanian Parliament before the Regulations are made. Submissions must be in writing and forwarded to:

EMPC (Smoke) Regulations Review
Environmental Policy & Support Services
EPA Tasmania
Department of Primary Industries, Parks, Water and Environment
GPO Box 1751
Hobart, TAS 7001

Submissions may also be emailed to:
EnvironmentEnquiries@environment.tas.gov.au

Submissions must be received by **5.00 p.m., Friday 30 June 2017**.

If you have any queries about these documents, or if you require a copy of the proposed Regulations, please contact:

Environmental Policy & Support Services Section
EPA Tasmania
Department of Primary Industries, Parks, Water and Environment
Telephone: 6165 4599
Email: EnvironmentEnquiries@environment.tas.gov.au

Confidentiality

Respondents are advised that the contents of submissions will not be treated as confidential unless they are marked 'confidential' and are capable of being classified as such in accordance with the *Right to Information Act 2009*.

Respondents are also advised that personal information in submissions will be treated as public information unless the submissions are marked 'confidential', in which case the information will be handled in accordance with the principles of the *Personal Information Protection Act 2004*.

ABBREVIATIONS

AS/NZS	Australian/New Zealand Standard
BLANkET	Base Line Air Network of EPA Tasmania
CRIS	Consultation Regulation Impact Statement
DPIPWE	Department of Primary Industries, Parks, Water and Environment
DTAE	Department of Tourism, Arts and the Environment
EHO	Environmental Health Officer
EIN	Environmental Infringement Notice (defined in EMPCA)
EMPCA	*Environmental Management and Pollution Control Act 1994*
EPA	Environment Protection Authority
EPN	Environment Protection Notice (issued under EMPCA)
EPP	Environment Protection Policy (created under EMPCA)
NATA	National Association of Testing Authorities
NEPM	National Environment Protection Measure
PM	(airborne) particulate matter
RIS	Regulatory Impact Statement
SLA	*Subordinate Legislation Act 1992*
µm	micrometre

EXECUTIVE SUMMARY

The *Subordinate Legislation Act 1992* (SLA) requires that a Regulatory Impact Statement (RIS) be prepared to assess the impacts of any proposed or substantially amended Regulations if it is assessed as imposing a significant burden, cost or disadvantage on any sector of the public.

This RIS has been prepared by EPA (Environment Protection Authority) Tasmania to assess the proposed *Environmental Management and Pollution Control (Smoke) Regulations 2017,* which have been drafted as a replacement for the *Environmental Management and Pollution Control (Distributed Atmospheric Emissions) Regulations* 2007. The latter Regulations expire on 15 August 2017 and the aim is to have the new Smoke Regulations in place by that date.

The proposed Regulations are largely the same as the current regulations. As with their predecessor, the main objective of the new Regulations will be to limit the smoke produced by heaters, fireplaces, outdoor cooking appliances and 'backyard burning' in and around urban areas. It is intended that this will be achieved by maintaining restrictions on the types of wood heater that can be sold, as well as on their operation and smoke emissions. The draft regulations also place limitations on the smoke emissions from other forms of heating and cooking, the conditions under which backyard burning can take place and the types of material that may not be burnt.

Ensuring compliance will be the joint responsibility of individual councils and EPA Tasmania.

The proposed Regulations do not attempt to specify controls on every conceivable heating appliance, type of heater operation or burning activity in urban areas. For the sake of clarity and brevity they only cover situations that frequently occur in everyday life. Other unusual scenarios such as smouldering fires where smoke is barely visible but the smoke odour may be offensive can be addressed using the general 'environmental nuisance' provisions in section 53 of the *Environmental Management and Pollution Control Act 1994* (EMPCA).

The proposed Regulations are based on the understanding that Tasmanians place a high value on air quality and want the cleanest air possible, taking into account the State's economic and social development goals. This requires long term, committed action by all sectors of the community, including governments, industry, communities and individuals, and the Regulations will be an important part of this action.

The RIS demonstrates that the proposed Regulations strike a reasonable balance between the use of wood-fired heating and cooking and occasional backyard burning of 'clean' waste with the need to protect human health and improve environmental amenity.

After reviewing the alternative of no regulations, it is considered that the best approach to achieving the policy objectives is to make the new Smoke Regulations under section 102 of EMPCA, instead of relying on the general 'environmental nuisance' provision in section 53 of EMPCA. It is considered that they will provide a net public benefit, as the benefits of improved environmental amenity and human health are expected to outweigh the identified costs.

Submissions are invited on any aspect of this Regulatory Impact Statement and accompanying draft Smoke Regulations in Appendix 4. Comment is especially invited on the potential costs and benefits of the proposed Regulations for business, households and other sectors of the community.

1.0 INTRODUCTION

1.1 The Purpose of this Document

The purpose of this RIS is to describe and examine the draft *Environmental Management and Pollution Control (Smoke) Regulations 2017*, assess their likely impact on various sectors, and compare them with alternative regulatory options. The draft Regulations have been prepared by EPA Tasmania, a Division within the Department of Primary Industries, Parks, Water and Environment (DPIPWE), which is also responsible for administering the environmental legislation (EMPCA) under which they may be made.

The SLA requires all subordinate legislation such as Regulations to be assessed before their introduction. Initially this involves determining whether the proposed subordinate legislation will impose a significant burden, cost or disadvantage on any sector of the public. If the legislation's effects are considered to be significant, any impacts on competition and the public must be identified and accounted for in a RIS. The Regulations will only be made if in the public interest and there is no better alternative to achieving the objectives.

The RIS has been prepared by EPA Tasmania following advice from the Department of Treasury and Finance that the proposed Regulations would have a significant effect on the community.

The RIS:

- outlines the objectives of the proposed Regulations;
- describes their scope;
- outlines their costs and benefits;
- examines alternatives to the proposed Regulations;
- assesses their impact on competition; and
- assesses whether they provide the greatest net benefit/least cost and are in the public interest.

Smoke sources covered by the proposed Regulations are:

- heating appliances such as domestic-style wood heaters, fireplaces, barbeques and the like;
- burning of waste; and
- burning of domestic waste and green waste in the open or in incinerators, both within and on the fringes of urban areas.

1.2 Background to the Proposed Regulations

Managing the health impacts of wood smoke produced by domestic wood heating and backyard burning is the problem that the proposed Regulations seek to address. Tasmania has had some form of domestic wood heater legislation since at least the early 1990's, when the Environment Protection *(Domestic Solid Fuel Burning Appliances) Regulations 1993* were made. The 1993 Regulations contained provisions covering the manufacture, importation into Tasmania and sale of new domestic solid fuel burning appliances.

The 1993 Regulations were eventually replaced by the *Environmental Management and Pollution Control (Distributed Atmospheric Emissions) Regulations 2007*. A RIS prepared at the time outlined the cost and benefits to industry, government and the community (Department of Tourism, Arts and the Environment, 2006). These Regulations have supported the provisions of EMPCA and equivalent regulatory provisions in other jurisdictions by making it an offence for a person to manufacture, or import into Tasmania for sale, or sell a heater unless it complies with emissions standard AS/NZS 4013.

The Regulations also cover operation of these appliances, as well as backyard burning. They have been implemented by local government.

Work began on reviewing the 2007 Regulations in late 2015, as they are due to expire in August 2017. The 2007 Regulations have undergone a comprehensive review and a new draft has been prepared in close consultation with local government.

The proposed Regulations are only one way of managing the air quality impacts of wood heaters, outdoor heating and cooking, and backyard burning. Other approaches such as public education will continue to be used, subject to availability of funds.

Appendix 1 outlines a summary of legislation and supporting documents used to regulate and manage urban smoke sources in the other Australian States.

1.3 Statement of Objectives

The proposed Regulations are based on the understanding that Tasmanians place a high value on air quality and want the cleanest air possible that is consistent with achieving the State's economic and social development goals, as well as minimising fire risks to individuals and the community.

Maintaining air quality requires action by all sectors of the community, including government, industry, communities and individuals.

The environment in Tasmania is protected under the Resource Management and Planning System by EMPCA and its subordinate legislation. The objectives of EMPCA require that Tasmania's air quality be capable of supporting the health and wellbeing of individuals, communities and the natural environment both now and into the future. To achieve these general objectives, EPA Tasmania is responsible for reviewing and updating subordinate legislation that regulates air quality.

The main policy objective for the proposed Regulations is to achieve, in conjunction with other legislation, the Schedule 2 objectives in EMPCA that relate to Tasmania's atmospheric environment. More specifically, the Regulations aim to:

- Protect the amenity and health of the Tasmanian community, particularly those living in residential areas;
- Recognise current Australian Standards for wood heater efficiency and emissions;
- Protect those adversely affected by domestic smoke emissions; and
- Protect those wishing to use wood heating and cooking, or undertake backyard burning.

1.4 Broad Scope of the Proposed Regulations

The proposed Regulations include provisions on heating appliances, outdoor heating and cooking, types of prohibited waste and backyard burning in urban and urban fringe areas. The draft provisions on heating appliances require that all domestic-style wood heaters manufactured, imported or sold in Tasmania meet the revised Australian Standards (published on 8 August 2014) for wood heater efficiency and emissions.

The heating and cooking provisions aim to minimise the smoke emitted from domestic wood heaters, open fireplaces, barbeques and the like by placing limits on the length and duration of visible smoke plumes. They also cover the use of domestic-style wood heaters in small businesses (e.g. workshops, hotels and restaurants).

The backyard burning provisions place limits on the burning of domestic waste and green waste in residential areas, as well as in surrounding rural residential areas where the properties typically have an area of several hectares or more.

The proposed Regulations do not cover other significant sources of air pollution. Provisions to manage industrial emissions and planned burning for forestry, fire hazard reduction and related purposes

remain in the Air Quality EPP, and other sources such as motor vehicles are addressed by means such as the *Vehicle and Traffic (Vehicle Standards) Regulations 2014*.

The proposed Regulations do not deal directly with ambient air quality. Rather, they provide standards and controls on particular urban sources of air pollution that are known to contribute to unsatisfactory air quality.

More details on the scope of the proposed Regulations are given in Appendix 2.

