



SOLID FUEL BURNING DOMESTIC APPLIANCE REGULATION

INFORMATION UPDATE

SUMMARY OF PUBLIC COMMENTS

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Solid Fuel Burning Domestic Appliance Regulation – Information Update

Summary of Public Comments

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A. INTRODUCTION AND BACKGROUND

The Ministry of Environment (the ministry) is revising the Solid Fuel Burning Domestic Appliance Regulation (SFB DAR). Adopted in 1994, the SFB DAR is targeted at reducing air pollution from domestic wood heating. The objective of the current review and proposed revisions is to minimize impacts on human health and ecosystems by further reducing air pollution from domestic wood heating in British Columbia.

This report provides a summary of stakeholder comments received through the consultation process as the work to update the regulation progresses.

Background to the consultation process

An information update summarizing the ministry's intentions and previous consultations on revising the SFB DAR was posted on the ministry's website (www.env.gov.bc.ca/epd/codes/solid-fuel/index.htm) and public comment was taken from September 30 through November 16 of 2015. The update provides background information regarding the previous consultation in 2010 and details of the proposed revisions. The website includes links to the ministry's previous intentions paper and the summary of public comments received at that time.

The complete set of responses received through the consultation process has been compiled and passed to the ministry for detailed review and consideration. All comments and references submitted through this process, through independent submissions and through direct consultations with stakeholders, will be reviewed and carefully considered by the ministry in revising the regulation.

Purpose and format of the *Summary of Public Comments* document

This document has been prepared for the Ministry of Environment by C. Rankin & Associates, contracted by the ministry to independently receive, compile and summarize comment on the ministry's intentions for updating this regulation.

This summary includes an overview of common themes raised by respondents followed by a synopsis of comments by topic as presented in the information update. The synopsis for each topic includes an indication of the extent of support expressed by respondents for ministry intentions (all, most, many, some, none) with associated comments, caveats or suggestions. A representative sample of comments from respondents is provided for each topic in accompanying text boxes (with respondent comments in quotes and without attribution).

B. SUMMARY OF CONSULTATION COMMENTS AND RESPONSES

Comments in response to the information update were received from 33 respondents and have been reviewed for this summary of public comments. Over half of responses were from individuals or representatives of “clean air” community interest groups. About one-third of respondents indicated that they worked for a regional health authority, Ministry of Health or local government. About half a dozen responses were received from representatives of manufacturing associations or sales and distribution of solid fuel burning appliances. Some responses included supplementary reference reports or photographs. All materials submitted have been compiled for review by the ministry.

Overview of responses – common themes

This overview of responses highlights key or common themes addressed by many or most respondents. A more complete and detailed summary of responses by topic is provided in the subsequent sections of this document.

1. Concern about the health impacts of wood burning

Many respondents recommended a “burning ban” in all urban areas, regardless of the type or age of the appliance involved. Several respondents cited experience with health impacts associated with fireplaces or outdoor wood boilers.

2. Support for a rapid phase out of non-compliant appliances

Respondents noted that OWBs may be in operation for a decade or more and that allowing sale of non-compliant appliances would delay anticipated reductions in air emissions. Some respondents suggested a buy-back or retro-fit program as an alternative to a phase out period.

3. Recognition of the heating challenges facing rural residents

Several respondents commented that use of an outdoor wood boiler (OWB) is the only cost effective heating option available to rural residents with limited services, and that health impacts of properly operated appliances in remote locations are minimal.

4. Clear and consistent definitions and regulatory guidance

Respondents commonly expressed support for the ministry’s intention to harmonize standards and definitions with the US EPA. Respondents also pointed to areas where Canadian CSA guidance may be inconsistent with US language, and also to the importance of clear communications with distributors, retailers and users to ensure guidance is understood and followed. Several respondents suggested including moisture content (i.e., >20%) in the definition of seasoned wood appropriate for burning.