1.5 Comparison between the Current and Proposed Regulations

Area of Regulation	Current Regulations	Proposed Regulations
Wood Heaters & Australian Standards	Prohibit the manufacture, importation for sale, or sale of a wood heater in Tasmania, UNLESS it complies with emissions standard AS/NZS 4013; AND the heater is marked in accordance this standard; AND a laboratory certificate is in force for that model of wood heater. Prohibit the modification of wood heaters that may increase emissions, except during repairs.	Prohibit the manufacture, importation for sale, or sale of a wood heater in Tasmania, UNLESS it complies with new emissions standard AS/NZS 4013:2014 and efficiency standard AS/NZS 4012:2014; AND the heater is marked in accordance these standards; AND a laboratory certificate is in force for that model of wood heater. Prohibit all modification of wood heaters except during repairs.
Emission of Smoke from Heaters, Fireplaces, Barbecues etc. (Applies to heating and cooking on residential properties and in small businesses; e.g. hotels, restaurants or workshops).	Specify that smoke plumes must not be continuously visible for more than >10 min and, during that 10 min period, must not be visible for >30 secs at a distance ≥ 10m. Allow the following wastes/fuels to be burnt – unpainted, untreated or uncontaminated wood, vegetation, pellet fuel, briquettes, paper, charcoal and peat. Require a person who is served a written notice to reduce smoke emissions within 21 days.	Specify that smoke plumes must not be continuously visible for more than >10 min and, during that 10 min period, must not be visible for >30 secs at a distance ≥ 10m. Notes: The proposed Regs clarify that smoke from fire pits, fire pots and pizza ovens are also subject to these restrictions. Prohibit the burning of the following 'prohibited waste' – asbestos, tyres, coated wire, paint and other chemical containers and residues, treated timber, rubber, painted wood, plastic, and oil. Allow an officer's evidence of smoke emissions, based on their own senses, to be admitted as prima facie evidence.
Backyard Burning	Prohibit backyard burning on land with an area of >2,000 m^2, UNLESS the waste and fuel burnt is as listed below. Prohibit backyard burning on land with an area of ≤2,000 m^2, UNLESS waste and fuel burnt is as listed below; AND	Prohibit the burning of 'prohibited waste' - tyres, coated wire, paint and other chemical containers and residues, treated timber, rubber, plastic, asbestos, batteries or painted wood. Prohibit backyard burning on land with an area of ≤4,000 m^2, UNLESS the burning is done in accordance with an EPN; OR

	the burning is allowed under a bylaw; OR burner has a Fire Permit; OR the burning is done to reduce a fire hazard. Allow the following wastes/fuels to be burnt – unpainted, untreated or uncontaminated wood, vegetation, paper, charcoal and peat.	Is otherwise lawful (i.e. there is a Fire Permit or bylaw permission and the burning doesn't cause an environmental nuisance). Prohibit backyard burning on properties with an area of >4,000 m^2, UNLESS the burning is otherwise lawful (i.e. there is an EPN or Fire Permit or bylaw permission and the burning doesn't cause an environmental nuisance); AND the person takes all practical measures to prevent or minimize air pollution so as not to adversely affect human health and the environment, taking into account weather conditions, proximity of habitable dwellings and dryness of waste. The areal limitation has been proposed to increase from 2,000m^2 to 4,000m^2 to reduce smoke from backyard burning in residential areas. It is considered that most property owners with land in the 2000 – 4000m^2 range will have other disposal options for green waste such as mulching or mowing.

1.6 Implementation of the Proposed Regulations

Guidelines explaining the Regulations will be prepared by EPA Tasmania if the proposed Regulations are made. The Guidelines will be made available to the general public and local government.

The provisions of the Regulations will be implemented and enforced in accordance with responsibilities generally defined in EMPCA. EMPCA requires councils to use their 'best endeavours' to prevent or control pollution from activities which are not Level 2 or Level 3 activities as defined by EMPCA (Level 2 and Level 3 categories cover medium to large industrial and infrastructure activities).

Since the smoke sources covered by the proposed Regulations are generally not associated with Level 2 or Level 3 activities, local government will be mainly responsible for the implementation of Parts 2 and 3 ('Emission of Smoke etc.' & 'Control of Burning'), as was the case with the 2007 Regulations.

Local Councils have their own implementation policies and practices and it is likely that the type and level of action taken by Councils will vary to suit their local community.

For example, problem assessment, advice and education will often be a first step. Verbal and written warnings may also be issued, followed if necessary by the serving of an environmental infringement notice (EIN).

In serious cases there is the option of seeking a court-imposed penalty against an alleged offender, with maximum penalties given in each relevant regulation.

The Regulations also provide the option of managing backyard burning, particularly regular burn-offs on larger blocks, through the issuing of a permit under the *Fire Service Act 1979* or an environment

protection notice (EPN) under section 44 of EMPCA. These approvals may specify the conditions under which burning may take place.

1.7 Consultation

Local Government Working Groups

A working group of Environmental Health Officers (EHOs) from six southern Councils was formed in November 2015 and a northern working group of seven EHOs was formed in March 2016. These groups have provided detailed feedback on current and emerging issues concerning domestic smoke management, and on preliminary drafts of the Regulations. In addition, an advanced draft of the Regulations was reviewed at a seminar held by Environmental Health Australia (EHA) in December 2016, which was attended by a larger group of EHOs from across the state. Further discussions were held at a subsequent EHA seminar in March 2017.

The EHOs come from Council areas that cover a broad cross section of land use types from urban to peri-urban and rural areas. They have played a critical role in the preparation of these Regulations as they have daily community contact and are able to provide feedback on community sentiment. They are also thoroughly familiar with implementation of environmental regulations, and have a good understanding of what does and doesn't work in domestic smoke management.

Program for Consultation on the RIS and Draft 2017 Regulations

The draft Regulations and RIS have been released for a 5-week consultation period. Their release has been advertised in the State's daily Tasmanian newspapers and in the *Government Gazette,* as required by section 5(2)(a) of the SLA.

The RIS and draft Regulations has also been sent directly to key stakeholders to fulfil the requirements of section 5(2)(b) of the SLA. All comments and submissions received will be considered in accordance with section 5(2)(c) of the SLA.

Submissions will be received at the address shown on the front of this document.

Management Regulations). Disposal by incineration also requires an individual approval, but such approval is unlikely to be granted because of the difficulties of avoiding adverse impacts.

2.0 THE POLICY PROBLEM – WOOD SMOKE FROM URBAN SOURCES

Wood smoke is Tasmania's main air quality issue, and management of the urban component of wood smoke is the policy problem that the proposed Regulations seek to address. In scientific and regulatory papers, the problem component of wood smoke in terms of human health is usually referred to as 'airborne particulate matter' or airborne PM.

Airborne PM consists of a mixture of suspended solid and liquid particles. These particles can vary in size, composition and origin, with the particles of greatest concern to public health being those with a diameter of less than 10 µm (PM_{10}) and particles with a diameter of less than 2.5 µm ($PM_{2.5}$). Note that one µm, or micrometre, equals 1/1000 of a millimetre. PM can remain airborne for minutes to days, and may travel for many kilometres. PM can also affect visual amenity, decreasing the environmental enjoyment of residents and visitors alike.

2.1 Health Effects of Wood Smoke

The Australian Government's Department of Environment (2015) found that exposure to PM has been associated with a range of adverse health impacts, including:

- increases in total, respiratory, and cardiac mortality;
- increased hospital, surgery and casualty admissions for respiratory disease, bronchitis, asthma, cardiovascular disease and chronic obstructive pulmonary disease;
- increased limitations to functional activity, either as school or work days lost and other restrictions;
- increase in the daily numbers of respiratory symptoms; and
- pulmonary function decreases in healthy children or adults with obstructive airways problems.

Furthermore, the Department concluded that although health impacts in Australia cannot be directly attributable to PM emissions, there is indirect evidence linking increases in mortality to PM emissions, and health effects will occur down to very low levels of pollution. This suggests that there may be no 'safe' level for airborne PM; however, it also suggests that any reductions in PM will bring positive health benefits to affected communities.

The Department of Tourism, Arts and the Environment (2006) noted that poorly operated wood heaters and open fires also emit carbon monoxide and a wide range of volatile and semi-volatile chemicals. These include aldehydes and other oxygenated products of partial combustion, which are responsible for the odour and irritation caused by smoke, and polycyclic aromatic hydrocarbons. These smoke particles tend to be very much towards the smaller end of the $PM_{2.5}$ size range, in the sub-micron or "nano-particle" range. More details on health costs is given in Appendix 3.

2.2 Sources of Wood Smoke in Tasmania

In Tasmania the most significant sources of wood smoke are the large scale 'planned burns' for bushfire hazard reduction, forest regeneration, agricultural land clearance and ecological management. In 2008 these sources were estimated to have produced between 86,000 and 122,000 tonnes of particle pollution.

Other significant sources of smoke particles are wood heaters and open fireplaces. In 2008 it was estimated that there were approximately 42,000 combustion stoves and 4,300 open fireplaces in Tasmania, contributing approximately 5,000 tonnes of particle pollution to the atmosphere (DPIPWE,

2008). A survey conducted by the former EPA Division in 2011 concluded that there were approximately 60,000 wood heaters in Tasmania. The percentage of households using wood heaters varied markedly from region to region, with Hobart being ~16% and Geeveston ~60%. (Environment Protection Authority, 2013)

Todd (2013) noted that there was a decline in wood heater usage across the nation between 1999 and 2008 (based on ABS data), followed by an increase of approximately 27,000 heaters per year from 2008 to 2011. These findings are in line with the results for Tasmania. It is not known whether the increasing trend has continued up until the present, although significant increases in reticulated energy costs in recent years may have led to more households using wood as an energy source.

There are no Tasmanian studies which separate the impacts of backyard burning from wood heater usage; however, it is reasonable to assume that backyard burning also contributes to smoke pollution in Tasmania.

2.2.1 Planned Burning

Planned burns clearly contribute most of the wood smoke particle pollution to the Tasmanian air-shed. However, many planned burns, particularly in forestry areas, are conducted in such a way that much of the smoke rises above and away from populated areas.

Such conflagrations are also timed with some consideration to weather conditions and the likely effects on the population. Bushfire hazard reduction burns tend to have more effect because they are often undertaken near residential areas and are relatively low intensity, which means that the smoke can accumulate at lower levels in the atmosphere.

2.2.2 Domestic Wood Smoke

In comparison, smoke from domestic wood heaters, fireplaces and backyard burning is often the result of burning wet firewood, 'damping down' of wood heaters so that they produce too much smoke. Domestic wood smoke often accumulates over residential areas due to prolonged periods of temperature inversion during winter, resulting in a much greater population exposure than the total pollutant output from these sources would suggest.

Wood heaters and backyard burning may also adversely affect environmental amenity in terms of unwanted odours and visual impact. The large number of complaints to urban Councils about smoke nuisance attests to public concern about this issue. In addition, there is an expectation in the community that smoke is kept to a minimum in and around cities and towns so that residents have a good quality of life. More importantly, the community also expects modern, practical legislation that can protect the health of vulnerable people, such as young children, the elderly and those with breathing difficulties. EPA Tasmania intends to make guidelines available to the general public and local government with further information regarding backyard burning and other aspects of the proposed regulations.

All major Tasmanian cities and towns are affected to some degree by domestic wood smoke; particularly Launceston as a result of its geography and frequent temperature inversions. It was estimated in 2004 that wood smoke comprised approximately 80% on average of wintertime pollution in Launceston. This was based on an analysis of particulates in Launceston that used Carbon 14 dating to determine the proportion of particulate matter from fossil fuels, such as vehicle emissions, and the proportion from biomass such as domestic and industrial burning of wood (Department of Tourism, Arts and the Environment, 2006).

In 2009 it was noted that substantial improvements had been made to air quality in Launceston as a result of a wood heater 'buyback' program, which reduced heater numbers by about 30% (Tasmanian Planning Commission, 2009). However, as noted in the first part of section 3.1, heater numbers across the State as a whole have significantly increased since that time.