5. Setback distances

Responses differed on this topic. Some respondents pointed out that many or most US states do not include setback requirements for appliances meeting new standards while others felt that setback distances were either not sufficient or not sufficiently enforced. Several pointed to problems with existing OWBs or fireplaces in populated areas.

1. WOOD AND PELLET BOILERS

1.a. Stopping sales of wood and pellet boilers that do not meet standards

The ministry is proposing that: “beginning in 2016, only wood and pellet boilers certified to meet either the new US EPA emissions standards for boilers (Title 40, Part 60, Subpart QQQQ) or the Canadian Standards Association (CSA) B415.1 emission standards will be legal to sell in B.C. There will be a six month period during which vendors will be allowed to sell existing stock that does not meet the new standards.”

Support for ministry intentions:	ALL	MOST	MANY	SOME	LITTLE OR NONE
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Many individual respondents commented that burning of wood as a primary heat source should not be allowed at all in residential areas due to air quality, health, GHG emissions and/or nuisance concerns. Other respondents commented that wood or pellet boilers can be operated with minimal air emissions and serve as a cost effective alternative to heating fuels or electricity, particularly in rural areas. Respondents commonly expressed support for setting harmonized standards while some noted discrepancies between US EPA and CSA guidance that should be clarified.

With respect to sale of existing stock, respondents pointed to the higher cost of boilers meeting the new standards (increasing demand for older stock) and the long period of time that boilers may be in operation (delaying desired results of new lower emissions standards). Some respondents suggested a “buy back or retrofit program” for the existing stock of non-compliant appliances.

Sample of respondent comments:

“[Our] Regional District supports the [ministry’s] intention to strengthen its Solid Fuel Burning Domestic Appliance Regulation by harmonizing its wood stove requirements with the US EPA’s newly more stringent requirements, and to phase out old wood/pellet boilers over time – [we] expect that these changes will reduce air pollutant emissions and contribute to improved air quality over time [and furthermore] will expect further review and increasing stringency in terms of emissions requirements on solid fuel domestic burning appliances over time”

“I suspect that European down-draft technology far better exceeds these standards – accordingly, ensure that the actual wording of the legislation enables units of better technology (less emissions) to be allowed also, and better yet, word the legislation so as to promote the best available technology beyond that of minimum standards”

“The wood burning industry's business interests should not come before clean air and public health protection - which depends upon residential wood burning bans”

“There is a place for [outdoor wood boilers (OWBs)] and most all manufacturer do tell the installer the recommended locations so as not to bother other people – make local government inspectors responsible for approving an application to install a new OWB – we in a rural area see many benefits to having an OWB in that the cost of heating is manageable as we can heat our green house and hot water, saving on electricity”

“I understand the need for the regulation in urban areas but am against it for people living outside natural gas service – the hi-efficient outside wood boilers are much more cost prohibitive for people already living outside urban centres and require more maintenance to operate – I would suggest anyone living outside of natural gas service should be allowed to purchase the current models available”

1.b. Ministry’s proposed setbacks to property lines

The ministry proposes to limit the installation of outdoor wood boilers (OWBs) to sites that are more than 30 metres from any property line. New OWBs will be limited to larger lots in rural areas. Pellet or chip-fired OWBs will be allowed to be installed with only a 10 metre setback. Vendors of OWBs will be required to inform purchasers of the new installation requirements.

Support for ministry intentions:	ALL	MOST	MANY	SOME	LITTLE OR NONE
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Comments from respondents on this topic were divided. Some respondents felt that the proposed distances would still allow OWBs in some residential areas where emissions can be a health concern (e.g., the Okanagan valley) while others commented that setbacks should not be required for newer low emission products.