Many smaller towns such as Geeveston, Longford, Perth, New Norfolk and Deloraine are also affected by poor air quality in winter, and communities located further away from the coast in general show a greater potential for higher smoke impacts due to the lower average wind speeds in those locations. In fact, individual residences anywhere in Tasmania can be subject to high levels of localised smoke from neighbouring chimneys.

Short-term (2 to 4 week) wintertime air quality monitoring campaigns carried out by EPA Tasmania at residential properties in Burnie, Invermay and Scottsdale, among other places, also show regularly occurring high smoke levels. For example, New Norfolk, Longford, Geeveston, Hadspen, Perth and Deloraine all recorded more winter days above the national reporting standard for $PM_{2.5}$ than did Launceston over the same period. The data were collected by the EPA Division's state-wide BLANkET (Base Line Air Network of EPA Tasmania) network, which in recent years has provided a much better understanding of the extent and level of impact of wood heater smoke on Tasmanian communities.

3.0 PROPOSED REGULATORY PROVISIONS

3.1 Summary of Regulations

The table below summarises the draft provisions in the proposed Regulations and provides a brief description for each regulation. Detailed explanations of each regulation are given in Appendix 2. A comparison table showing the differences between the current and proposed Regulations is given in section 1.5.

The broad scope of the propose Regulations is the same as the current (2007) Regulations, in that they cover the standard, use and modification of heating appliances (wood heaters), emission of smoke from heaters, fireplaces and barbeques, and controls on the burning of waste. As a consequence, the costs and benefits of implementation are not expected to be significantly different from the ongoing implementation of the current Regulations. Changes as identified in section 1.5 that impose a cost or benefit are examined in section 4.1 of this RIS.

Provisions of the Proposed 2017 Regulations

Proposed Regulation No.	Title	Description
PART 1 - PRELIMINARY		
1	Short Title	The new title will be the *Environmental Management and Pollution Control (Smoke) Regulations 2017.*
2	Commencement	Intended to be on or before 15 August 2017.
3	Interpretation	Definition of terms used throughout the Regulations.
PART 2 – HEATING APPLIANCES TO COMPLY WITH AUSTRALIAN STANDARDS		
4	Application of Part	States that Part 2 applies to heating appliances that are designed, manufactured or adapted for domestic use on residential premises.
5	Heating appliances to comply with Australian Standards	This regulation requires that heaters manufactured, imported into or sold in Tasmania must comply with the most recent Australian Standards for emissions and efficiency. Such heaters must have a certificate from a NATA-registered* laboratory to that effect, and this certificate must be provided to the Director EPA on demand. *National Association of Testing Authorities
6	Interference with heating appliances	This regulation specifies that certified heaters must not be modified, except during the course of repairs.

Proposed Regulation No.	Title	Description
PART 3 – EMISSION OF SMOKE FROM HEATING APPLIANCES & OUTDOOR HEATING OR COOKING APPLIANCES		
7	Emission of smoke from heating appliances and outdoor heating or cooking appliances	This regulation specifies that that smoke plumes must not be continuously visible for more than >10 min and, during that 10 min period, must not be visible for >30 secs at a distance ≥ 10m. The regulation also allows an officer's evidence of smoke emissions, based on their own senses, to be admitted as prima facie evidence.
PART 4 – CONTROL OF BURNING		
8	Prohibition on burning of prohibited waste	Specifies that a person must not burn asbestos, tyres, coated wire, paint and other chemical containers and residues, treated timber, rubber, painted wood, plastic, and oil.
9	Burning of domestic waste and green waste on land with an area of <4,000m^2	Prohibits backyard burning, UNLESS the burning is done in accordance with an EPN; OR Is otherwise lawful (i.e. there is a Fire Permit or bylaw permission and the burning doesn't cause an environmental nuisance). The areal limitation has been proposed to increase from 2,000m^2 to 4,000m^2 to reduce smoke from backyard burning in residential areas. It is considered that most property owners with land in the 2000 – 4000m^2 range will have other disposal options for green waste such as mulching or mowing.
10	Burning of domestic waste and green waste on land with an area of >4,000m^2	Prohibits backyard burning, UNLESS the burning is otherwise lawful (i.e. there is an EPN or Fire Permit or bylaw permission and the burning doesn't cause an environmental nuisance); AND the person takes all practical measures to prevent or minimise air pollution so as not to adversely affect human health and the environment, taking into account weather conditions, proximity of habitable dwellings and dryness of waste.

Proposed Regulation No.	Title	Description
PART 5 - MISCELLANEOUS		
11	Prescribed offences	Infringement Notice penalties for each potential offence have been transferred from the *EMPC (Environmental Infringement Notices) Regulations 2016* and placed within Schedule 1 (see below). These are set at 5 Penalty Units, or 10% of the maximum court fine for a single offence.
SCHEDULES		
Schedule 1	Environmental Infringement Notice Penalties	See Regulation 11 above.

The EPA will continue to provide technical assistance to Councils in cases where smoke monitoring may be necessary, and will also be responsible for ensuring compliance with Part 2 of the Regulations ('Heating Appliances to Comply with Australian Standards').

Police officers are authorised officers under EMPCA, and Tasmania Police could potentially play a role in implementing the proposed Regulations outside of normal business hours, providing a first response to complaints and investigating and enforcing particular provisions. However, as nuisance smoke is not generally considered to be a public order issue, it is unlikely that the police would get involved.

4.0 COSTS AND BENEFITS

4.1 Summary of Costs and Benefits

SECTION IN REGULATIONS	BENEFITS	COSTS
Heating Appliances to comply with Aust. Standards (Part 2)	Health benefits associated with increased heater efficiency and reduced smoke emissions Consumers will have confidence that they are buying heaters which meet the most recent Australian Standards for efficiency and emissions. A potential reduction in the number of smoke complaints from 2017. Residents and small businesses (e.g. restaurants and hotels) will be able to use accepted modern heater technology to help them fulfil their general environmental duty under section 23A of EMPCA to prevent or minimise environmental harm or nuisance caused by wood smoke.	COSTS TO RETAIL BUSINESSES Staff participation in any audits of retail outlets (probable max. of 1 hour/visit; estimated cost of $100 per visit with a total cost to Tasmanian businesses of ~$300 per year). Disposal of any remaining non-compliant heaters (should have already been completed by the time the Regulations take effect). (Note that a cost benefit analysis of potential wood smoke control measures for NSW found that there would be no reduction in heater sales as a consequence of putting the new heater standards into the NSW Protection for the Environment Operations (Clean Air) Regulation 2010, and consequentially there would be no change to business profitability (AECOM Australia Pty Ltd, 2014). COSTS TO BUSINESSES USING WOOD HEATING & COOKING (e.g. restaurants & hotels) Cost of purchasing a compliant heater - an additional cost of around $230 (Note that the Federal Department of Environment (2013) estimated that the average additional cost to consumers of a heater meeting the full scope of the new Standards (60% efficiency and 1.5g/kg emissions) would be an additional cost of $230). OTHER POTENTIAL COSTS TO BUSINESS (retailers, manufacturers or importers) Retesting of heaters for compliance certification 10-$15,000 per model (Note that it is highly unlikely such a cost would be incurred as certificates should already be available for each model being imported or sold) COST TO CONSUMERS/HOUSEHOLDS Cost of purchasing a compliant heater an additional cost of $230 (could potentially be offset by lower wood costs (see note above relating to costs to business using heating & cooking)

		Cost associated with disposing of the old non-compliant heater. Also the potential financial loss of not being able to on sell the old heater. POTENTIAL COST TO GOVERNMENT EPA compliance monitoring: (~$114.75/hr, current rate). Total cost ~$350 per year (3 x 1 hour visits) EPA advice to local government + public education costs
Emission of Smoke from Heating Appliances etc. **(Part 3)**	Improved air quality and long term reduction in smoke-related health costs (est. at $5-10 million/year in 2006 for Tasmania); also decreased mortality. A long term reduction in the number of smoke complaints from 2017. Implicit recognition that wood-fired heating and cooking are acceptable if done in a responsible manner.	COST TO GOVERNMENT Local government complaint handling ~$80,000 per year in 2012/13 (Note that this is a combined cost for heater and backyard burning smoke complaints (Note that these costs may be even higher in the absence of regulations) COST TO CONSUMERS/HOUSEHOLDS Indirect cost of time required to check adherence to the regulations
Control of Burning (Part 4)	Less smoke in areas affected by backyard burning. A long term reduction in smoke-related health costs (est. at $5-10 million/yr. in 2006); also decreased mortality. A long term reduction in the number of smoke complaints. Part 4 advises burners what is required to properly plan and manage fires, including what can't be burnt; i.e. what is prohibited waste.	COST TO HOUSEHOLDS or INDIVIDUALS Green waste disposal at Council or waste authority facilities if appropriate (cost likely to be ~$100 per trailer load for contractor (garden service maintenance). Individuals can also take their green waste to the tip – they will incur petrol costs, time costs, cost of tipping which varies with each council. Some Councils offer 'green bins' which are generally included in Council rates. Time taken to comply with and obtain an EPN or fire permit. Although there may be no cost associated with obtaining a fire permit, the cost of obtaining an EPN may vary between councils. COST TO GOVERNMENT As above, Local government complaint handling ~$80,000 per year in 2012/13.There is also the potential cost to local government of issuing an EPN.

4.2 Restrictions on competition

The emission of smoke and backyard burning provisions will apply to all individuals and small businesses (e.g. hotels, restaurants and garden maintenance services).

The new Australian standards for wood heaters have been accepted and largely implemented nationwide, so there will be no new restriction on market entry and competitive conduct as all impacts are likely to have been absorbed by the market.

Note, however, that vendors of second-hand heaters will potentially have lower sales volumes because of the prohibition on the sale of non-compliant heaters.

Restricting the laboratories that may issue certificates to those that are NATA-registered (sub-regulation 5(2)) is a restriction on competition, but one that is considered necessary for the maintenance of high standards. Note that a similar requirement exists in the current Regulations and that NATA registration has long been the norm for Australian laboratories.

In summary, there will not be any restriction in competition associated with the proposed Regulations.

5.0 ALTERNATIVES TO THE PROPOSED REGULATIONS

5.1 Rely on the general provisions of primary legislation

If the 2007 Regulations are not replaced by another instrument with specific provisions for smoke sources, the general provisions of primary legislation could be relied upon to address neighbourhood smoke issues on a case-by-case basis. These include the general provisions of EMPCA, in particular section 53 (environmental nuisance offences) and section 44 (environment protection notices). The nuisance provisions of the *Local Government Act 1993* may also be used by Councils. Smoke control conditions relating to specific activities could also be included in permits issued under the *Land Use Planning and Approvals Act 1993* or the *Fire Service Act 1979*.

For sources which have a small potential for nuisance, special regulatory provisions are unnecessary and the general provisions of EMPCA and other legislation should suffice to address occasional problems. Where no nuisance exists then general provisions can remain unused, which would be an appropriate response where there is no benefit in government intervention.

However, for those sources which have significant potential for nuisance (such as backyard burning), some government intervention beyond primary legislation is necessary to minimise nuisance. A case-by-case approach using the general provisions of EMPCA or other legislation would be administratively and technically inefficient for neighbourhood smoke sources, given the very large number of such sources. Appropriate criteria would need to be established and implemented in each and every case. Guidelines could be issued, but it is unlikely that they would be applied consistently by the various Councils and the Police. This would result in inequities and inconsistent protection of the air environment.

5.2 Develop non-mandatory guidelines

As would be the case in using the general provisions of EMPCA or other legislation, developing non-mandatory guidelines for each type of smoke source covered by the proposed major amendments would be inefficient and take considerably longer to research and develop than regulations.

Furthermore, it is unlikely that they would be applied consistently by the various Councils. This would result in inequities and inconsistent protection of the air environment. As there would be no compunction to comply with the guidelines, persistent or blatant smoke offences would be likely to continue, and public confidence in the regulatory abilities of government would be undermined. It should also be noted that most other Australian jurisdictions have mandatory requirements covering smoke sources.

Individual guidelines would, however, have the benefit of focussing directly on specific smoke-producing activities, and will likely be used as supporting documents for the proposed Regulations.

5.3 Self-regulation

Self-regulation is an approach whereby businesses and individuals are given a degree of freedom to determine the means by which they will meet established standards. Self-regulation allows for reduced inspections by regulators, with resources being redirected to prosecutions and policy development.

To promote satisfactory environmental performance, businesses may be required to acquire certification or equivalent quality assurance standards for environmental management systems. Self-regulation will sometimes be supported and steered by government through the provision of guidelines, public education and information and financial incentives. However, diminishing budgets and a focus on core business by government has meant fewer resources are allocated to such tasks and this situation is unlikely to change in the foreseeable future.

A variant of self-regulation is co-regulation, whereby there is formal provision for cooperative decision making between regulatory authorities and businesses or individuals on environmental standards or case-specific requirements.

The advantages of self-regulation include greater freedom of action by businesses and individuals, greater internalisation of costs by polluters, and potential reductions in costs to government. The disadvantages include greater uncertainty, greater likelihood of litigation, substantial expense for quality assurance certification (a particular burden on small business and individuals) and reduction of the regulatory authority role to a strictly reactive one (potentially allowing serious environmental harm or nuisance to occur as a result of negligence or cost cutting).

Self-regulation is not a practical option for the control of neighbourhood smoke sources because of the very large number of sources of smoke emissions, the high probability of breaches occurring and the incapacity or unwillingness of many operators to adequately self-regulate.

6.0 GREATEST NET BENEFIT/LEAST COST

After reviewing the alternative (of no regulations), it is considered that the best approach to achieving the policy objectives is to continue to have Regulations made under section 102 of EMPCA. This option provides the greatest net public benefit, as the benefits of less smoke and human health impacts are expected to outweigh the identified costs.

The main benefits of the Regulations are:

- For businesses and individuals/households - practical rules governing operation of wood heaters, fireplaces and barbeques, and backyard burning of domestic and green waste, that are consistent with current community expectations;
- Little to no direct cost for permit applicants;
- For individuals - health benefits given the potential reductions in smoke pollution within residential areas in both cities and smaller communities; and
- For individuals and Government - in the longer term, potentially significant reductions in health costs (see Appendix 3 for smoke-related health cost estimate of $5-10 million/yr.)

The main costs associated with the Regulations are:

- For businesses - the additional cost of purchasing a compliant wood heater in the event that the current heater is non-compliant. The additional cost of an average wood heater is estimated at $230.
- For individuals and households - the requirement for people to ensure their behaviour is in accordance with the proposed restrictions on the operation of wood heaters and other restrictions on the backyard burning of domestic waste and green, or garden waste. For example, people living in residential areas may require a permit to burn 'clean' waste outdoors (particularly if it is a fire hazard), and will also need to be mindful of the smoke visibility and duration restrictions when operating their wood fire or combustion heater;
- For some individuals and households there may be the added cost of taking the green waste to the tip - cost varies between councils. Individuals and households will incur petrol costs and time costs.
- For businesses and individuals/households - potential penalties related to breaches of the amended regulations.
- For local government - complaint management costs in the order of $80,000/year (2012/13 estimate) – noting that these costs would likely be incurred in the absence of regulations and may be even greater due to the lack of regulatory guidance.

It is considered that the listed benefits, supported by the more detailed discussion in Part 4, 5 and 6 of the RIS, are likely to outweigh the identified costs and will provide a net public benefit.

7.0 CONCLUSION

The preferred option for addressing the environmental and health issues that relate to residential smoke pollution is to adopt the provisions described in section 4; that is, to make the Regulations as proposed. It is considered that this option has the greatest net public benefit, as the benefits to air quality and human health are expected to outweigh the identified costs.

8.0 REFERENCES

AECOM Australia Pty Ltd (2014), *Wood Smoke Control Measures*. Cost Benefit Analysis prepared for NSW Environment Protection Authority.

Commonwealth of Australia (2015), *National Clean Air Agreement.*

Department of the Environment (2015), *Reducing Emissions from Wood Heaters*. Decision Regulation Impact Statement.

Department of Tourism, Arts and the Environment 2006, *Environmental Management and Pollution Control (Air Quality) Regulations 2006*. Regulatory Impact Statement.

Department of Tourism, Arts and the Environment 2006, *Tasmanian Air Quality Strategy 2006.*

Department of Primary Industries, Parks, Water and Environment (2008), *A preliminary re-assessment of the relative contribution of PM10 particle pollution from forest industry burns and domestic wood heating to the Tasmanian airshed in 2008.*

Department of Primary Industries, Water and Environment 2004. *Environment Protection Policy (Air Quality) 2004.*

Environment Protection Authority 2013. *Annual Report 2012-13.*

Johnston, F.H., Hanigan, I.C., Henderson, S.B. and Morgan, G.G. 2013. *Evaluation of interventions to reduce air pollution from biomass smoke on mortality in Launceston, Australia: retrospective analysis of daily mortality, 1994-2007,* British Medical Journal 2013: 345:e8446.

Joint Technical Committee CS-062 1999, *Australian/New Zealand Standard AS/NZS 4013: Domestic solid fuel burning appliances – Method for determination of flue gas emission*, Standards Australia and Standards New Zealand, Sydney, NSW.

Joint Technical Committee CS-062 2014, *Australian/New Zealand Standard AS/NZS 4012:2014 Domestic solid fuel burning appliances – Method for determination of power output and efficiency*, Standards Australia and Standards New Zealand, Sydney, NSW.

Joint Technical Committee CS-062 2014, *Australian/New Zealand Standard AS/NZS 4013:2014 Domestic solid fuel burning appliances – Method for determination of flue gas emission*, Standards Australia and Standards New Zealand, Sydney, NSW.

NEPC Service Corporation (2013), *Consultation Regulation Impact Statement for Reducing Emissions from Wood Heaters.*

Pecan Engineering Pty. Ltd. & Adelaide Heating Technology (2013), *Submission in response to "Consultation RIS for reducing emissions from wood heaters"* (Submission No. 24).

Tasmanian Planning Commission 2009, *State of the Environment Report: Tasmania 2009*.

Todd, J. (2013), *CRIS Wood Heater Submission on the Consultation Regulation Impact Statement for Reducing Emissions from Wood Heaters.* (Submission No. 20).

APPENDIX 1 – SUMMARY OF SMOKE MANAGEMENT LEGISLATION & SUPPORTING DOCUMENTS IN OTHER STATES

STATE	ENVIRONMENTAL LEGISLATION	POLICIES	REGULATIONS	OTHER
SOUTH AUSTRALIA	*Environment Protection Act 1993* *(no smoke-specific clauses- see 'environmental nuisance' provisions)*	*Environment Protection (Air Quality) Policy 2016* (a consolidation of 4 former policies and 2 guidelines) In terms of regulating specific activities, the EPP contains provisions for burning in the open, including burning permits & prohibited substances. Also covers solid fuel heaters (sale, installation, interference with, prevention of excessive smoke, sale of green firewood, and taking reasonable/practicable measures to avoid emissions.	*Environment Protection Regulations 2009* Note – contains airshed definitions, but no specific smoke management provisions	Broad Acre Burning Code of Practice 2015 (South Australian Country Fire Service) EPA website article – 'Wood Heater Smoke and How to Prevent It'
VICTORIA	*Environment Protection Act 1970*	*State Environment Protection Policy (Ambient Air Quality)* 2001 *State Environment Protection Policy (Air Quality Management)* 2001 *Waste Management Policy (Solid Fuel Heating)* 2004	none	Air Fact Sheet 2012 that mentions Smog Alerts & includes reference to wood smoke
QUEENSLAND	*Environmental Protection Act 1994*	*Environmental Protection (Air) Policy 2008* (similar high-level approach to Tasmania's EPP)	*Environmental Protection Regulation 2008* (covers all environmental matters). The only apparent reference to wood heaters is in Part 5, which refers to relevant Australian Standards	Wood Heater Guide (Brisbane City Council 2006)

STATE	MAIN ENVIRONMENTAL LEGISLATION	POLICIES	REGULATIONS	OTHER
NEW SOUTH WALES	*Protection of the Environment Operations Act 1997* provides the statutory framework for managing air emissions in NSW	none	*Protection of the Environment Operations (Clean Air) Regulation 2010* provides regulatory measures to control emissions from wood heaters (Part 2), open burning, motor vehicles and fuels and industry.	Selecting, Installing and Operating Domestic Solid Fuel Heaters 1999 (Guideline) Local Government Air Quality Tool Kit Action for Air (The NSW Government's 25-year Air Quality Management Plan) 1998 Guidelines for the Burning of Bio-material: Record Keeping and Reporting Requirements for Electricity Generating Facilities 2013
WESTERN AUSTRALIA	*Environmental Protection Act 1986*	none	*Environmental Protection (Domestic Solid Fuel Burning Appliances and Firewood Supply) Regulations 1998*	Smoke from Backyard Barbeques, Chimineas and Outdoor Pizza Ovens (Department of Environment Regulation) Wood Heaters and Air Pollution: Reducing Smoke Emissions Air Quality Information Sheet 1 (former Dept. of Envt & Conservation) – Note – open air burning and permits are mainly managed by local govt.

Note: Most legislation and supporting documents are the responsibility of each State's principal environmental regulator - usually the EPA, except when otherwise referenced.

APPENDIX 2 – DETAILED EXPLANATION OF PROVISIONS

The provisions in the proposed Regulations cover compliance with Australian Standards for wood heater efficiency and emissions, emission of smoke from wood heaters, fire places, barbecues and the like, and burning of domestic and green waste in urban and urban fringe areas.

Part 2 - Heating appliances to comply with Australian Standards

Regulation 4 – Application of Part

Part 2 applies to heating appliances that are designed, manufactured or adapted for domestic use on residential premises.