Sample of respondent comments:

“The law issued by the EPA this year had no setback requirements in it at all and... only a small number of states in the USA use any setback requirement... to apply a setback rule on these appliances will only serve to hurt the many local businesses that sell these products and the end users who would like to use them without the anticipated benefits”

“These proposed guidelines... conform better with the vast unique topography of B.C. based on the location, property size, terrains and demographics rather than assuming every location/region is the same”

“The siting of OWB at 30 metres from property edge, with provision for shorter distances is not sufficient – siting should be outcome based and includes consideration of the stack height, dispersion characteristics of the immediate area, as well as PM concentrations at the property line”

1.c. Phase out of non-conforming OWBs

The ministry is proposing to phase out the use of OWBs that do not meet either the US EPA standard, the CSA standard or qualify for the US EPA White Tag Program. Prior to the phase-out, a ten-year grace period will be in place to recognize the investment of those who may have recently installed an OWB. Thus, the use of these non-conforming OWBs will be phased out by 2026. Non-conforming OWBs that are located more than 75 metres from any property line and more than 150 metres from any school or hospital will be exempt from the phase-out.

Support for ministry intentions:	ALL	MOST	MANY	SOME	LITTLE OR NONE
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Respondents commenting on the proposed phase out period commonly suggested a faster phase-out period.

Sample of respondent comments:

“These products were found to be a problem on release nearly 10 years ago, and no provincial action was taken – waiting another 10 years seems unacceptable”

“I would like you to include these non-conforming OWBs in the phase-out – they may not cause nuisance to next door neighbors but the amount of pollutants released in the local airshed won’t be reduced if they continue in operation indefinitely”

2. WOOD AND PELLET FURNACES

Ministry intentions: “beginning in 2017, only wood and pellet fired forced air furnaces certified to meet either the new US EPA emissions standards for furnaces (Title 40, Part 60, Subpart QQQQ) or the Canadian Standards Association (CSA) B415.1 emission standards will be legal to sell in B.C.”

A limited number of specific comments on this intention were received. One respondent from a “clean air” community organization submitted a reference paper that pointed to weaknesses in EPA wood burning stove testing methodology and effectiveness of EPA-certified stoves in reducing particulate matter (PM) pollution. Points in the paper included: “EPA-certified wood stoves emit at least 169 times more fine particles than a gas furnace and far more than an electric ductless mini-split heat pump... EPA-certified stove performance in the real world does not match laboratory performance... the performance of wood heating devices equipped with catalytic components degrades with use, and the catalytic components must be replaced regularly to maintain low emissions... after a few years of use, wood smoke emissions from catalytic devices will potentially be as high as those from an uncertified conventional wood heater... EPA-certified wood stoves have not been shown to reduce emissions of dioxins, furans, or other air toxics – [furthermore] some studies have shown that EPA stoves emit more dioxins and furans than conventional wood stoves.”

3. DEFINITION OF WOOD STOVES, PELLET STOVES AND OTHER SOLID FUEL APPLIANCES

The ministry proposes to broaden the SFB DAR definition of “appliance” to capture a broader range of devices. A few niche categories of solid fuel appliances – site-built masonry fireplaces, masonry stoves, wood cook stoves and portable camp stoves – will continue to be exempted from emission standards.

Support for ministry intentions:	ALL	MOST	MANY	SOME	LITTLE OR NONE
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Respondents commenting on this topic broadly supported the ministry’s intentions and encouraged the ministry to clarify and harmonize definitions with EPA regulations as much as possible “to avoid confusion” and “close loopholes”.

Sample of respondent comments:

“EPA has done a good job coming-up with a comprehensive definition of what is a fireplace in order to avoid creating a loophole... we suggest that you exempt fireplaces for sake of reciprocity with the USA and that you adopt EPA’s fireplace definition”

“What kind of regulations there will [there] be for masonry heaters?”

“Will there be an actual definition of what constitutes a wood and pellet boiler – sizing, heat output, single or multi-residences, industrial, etc.?”

“Make it crystal clear as to what constitutes an ‘appliance’; specifically is a wood and pellet boiler and/or furnace an ‘appliance’ or are these units of their own specific definition in the SFB DAR?”

“It is unclear from the intentions document if there is a clear definition of wood pellets or chip-fired, or who gets to label their product as wood pellets or chip-fired?”