Regulation 5 – Heating appliances to comply with Australian Standards

Background

In December 2015, Commonwealth, State and Territory Environment Ministers endorsed the National Clean Air Agreement (Commonwealth of Australia, 2015), which included acceptance of new emission and power output/efficiency standards for new wood heaters that were published on 8 August 2014. Each jurisdiction is required to update their legislation to include these new standards.

The new Standards are voluntary and include a test method that addresses fuel loading, operating procedures and sampling methods. They will only apply to heaters that are sold on the Australian market. Although voluntary, they were developed through a process of consultation with regulatory authorities and the wood heater industry. They already have wide acceptance in Australia and New Zealand as the standards which should be referred to in any related legislation that deals with wood heater compliance.

The new emissions standard is 'AS/NZS 4013:2014 Domestic solid fuel burning appliances – Method for determination of flue gas emissions'.

The new power output/efficiency standard is 'AS/NZS 4012:2014 Domestic solid fuel burning appliances – Method for determination of power output and efficiency'.

Explanation of Part 2

The current (2007) Regulations require that wood heaters comply with the outdated Australian Standard AS/NZS 4013:1999 for emissions (Joint Technical Committee CS-062, 1999), but do not require an efficiency standard.

Emissions are measured in terms of particle mass (in grams) emitted for each kilogram of wood burnt under test conditions and are measured as g/kg.

AS/NZS 4013:2014 tightens the emission limit for heaters (as measured in a laboratory test specified in the Standard), in two stages. The previous limit was 4 grams of particles emitted from the heater per kilogram of fuel burnt. A lower limit of 2.5 g/kg grams per kilogram for heaters without catalytic converters was due to be mandated throughout Australia on 8 August 2015, and a limit of 1.5 g/kg for the same type of heater is due to be mandated on 8 August 2019. The equivalent mandated limits for heaters with catalytic converters are 1.5 g/kg and 0.8 g/kg, respectively.

Similarly, the new AS/NZS 4012:2014 requires that heater efficiencies be increased to at least 55% by 8 August 2015, and to at least 60% by 8 August 2019. The operating efficiency measures how much of the heat value contained in the wood is extracted and delivered into the living space.

The new Regulations will require compliance with both of the updated Standards.

Part 2 of the proposed Regulations specifies that a person must not manufacture, import into Tasmania for sale, or sell a heating appliance that is designed, manufactured or adapted for domestic use on residential premises unless it is marked in accordance with the current Australian Standards for efficiency and emissions and the name of the compliance tester. The proposed prohibition on the sale of non-compliant heaters will apply to sellers of new heaters, to second hand dealers, and to individuals seeking to dispose of their old heater through a private sale.

Note that this would not prevent a person importing a specialist, possibly non-compliant heater for their own use. An example could be an imported wood heater, or 'range' used for both central heating and cooking in a private residence. Such a situation would be rare and does not warrant specific coverage within the Regulations.

A certificate issued by a laboratory registered with the National Association of Testing Authorities (NATA) must also be in force for that model of appliance, and must be provided to the Director, EPA upon request. NATA registration has been the accepted laboratory standard for many years and is considered appropriate for this situation.

Regulation 3 ('Interpretation') in effect defines 'heating appliance' as any solid fuel burning heating appliance to which the Australian Standards apply. Therefore, Part 2 of the proposed Regulations only covers wood heaters designed for use in residential premises. In most situations, such heaters would be used to burn firewood or other timber offcuts in a private home.

Part 2 will not apply to heaters designed and manufactured for commercial or industrial use. These will be subject to the environmental nuisance provisions in section 53 of EMPCA.

Part 2 also will not apply to pellet heaters, as these are covered by different Australian Standards. In addition, existing heaters installed in Tasmanian homes (or small businesses) which do not meet the current Australian Standards will not be affected by the proposed regulation 5.

While the general scope of the proposed Part 2 is the same as that in the current Regulations, some sections have been removed or simplified to make for easier interpretation and implementation. For example, current regulation 4 ('Non-application of regulations') has been removed because the main focus of any Regulations should be to define the specific actions that are not lawful, rather than to stray into the far wider regions of permissible behaviour.

In addition, those sections of the existing regulations 5 and 6 that deal with certificates of compliance have been removed, since heater certification by a NATA-registered laboratory is all that is required for establishing compliance with Australian Standards.

Regulation 6 – Interference with heating appliances

Regulation 6 prohibits a person from altering the structure, exhaust system or inlet of any laboratory-certified heating appliance unless it is a temporary modification during repairs. Importantly, sub-regulation 6(2) also "...extends to any person who causes or permits [modification]...". This means that a heater owner, modifier (possibly a technician) or both could potentially commit an offence.

The ban on modification is particularly important for modern heaters because their lower smoke emissions depend on sufficient airflow being maintained, so their 'damping down' capacity is deliberately limited by design and construction.

Sub-regulation 6(3)(a) exempts modifications to appliances that have been installed in and are sold together with a building. In other words, the regulation only applies to new wood heaters that comply with the most recent Australian standards.

The offence of heater 'plate-tampering' has been removed from the current Regulations (see regulation 8). Proposed regulation 5 requires heater marking in accordance with Australian Standards, therefore any willful removal or destruction of a compliance plate will automatically mean a breach of the regulation.

Part 3 - Emission of Smoke from Heating Appliances, Fireplaces and Barbecues

Regulation 7 - Regulation of smoke emissions from heating appliances, fireplaces and barbeques

The proposed Regulation 7 places limits on the duration and length of visible smoke plumes arising from heating appliances (wood heaters), indoor and outdoor fireplaces (including small campfires for the purpose of cooking and heating) and barbecues. In summary, such smoke should not be visible for a continuous period of more than 10 minutes, and during that period it should not be visible for more than 30 seconds at a distance of 10 metres or more. The rationale for this provision is that fires kindled and fuelled with dry wood, and provided with sufficient airflow should only produce significant smoke plumes during brief start up and restocking periods.

These provisions are essentially the same as in the current Regulations. The only change of significance is the removal of the subclause covering the issuing of a written notice by authorized officers or Council officers, including the requirement for offenders to reduce their smoke emission within 21 days of receiving such a notice.

This has been done because Council officers have reported that the abatement provision is misused by some offenders to delay taking any action, and as a consequence the regulation is somewhat ineffective. Notwithstanding this change, Council officers will still be able to issue warning letters if they consider it necessary, and these may include requirements for smoke nuisance abatement.

Regulation 7 is mainly aimed at regulating heating and cooking on residential properties, but it will also apply to small business; for example, a hotel using a wood heater or pizza oven, or a workshop using a heater for the benefit of employees.

The purpose of this regulation is to minimize the effect of smoke on neighbours, and to limit the general accumulation of smoke in residential areas.

These proposed restrictions are the same as those in the existing 2007 Regulations, as local government officers have reported that they have proved to be workable in most situations.

The provisions recognise that visible smoke is inevitable during the initial stage of wood-fired heating and cooking, but that it can subsequently be controlled and largely eliminated if the appliance or fire is fuelled by dry wood and provided with sufficient airflow.

Sub-regulation 7(2) also states that the sense - evidence of authorized and Council officers in relation to smoke emission from premises is acceptable as a fact in any legal proceedings, subject to the presentation of alternative facts. This provision is a restatement of section 53A in EMPCA, and has been included in the proposed Regulations to emphasise that smoke emission can be established without necessarily using any physical recording or instrument detection.

Part 4 - Control of Burning

Regulation 8 – Prohibition on burning of prohibited waste

This proposed regulation references the definition of 'prohibited waste' in Regulation 3. It prohibits the burning of tyres, coated wire, batteries, paint and chemical containers and residues, treated timber, rubber, painted wood, plastic, asbestos unless it is otherwise lawful to do so.

The main purpose of this regulation is to stop the intentional backyard burning of such material in order to prevent the release of toxic fumes and particles. It will also apply to burning of waste on commercial and industrial premises unless some form of lawful approval has been obtained.

The regulation will not apply in emergency situations such as a bushfire or house fire where it may be impossible to control the burning of contaminated material. The 'otherwise lawful' exception recognises that in highly unusual circumstances it may be possible to burn contaminated material if some form of permit were obtained, although it would be extremely unlikely for this to occur, particularly in residential areas, unless there were demonstrable benefits to doing so and/or no other options were available.

The proposed regulation replaces current regulation 10, which prohibits burning of solid fuel in heaters, fireplaces etc. unless that fuel is one of the listed exceptions such as unpainted wood, coal and paper. The reason for the replacement is the same as that for current regulation 4 ('Non-application of regulations'); that is, changing the focus from what is permissible to what is unlawful.

Regulation 9 – Burning of domestic waste and green waste on land with an area of less than 4,000 square metres

Proposed regulation 9 prevents the intentional burning of domestic waste or green waste on blocks of land with an area of less than 4,000 m^2 (just under an acre), unless the owner/burner has been issued with an EPN under EMPCA or the burning is otherwise lawful. In this context, 'otherwise lawful' would mean a permit has been issued under the *Fire Service Act 1979*, or the burning is allowed under a Council bylaw or that it does not contravene the environmental nuisance provisions in section 53 of EMPCA.

'Domestic waste' typically means non-hazardous materials such as paper, cardboard or unpainted timber. 'Green waste' includes shrub clippings, tree branches, leaves and grass piled into pyramid-like structures for burning. These waste categories replace the solid fuel exceptions in existing regulation 11, although their broad scope is essentially the same.

The intention of Regulation 9 is to limit backyard burning in urban areas to rare situations where there are large volumes of waste and there is no practical option for waste disposal (such as offsite removal or onsite mulching), or where the material has to be dealt with onsite for the purposes of fire hazard reduction.

In most situations it is considered reasonable to expect urban landowners and residents to remove waste from their property, or use it as mulch or compost before it accumulates to an unmanageable volume. The use of an areal limitation (4,000m^2) is a simple and effective means of reducing non-essential smoke to a minimum within Tasmanian cities and towns.

It is important to note that the areal limitation has been increased from 2,000m^2 in existing regulation 11 to 4,000m^2 in the proposed regulation 9. This has been done to reduce smoke from backyard burning in residential areas, on the assumption that most property owners with land in the 2000 – 4000m^2 range will have other disposal options for green waste such as mulching or mowing.

If necessary they can obtain formal permission to burn off under proposed sub-regulation 9(1)(a) which allows for the issuing of an environment protection notice (EPN) by Council officers, or use the 'otherwise lawful' provision in 9(1)(b) which provides for any other approval mechanisms, including a permit under the *Fire Service Act 1979*.

The EPN option has been included so that Council officers can apply environmental conditions to any proposed backyard burning if they are approached by a landholder or resident before the burning takes place. This is the preferred method of preventative regulation because Fire Service permits focus on the fire hazard aspect of green waste and may be issued without conditions relating to environmental amenity.

Another significant change to current regulation 11 is the removal of the exclusion to backyard burning 'for the sole or primary purpose of reducing a potential fire hazard' (see sub-regulation 11(1(b)(iii). Council officers have advised that this exclusion has been treated as a loophole by some landowners to

avoid using other green waste disposal options. In any case the exclusion is not necessary because proposed sub-regulation 9(1)(b) allows for a fire permit to be obtained.

Finally, proposed sub-regulation 9(2) has been added as a reminder that backyard burning on blocks with an area of less than 4000m^2, notwithstanding any approvals other than a Fire Permit, must not be 'otherwise unlawful'. In other words, even the issuing of an EPN does not entitle the owner/burner to burn waste in such a manner that it creates an 'environmental nuisance' under section 53 of EMPCA.

Note that Council officers can also issue Abatement Notices under the Local Government Act, which direct landowners to reduce fire hazards; for example, by cutting long grass on vacant blocks.

In summary, the green waste disposal options for properties less than 4,000m2 are:

1. Cut, mulch or compost onsite
2. Use council 'green bins'
3. Take waste to a waste management facility using a trailer, or pay a contractor to do so.
4. Burn the waste on the property in such a manner that it does not cause an environmental nuisance under s53 of EMPCA.
5. Burn in accordance with a council bylaw, if such exists.
6. Obtain an EPN with appropriate conditions from the local council (mainly for situations where regular burning is planned).
7. Obtain a Fire Permit from Fire Service Tasmania (only where a fire hazard exists and other disposal options are impractical).

*Note that only Option 7 (Fire Permit) exempts the landowner from the requirements of S53A of EMPCA.

Regulation 10 – Burning of domestic waste and green waste on land with an area of 4,000 square metres or more

The proposed regulation 10 requires that a person burning waste on larger blocks of land (≥4,000m^2) should employ all means necessary to prevent or minimise air pollution, taking into account weather conditions, the likely burn duration, proximity of neighbours, and the waste's moisture content.

The regulation recognises that large blocks of land can produce significant quantities of green waste when cleaned up or cleared, and that burning this waste may be the only practical disposal option. This is particularly the case on the urban fringes where property sizes are often 5 acres (~20,000m^2) or more. Nevertheless, the conditions placed on burning also recognise that smoke must be minimized in order to protect the health of neighbours and the wider community, and that anyone undertaking such burns must do so responsibly.

Sub-regulation 10(1) also clarifies that an exception to these requirements would apply if the burning is 'otherwise lawful'. In some cases, this would mean a permit has been granted under the *Fire Service Act 1979*, and there is such a high degree of urgency for burning of any flammable material that environmental requirements could be waived.

In other cases, 10(1) would provide an opportunity for Council officers to issue an EPN with environmental conditions if they are advised beforehand that burning is to take place. This management tool would be appropriate in situations where property owners intend to undertake regular (possibly annual) burning of green waste and the surrounding properties have particular sensitivities.

Examples would include a golf course adjacent to a residential subdivision, or a semi-rural property adjacent to a school, hospital or aged care facility. The use of an EPN may also be appropriate when land is cleared for subdivisions and the developer wants to burn the resultant green waste.

Although not explicitly mentioned in regulation 10, the onus remains with all property owners and waste burners to make sure their burning does not constitute an 'environmental nuisance' under section 53 of EMPCA.

In summary, the green waste disposal options for properties greater than 4,000m2 are the same as for smaller properties, noting that all burning options (excluding the Fire Permit) must use all practical means necessary to prevent or minimise air pollution, including consideration of wind and other weather conditions, length of burn, proximity of habitable dwellings and dryness of waste.

Part 5 - Miscellaneous & Schedule 1

Regulation 11 – Prescribed offences

&

Schedule 1 – Environmental Infringement Notice Penalties

The proposed regulation 11 and Schedule 1 define and list the environmental infringement notice (EIN) penalties that would apply for offences under Regulations 5, 6, 8, 9 and 10. Each penalty is set at 5 penalty units, which is 10% of the maximum court fine of 50 penalty units that could be imposed under each regulation.

The penalty unit value is adjusted every year based on consumer price index (CPI) movements in the previous year. For the 2016/17 financial year, the penalty unit value was set at $157. This means that a relatively minor offence under any of the new regulations resulting in the issue of an EIN – typically by a Council officer - would have incurred a penalty of $785. More serious offences could result in a court-imposed fine of up to $7,850.

Note that the current Regulations do not contain a Schedule of EIN penalties for smoke-related offences, as these are included in the Environmental Infringement Notice Regulations 2016. It is proposed that these penalties be moved to Schedule 1 of the new Smoke Regulations so that they can be referenced more easily.

APPENDIX 3 – DETAILED EXPLANATION OF COSTS AND BENEFITS

Costs and benefits for industry

Part 2 - Heating Appliances to Comply with Australian Standards

Costs

Under Part 2, persons that manufacture, import or sell residential wood heaters in Tasmania will have to ensure that heaters meet the Australian Standards for efficiency and emissions that were published on 8 August 2014. The seller requirements will apply to private individuals, second hand dealers and retailers of new heaters.

The current regulations require compliance with the 1999 emissions standard AS/NZS 4013, so both the principle and practice of meeting heater construction requirements are already well-established. Since the wood heater industry was heavily involved in creating the new Standards, most affected businesses will already be aware of the requirements and will have taken steps to start supplying compliant heaters.
In addition, costs related to wood heater redesign and changes to production processes are likely to have already been incurred by manufacturers as they have made the transition to meeting the new Standards.

Similarly, the requirement in proposed sub-regulation 5(1) for laboratory certification of newly-designed and manufactured heaters is unlikely to directly affect Tasmanian businesses in 2018 and beyond.

In some instances, a business may be required to produce a laboratory certificate if asked to do so by the Director, EPA (sub-regulation 5(3)). The most likely situation for such a request would be if the Director receives a report that a heater does not have Australian Standard markings or is not operating as claimed.

While this may seem to be an additional business impost, in reality a certificate should be readily available if the business is legitimately manufacturing, importing or selling compliant heaters with appropriate markings. However, in the unlikely event that a certificate cannot be produced, the business would have to bear the cost of producing one. In 2013, the cost of a testing each wood heater model for certification was estimated to be ~$10,000 (NEPC Service Corporation, 2013). However, Pecan Engineering et al. (2013) noted in their submission to the Service Corporation's 2013 CRIS that they had been quoted $12,980 to test a heater in 2010. It is therefore considered that a ball-park range for testing in 2017 would be $10,000-$15,000.

When the new Regulations take effect, businesses may incur minor compliance costs for staff participation in any audits or inspections of heater by EPA Tasmania. The cost of any inspection and reporting by EPA Tasmania would be $114.75/hr (current rates), which would most likely be borne by Government. An affected business may also consider that an inspection of say, one hour, may result in a similar cost to their enterprise. There could also be costs associated with disposal of any non-compliant heaters before the end of the moratorium.

Regulation 5 may reduce sales of second-hand heaters both privately and by second hand dealers, because these sales would mostly be of older heaters that are unlikely to meet the new Standards. On the one hand the reduced availability of second-hand heaters may increase sales of new wood heaters; on the other hand, it may increase sales of other forms of space heating. The effect is likely to be marginal either way.

It is not possible to quantify the impact on new heater sales, as buyers are also driven by quality, price, lifestyle and convenience considerations, to name a few.

Benefits

The benefits to Tasmanian industry of the proposed Part 2 will be significant. In particular, Regulation 5 will formalise and provide for enforcement of current standards and practices, which will enhance the image of the industry by boosting confidence amongst purchasers that they are buying a modern and efficient heater.

Businesses will also be able to compete on a 'level playing field' because the new Standards are being implemented across the nation, and laboratory certification and heater marking will protect retail businesses from consumer claims that they are being sold sub-standard products. In addition, any business that buys a compliant heater for its own use (e.g. a hotel or workshop) will know that it is using accepted modern technology and therefore should not generate any smoke complaints if the heater is used correctly.

Sub-regulation 6(a) clarifies that the restrictions on heater modification do not include temporary modifications during heater repairs. Regulation 6 will therefore benefit businesses who undertake legitimate heater maintenance and repairs, as opposed to 'backyard operators' who may be seeking to circumvent the Regulations.

Part 3 - Emission of Smoke from Heating Appliances and Outdoor Heating or Cooking Appliances

Costs

Although Part 3 is mainly aimed at reducing smoke from residential properties, it will also affect businesses that use wood heaters, fire pots and the like, or cook food outdoors. For example, a hotel or restaurant with an outdoor barbeque or pizza oven would need to comply with the smoke visibility and smoke duration requirements of proposed regulation 7.

These requirements are essentially the same as those in the current Regulations, which provide clarity on what may be seen as 'environmental nuisance' under section 53 of EMPCA. Since EMPCA and its environmental management requirements have been in place for over 22 years, it is concluded that there will be no additional costs to business as a result of the proposed regulation 7.

Benefits

The main benefit to business will be the implicit recognition that commercial heating and cooking using firewood are valid activities, provided that they are undertaken in an environmentally responsible manner.

Part 4 - Control of Burning

Costs

Proposed regulation 8 ('Prohibition on burning of prohibited waste') is not expected to impose any additional costs on industry and commerce, because businesses with a requirement to dispose of this type of waste should already have some form of legitimate process or permit to do so. In most situations this will involve recycling and/or landfill disposal, rather than burning.

Businesses such as gardening contractors and developers of new subdivisions will need to be mindful of the more specific wording in proposed regulations 9 and 10 that emphasises the need for permits and consideration of weather conditions before burning off.

However, they should already be obtaining relevant permits and restricting their burning to favourable times as part of their 'best practice environmental management'; a concept and requirement that was included in EMPCA in 1994. In this respect proposed regulations 9 and 10 do not impose any additional burden on industry and commerce.

Benefits

The main benefit of proposed regulations 9 and 10 to gardening, property maintenance and development businesses will be the implicit recognition that under certain circumstances backyard burning is a valid activity, provided that it is undertaken in an environmentally responsible manner.

Costs and benefits for State Government

Unless otherwise specified, this section describes the potential costs and benefits for EPA Tasmania, a Division of the Department of Primary Industries, Parks, Water and Environment (DPIPWE). In general terms, one of the most significant benefits to State Government of the proposed regulations is that they provide a means of fulfilling the Government's environmental management responsibilities under EMPCA.

Part 2 - Heating Appliances to Comply with Australian Standards

Costs

Initially there will be the cost of advising the public, retailers and installers on heater certification and labelling requirements.

Ensuring compliance with wood heater standards under Part 2 of the Regulations will also fall to EPA Tasmania. The cost of this work has not been determined; however, it would likely be tailored to fit existing resources. It would be mainly reactive, based on any notifications or complaints about non-compliance.

The Department of Justice (Consumer Affairs and Fair Trading) may also occur costs if they receive complaints or inquiries about new heater advertising, sales or faulty operation.

Benefits

See 'Emission of Smoke' benefits below.

Part 3 - Emission of Smoke from Heating Appliances and Outdoor Heating or Cooking Appliances

Costs

Parts 3 and 4 of the proposed Regulations apply mainly to residential smoke sources, which are not directly relevant to State government activities. However, EPA Tasmania will continue to provide technical advice and information to local government on smoke monitoring, heater compliance and use of the Regulations, the cost of which will be subsumed within existing budgets.

Benefits

Ambient air quality may improve if the community and business sector are prepared to follow the common sense environmental principles in Part 3 (and Part 4), and State and local government are prepared to allocate sufficient resources for assessment and compliance.

Under these circumstances there may be a long term saving in public hospital and other health care costs from reduced incidence of respiratory illnesses, which will in turn benefit taxpayers who, either directly or indirectly, pay for all health services. That is, proper usage and design of new wood heaters and gradual replacement of older heaters means cleaner burning and reduced smoke emissions and pollution, which will benefit all levels of government, as well as the community.

Part 4 - Control of Burning

Costs & Benefits

See section on 'Costs and Benefits for State Government' above.

Costs and benefits for Local Government

Background - Results of 2013 Council survey on smoke complaints

EPA Tasmania surveyed Councils in August-September 2013 to gather data on complaints to Councils about heaters and backyard burning, the resource burden that complaints impose on Councils and the use of the 2007 Regulations by Councils. Although the survey was conducted over 3 years ago, its findings are still considered to be relevant to the current situation.

The results of the survey were as follows:

- Between 2007-08 and 2012-13 the number of complaints about heaters increased, but the number of complaints about backyard burning decreased. Overall, the total number of complaints remained almost constant.
- Despite the steady complaints figure, total cost to Councils of complaint investigation approximately doubled, from $39,379 to $80,592 (from $44,104 to $80,592 adjusted for the Consumer Price Index). There was a slight decrease in the average cost of investigating a complaint about visible smoke emissions from heaters in residential premises, but the cost of investigating other types of complaint rose quite substantially. The immediate reason for the latter appears to be increased EHO hours required to investigate complaints.
- Written warnings were issued much more frequently in relation to all matters in 2012-13 than in 2007-08. In relation to heater visible smoke in residential premises the survey results indicate that an average of more than one warning was issued per complaint.
- The average length of time taken to resolve complaints about heater visible smoke in residential premises remained steady at 13 days, but increased markedly for non-residential premises. Average time to resolve complaints about backyard burning on small blocks dropped very markedly, from 18 to 4 days. Time to resolve did not change significantly for other matters.
- There was no significant change in relation to enforcement action. Councils still rarely undertake enforcement action in terms of issuing infringement notices, court prosecution or issuing environment protection notices, preferring to rely on other forms of resolution.
- Enquiries to Councils increased in relation to all heater and backyard burning matters. The total number of enquiries (excluding those registered as complaints) almost doubled.

General statement of costs and benefits

The proposed Regulations benefit local government by establishing a 'line in the sand' that can be used to advise ratepayers of their legal responsibilities and, if necessary, provide the means to issue environmental infringement notices or take court action against recalcitrant individuals. In the first instance, most Councils take an educative approach to complaints and will only ramp-up their response if the situation is not satisfactorily resolved.

Acting on a smoke complaint related to Parts 3 and 4 of the Regulations will require EHOs to take one or more of the actions listed below, each of which has a 'time cost' that has its equivalent in salary expenditure. Obtaining legal advice will also occur a 'dollar cost' that can be quite large and may be a disincentive to taking Court action. The possible actions required are:

- initial receipt and assessment of complaints;
- site visits;
- assessment of smoke conditions;

- obtaining technical advice and monitoring information from EPA Tasmania;
- negotiation with the alleged offender regarding smoke abatement measures, including written advice and notification;
- issue of verbal and written warnings;
- issue of infringement notices;
- obtaining legal advice on prosecutions;
- preparing evidence for prosecutions; and
- staff attendances in court.

While infringement notices have rarely been issued under the current Regulations and successful prosecutions are reportedly even less common, Council officers have advised that the threat of fines and prosecution action has been effective in achieving voluntary compliance with the Regulations. Removing offence or penalty provisions would remove this incentive for voluntary compliance and take away a major benefit of the Regulations.

Without regulations, local government would have to rely on the 'environmental nuisance' provisions in section 53 of EMPCA. They would still be required to carry out most of the activities listed in the dot points above and incur the related costs, which could be considerably higher as they would be operating without the more detailed framework that is provided by the draft Regulations.

Specific rules governing heating, cooking and backyard burning will allow Council officers to deal efficiently with many queries and complaints. Without these, they may have to spend a lot more time investigating a complaint to establish whether an offence had occurred under the Act; possibly with a more uncertain outcome.

Part 2 - Heating Appliances to Comply with Australian Standards

Costs

Assessing and enforcing compliance with the current Australian Standards will largely be the responsibility of EPA Tasmania. However, if a Council officer believes that a heater is non-compliant, they may need to spend time assessing the matter and reporting it to EPA Tasmania for follow-up with the retailer.

In addition, they may be required to take their own compliance action to deal with reports of heaters modified in contravention of proposed Regulation 6. The approach taken would be at each Council's discretion, but could involve checking compliance when investigating smoke nuisance complaints. Note that any related offence could be the responsibility of the heater owner, modifier (possibly a technician), or both.

The owner of a heater of a type not compliant with the current Australian Standards may be required to provide information as to when the heater was installed, so that the investigating officer may determine whether any regulation has been breached.

Benefits

A potential benefit (and possibly also a cost) of Part 2 is that it could be applied by Councils when approving new homes or housing developments.

As noted previously, including updated Standards in the new Regulations is also a useful education tool for Council officers when explaining to the public what 'best practice' is in terms of heater design and usage.

Part 3 - Emission of Smoke from Heating Appliances and Outdoor Heating or Cooking Appliances

Costs

See section 'Costs and Benefits for Local Government' above.

Benefits

Where action has been taken against excessive wood smoke in the past, it has been common practice to issue a warning and education material to encourage the operator of a heater or fireplace to reduce smoke emissions. This has usually been aimed at improved operating practices and encouraging the use of drier firewood. Proposed regulation 7 provides a useful legal foundation for this approach.

Part 4 - Control of Burning

Costs

See section 'Costs and Benefits for Local Government' above.

Benefits

EHOs have reported that the current Regulation 7, which is similar to its proposed replacement, has generally worked well and provides reasonable parameters for determining nuisance.

The proposed extension of the regulation's scope from 'residential premises' to all premises using heating and cooking appliances offers a benefit in that there will be a 'level playing field' for all users of such appliances, making assessment and management more equitable and therefore somewhat easier to administer.

Proposed regulation 9 also offers the benefit of clarifying that an EPN may be appropriate smoke management tool for EHOs to use under appropriate circumstances.

Costs and benefits for the community

General statement of costs and benefits

The main benefit to the community from producing new and updated Regulations is the continued protection and enhancement of environmental amenity and human health. For example, Johnston et al. (2013) concluded that Government intervention in the form of wood heater buybacks, community education and regulatory compliance activities in the Launceston area had reduced smoke-related mortality in the years following intervention (2001-2007). Todd (2013) stated that this study suggests 30 fewer fatalities per year compared to the preceding period of 1994-2000.

Another benefit is that the Regulations provide a clear framework to the community on what is and is not acceptable in terms of smoke generation in urban areas, which has both a regulatory and a public education value.

The provisions represent a social cost to the community by restricting heating, cooking and burning activities. However, there is an expectation in the community that smoke is kept to a minimum in and around cities and towns so that residents have a good quality of life. More importantly, the community also expects modern, practical legislation that can protect the health of vulnerable people, such as young children, the elderly and those with breathing difficulties from the near-Dickensian smoke concentrations that can sometimes occur.

In monetary terms, the NEPC Service Corporation (in DTAE 2006) estimated that the cost to the community of deaths from particulate pollution has may be $7M for each premature death, although costs would be significantly lower for premature deaths of those already seriously ill. The RIS for the current Tasmanian regulations Todd (in DTAE 2006) estimated a cost to the Tasmanian community for hospital admissions and reduced activity days associated with particulate pollution of $5-10M per year.

Part 2 - Heating Appliances to Comply with Australian Standards

Costs

The proposed ban on the sale of relatively cheap, non-compliant second-hand heaters (see regulation 5) could affect low-income households that cannot afford a new compliant heater. It is possible that the

lower cost of a second-hand heater would be offset by a shorter operating life or lower overall performance than a better heater; however, this has not been tested and any relative cost estimates would be speculative at best.

Low income households will also have the option of using other heating methods such as electricity and gas, so any cost impacts arising from the ban are not a critical barrier to obtaining household heating.

Consumers may also face price increases for new wood heaters as manufacturers seek to recoup some of their higher costs through higher prices. The extent to which these costs are passed on will depend upon a number of factors, including the price sensitivity of consumers to the relative cost of alternative forms of heating, the level of rationalisation of businesses and wood heater models, and sales distribution across these businesses and wood heater models (Department of the Environment, 2015).

The Australian Department of Environment (2013) estimated that the additional cost to consumers of a heater meeting the full scope of the new Standards (60% efficiency and 1.5g/kg emissions) would be ~$230.

The cost of using a compliant wood heater is likely to be similar to that of using a non-compliant heater if dry wood is used. While the reduced emissions technology requires greater air flow and faster burning, this is offset by greater heater efficiency and less wood usage.

There may also be costs for a heater purchaser who is unaware that a heater is non-compliant. If the non-compliance is detected by a Council after purchase (e.g. if a building inspector reports a non-compliant heater to a Council in the course of conducting a building inspection), then the Council may require the heater to be removed or at least not operated. The purchaser may, however, be able to obtain redress from the heater vendor or installer. Subject to sufficient resourcing of compliance activities, EPA Tasmania inspections at retailers' premises would reduce the likelihood of this scenario.

In addition, proposed regulation 5 may encourage some home owners to keep their existing heaters rather than upgrade, as they will be unable to legally sell their old heater. However, it is considered likely that this effect will be outweighed by the advantage of preventing their reuse and reinstallation.

Any testing and certification of compliance with AS/NZS 4013:2014 and AS/NZS 4012:2014 will be performed on a model-by-model basis, rather than for an individual heater. As such, a heater purchaser does not bear any direct costs for laboratory tests. Any indirect costs (i.e. contribution to heater sale price), while dependent on the size of production run, are likely to be minimal.

If there were no regulations, it is likely that most heaters imported into Tasmania would still comply with the new Australian Standards as there is a national market for heaters and all other jurisdictions have, or will soon have compliance requirements. This means that there would be no consequential impact on price. In addition, the option of 'no regulations' for implementation of wood heater standards is and will remain entirely hypothetical given national agreement between governments and relevant businesses that the new Standards will be implemented in full by August 2019.

Benefits

As mentioned in section 5.4.1, the sale and installation of compliant heaters has major benefits for human health and environmental amenity by reducing heater pollutant emissions and helping to address the air quality issues discussed in Part 3 of this RIS. Reduction in particle levels and improvement in ambient air quality will reduce the incidence of respiratory illnesses.

Reduction in smoke emissions from heaters also decreases the likelihood of nuisance to neighbours. The design of heaters is not the only factor relating to emissions. Other provisions of the proposed regulations, such as Part 3, will also contribute to reducing emissions.

The provisions for heater certificates and labelling will assist the public to make an informed choice on whether they are buying a modern, efficient and low-emission heater that complies with the Regulations.

Part 3 - Emission of Smoke from Heating Appliances and Outdoor Heating or Cooking Appliances

Costs

The main financial cost of limiting smoke emissions will be that users of heating and cooking appliances will need to collect or buy good quality, dry firewood that is cut to a suitable size for efficient burning.

Another indirect cost will be the time, care and attention required to make sure that any smoke produced does not exceed the limits specified in proposed regulation 7.

Part 4 - Control of Burning

Costs

The prohibition on burning of prescribed 'contaminated' waste (proposed regulation 8) is not expected to increase the community's waste disposal costs, as EMPCA already imposes an effective ban on burning of such waste in urban areas.

Restrictions on backyard burning proposed in regulations 9 and 10 may result in a need to find alternate management methods for green waste and relatively minor volumes of other combustible material that might be burnt. The financial cost will depend on the volume of materials currently managed through backyard burning, access to management alternatives and the cost associated with using those management options (e.g. transport costs, gate fees at Council waste management facilities, or hire/purchase of mulchers or compost bins). Some Councils also provide 'green bins' for green waste disposal.

The proposed restrictions may also impose a 'convenience' cost on those who previously burnt green waste and other combustible material.

These potential costs will be largely offset by the options for gaining approval to burn under certain conditions, mainly through the issuing of an EPN or a Fire Permit. In other words, Part 4 does not ban backyard burning, but places restrictions how it may be undertaken. The cost of an EPN to applicants would be determined by each individual Council.

Historically, EPNs have rarely been issued by local government so there is no overarching cost recovery policy for such an instrument. Note, however, that EPA Tasmania currently charges approximately $300 for issuing EPNs to industry, which is based on partial cost-recovery. Because an EPN typically relates to long term management of a site or activity, a minimum of 12 months would most likely apply for any issued by local government. Currently, EPA Tasmania understands that local government would not charge directly for issuing an EPN.

Fire Permits are issued free of charge by Tasmania Fire Service.

Benefits

Less backyard burning will have benefits for human health and environmental amenity, by helping to address the air quality issues discussed in Part 3 of this RIS. Reduction in particle levels and improvement in ambient air quality will reduce the incidence of respiratory illnesses. Less backyard burning also decreases the likelihood of nuisance to neighbours.

APPENDIX 4 – DRAFT ENVIRONMENTAL MANAGEMENT AND POLLUTION CONTROL (SMOKE) REGULATIONS 2017

Drafted in the Office of
Parliamentary Counsel

TASMANIA

ENVIRONMENTAL MANAGEMENT AND POLLUTION CONTROL (SMOKE) REGULATIONS 2017

STATUTORY RULES 2017, No.

CONTENTS

Version 8
5 April 2017

ENVIRONMENTAL MANAGEMENT AND POLLUTION CONTROL (SMOKE) REGULATIONS 2017

I, the Governor in and over the State of Tasmania and its Dependencies in the Commonwealth of Australia, acting with the advice of the Executive Council, make the following regulations under the *Environmental Management and Pollution Control Act 1994*.

Dated 20 .

Governor

By Her Excellency's Command,

Minister for Environment, Parks and Heritage

PART 1 – PRELIMINARY

1. Short title

These regulations may be cited as the *Environmental Management and Pollution Control (Smoke) Regulations 2017*.

2. Commencement

These regulations take effect on 15 August 2017

3. Interpretation

In these regulations, unless the contrary intention appears –

Act means the *Environmental Management and Pollution Control Act 1994*;

AS/NZS 4012:2014 means the Australian and New Zealand Standard AS/NZS 4012 entitled "Domestic solid fuel burning appliances – Method for determination of power output and efficiency" published by Standards Australia and Standards New Zealand in 2014;

AS/NZS 4013:2014 means the Australian and New Zealand Standard AS/NZS 4013 entitled "Domestic solid fuel burning appliances – Method for determination of flue gas emission" published by Standards Australia and Standards New Zealand in 2014;

outdoor heating or cooking appliance means a fire pit, fire pot, barbeque, outdoor pizza oven, outdoor heater or outdoor fireplace;

domestic waste means any waste (other than prohibited waste or green waste) of a kind and quantity ordinarily generated on residential premises;

green waste means any leaves, grass cuttings or other plant-based cuttings;

heating appliance means any solid fuel-burning heating appliance to which AS/NZS 4013:2014 or AS/NZS 4012:2014 applies, including the firebox of any such heater, regardless of whether that appliance or firebox –

(a) was manufactured before or after the commencement of these regulations; or

(b) is new or used;

laboratory certificate has the meaning given by regulation 5(2);

model, in relation to a heating appliance, means a heating appliance of a particular design made by a particular manufacturer;

prohibited waste means any one or more of the following:

(a) asbestos;

(b) tyres;

(c) coated wire;

(d) paint containers and residues;

(e) chemical containers and residues;

(f) timber treated with copper chrome arsenate (CCA) or pentachlorophenol (PCP);

(g) rubber;

(h) painted wood;

(i) plastic;

(j) oil;

residential premises means –

(a) any building or part of a building used as, or for the purposes of, a residence; and

(b) the block of land on which the building, or part of the building, is situated.

PART 2 – HEATING APPLIANCES TO COMPLY WITH AUSTRALIAN STANDARDS

4. Application of Part

This Part applies to heating appliances that are designed, manufactured or adapted for domestic use on residential premises.

5. Heating appliances to comply with Australian Standards

(1) A person must not manufacture, import into Tasmania for sale, or sell, a heating appliance to any other person unless –

(a) the heating appliance is marked in accordance with AS/NZS 4013:2014 and AS/NZS 4012:2014; and

(b) a laboratory certificate is in force in relation to heating appliances of the same model as that heating appliance.

Penalty: Fine not exceeding 50 penalty units.

(2) A laboratory certificate is a certificate issued by a laboratory registered with the National Association of Testing Authorities for testing for the purposes of AS/NZS 4013:2014 and AS/NZS 4012:2014.

(3) If requested to do so by the Director, a person must produce to the Director, for inspection by

the Director, a laboratory certificate that is in force in relation to heating appliances of the same model as any heating appliances the person is manufacturing, importing into Tasmania for sale or selling.

Penalty: Fine not exceeding 50 penalty units.

6. Interference with heating appliances

(1) A person must not alter the structure, exhaust system or inlet air system of any heating appliance of a model to which a laboratory certificate relates.

Penalty: Fine not exceeding 50 penalty units.

(2) Subregulation (1) extends to any person who causes or permits the doing of a thing that is prohibited under that subregulation.

(3) Subregulation (1) does not apply in relation to –

(a) a person temporarily modifying a heating appliance during the course of making repairs to the heating appliance; or

(b) a heating appliance that has been installed in, and is sold together with, a building.

PART 3 – EMISSION OF SMOKE FROM HEATING APPLIANCES, OUTDOOR HEATING OR COOKING APPLIANCES AND FIREPLACES

7. Emission of smoke from heating appliances, outdoor heating or cooking appliances and fireplaces

(1) A person is not to cause, or allow, a heating appliance, an outdoor heating or cooking appliance or a fireplace to emit smoke that –

(a) is visible for a continuous period of 10 minutes or more; and

(b) during that continuous 10-minute period, is visible for a continuous period of 30 seconds or more –

(i) in the case of a heating appliance or fireplace in a building, or part of a building, at a distance of 10 metres or more from the point on the building, or part of the building, where the smoke is emitted; or

(ii) in the case of a heating appliance or an outdoor heating or cooking appliance that is not in a building, or part of a building, at a distance of 10 metres or more from the point where the smoke is emitted.

Penalty: Fine not exceeding 10 penalty units.

(2) If, in a proceeding for an offence against subregulation (1), an authorized officer or a council officer gives evidence, based on the officer's own senses, that smoke was emitted from a building or land occupied by the defendant, that evidence is prima facie evidence of the matters so stated.

PART 4 – CONTROL OF BURNING

8. Prohibition on burning of prohibited waste

Unless it is otherwise lawful to do so, a person must not burn any prohibited waste.

Penalty: Fine not exceeding 50 penalty units.

9. Burning of domestic waste and green waste on land with an area of less than 4 000 square metres

(1) A person must not burn domestic waste or green waste in the open, or in an incinerator, on land that has an area of less than 4 000 square metres, unless the burning of the domestic waste or green waste is –

(a) in accordance with a valid environment protection notice issued, or caused to be issued, under section 44 of the Act; or

(b) otherwise lawful.

Penalty: Fine not exceeding 50 penalty units.

(2) Any burning of domestic waste or green waste in the open, or in an incinerator, on land that has an area of less than 4 000 square metres must not be otherwise unlawful.

10. Burning of domestic waste and green waste on land with an area of 4 000 square metres or more

(1) Unless it is otherwise lawful to do so, a person must not burn domestic waste or green waste in the open, or in an incinerator, on land with an area of 4 000 square metres or more, unless the person uses all practicable means as are necessary to prevent or minimise air pollution.

Penalty: Fine not exceeding 50 penalty units

(2) Without limiting subregulation (1), the means of preventing or minimising air pollution is to include the following:

(a) having regard to the potential for smoke to have an adverse effect on human health and the environment taking into account –

(i) wind direction and wind speed; and

(ii) weather conditions; and

(iii) the length of time the domestic waste or green waste being burnt is likely to burn; and

(iv) the proximity of any habitable building;

(b) taking reasonable measures to ensure that –

(i) only dry domestic waste or green waste is burnt; and

(ii) only domestic waste or green waste that is suitable for disposal by burning is burnt.

PART 5 – MISCELLANEOUS

11. Prescribed offences

For the purposes of section 72 of the Act –

(a) an offence specified in column 1 of the table in Schedule 1 is a prescribed offence; and

(b) a penalty specified in column 2 of the table in Schedule 1 is the penalty prescribed as applicable for the offence to which it relates.

SCHEDULE 1 – ENVIRONMENTAL INFRINGEMENT NOTICE PENALTIES

Regulation 11

	Column 1 Regulation	Column 2 Penalty (penalty units)
1.	Regulation 5(1)	5
2.	Regulation 5(3)	5
3.	Regulation 6(1)	5
4.	Regulation 8	5
5.	Regulation 9(1)	5
6.	Regulation 10(1)	5

Printed and numbered in accordance with the *Rules Publication Act 1953*.

Notified in the *Gazette* on 20 .

These regulations are administered in the Department of Primary Industries, Parks, Water and Environment.

EXPLANATORY NOTE

(This note is not part of the regulations)

These regulations –

(a) provide that certain wood heaters that are sold in, manufactured in or imported into Tasmania for sale must comply with AS/NZS 4013:2014 and AS/NZS 4012:2014; and

(b) regulate the emission of smoke from wood heaters, fireplaces and outdoor cooking or heating appliances; and

(c) prescribe certain prohibited wastes that cannot be burnt; and

(d) regulate the burning of domestic waste and green waste on certain land; and

(e) prescribe certain offences to be offences for which an environmental infringement notice may be issued and served.

ENVIRONMENT PROTECTION AUTHORITY