“For those niche categories of appliances exempted from emission standards, where can a person turn if they happen to be living beside a residence that belches smoke from such an exempt appliance to the point whereby it substantially alters or impairs the usefulness of the environment (causes pollution)?”

4. DEFINITION OF SOLID FUEL

The ministry proposes to include a definition of acceptable fuel for wood heating appliances in the regulation. The definition would include untreated seasoned wood products, pelletized fuel and fire logs. The effect of this will be to prohibit burning of undesirable fuels, such as garbage, plastics and treated wood. The use of paper and cardboard to start fires will still be allowed.

Support for ministry intentions:	ALL	MOST	MANY	SOME	LITTLE OR NONE
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Many respondents commented that effective operation and associated emissions of wood heating appliances is dependent to a significant degree on the use of properly seasoned fuel and control of air flow. Some respondents reiterated their comment that burning of wood should not be allowed in any urban area. Other respondents supported the ministry's proposed definition. Some respondents questioned how "seasoned wood products" would be defined. Several suggested specifying moisture content (i.e., >20%) rather than length of time after cutting as an important measure of "proper seasoning".

Sample of respondent comments:

"Here is [a suggested wording for the regulation]... placing the responsibility on the OWB owners: 'all OWB owners are required to use designated fuels that are properly seasoned – burning of plastic, household rubbish, treated wood, unseasoned wood and any other non-conforming products is prohibited. The B.C. Ministry of Environment reserves the right to issue a 'cease and desist' for use of any OWB that is used outside the manufacturers guidelines and whereas the ministry deems as a nuisance OWB' "

"Clearly specify that the fuel requirements of the SFB DAR (no garbage, plastics, treated wood) also applies to those niche category appliances mentioned as exempt"

"Wood is deemed to be such a dangerous fuel in Britain that it was not legal for wood or paper to be used as a firelighter for the processed smokeless fuels"

"The government should investigate the possibility of reprinting: 'Residential Wood Heating', a publication of the federal department of Natural Resources, that... is a comprehensive look at wood heating, dealing with everything from construction of an effective wood shed to chimney cleaning, when to harvest and how to store wood fuel"

"My strong suggestion regarding regulating wood burning and appliances would be to regulate the requirement for each and every person who wishes to burn wood to have a properly constructed Wood Shed of appropriate size to ensure that the wood being burnt is correctly seasoned. It is burning wet wood which contributes to the air quality as much as the age of the appliance"

5. COMPLIANCE

5.a. Manufacturers, distributors and retailers of solid fuel appliances

Ministry intentions: “manufacturers, distributors and retailers of solid fuel appliances will not be required to conduct additional emissions testing specifically to sell in the B.C. market. Rather, they will be required to have records and appliance labelling to demonstrate that emissions testing has been undertaken and certification achieved. The labelling and record keeping requirements are similar to the current SFB DAR. In addition, vendors of OWBs will be responsible for maintaining records showing that they have informed purchasers of OWB installation and phase-out requirements.”

Support for ministry intentions:	ALL	MOST	MANY	SOME	LITTLE OR NONE
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Several respondents commented that the information update did not include reference to a compliance strategy, enforcement measures or penalties – suggesting that a means of enforcing the regulation needs to be in place for the regulation to be effective.

Sample of respondent comments:

“I have been educating and pushing my customers towards the purchase of efficient wood gasification boilers since I started [my solid wood and pellet boiler resale and distribution business] in 2010 – I’m sure I’ve lost hundreds of sales in that time to standard OWB but with education and time more and more people are moving in the forward direction”

“The paper makes no mention of regulating the sale of used appliances – if I buy a used, non-compliant appliance off a bulletin board will this be regulated? How, specifically, will the sale be regulated?”

“I do not support hiring ministry staff or contractors to proactively search out non-compliant appliances and to confirm setbacks”

“Vendors [should be required to] retain records of the installation destination, as sometime in the distant future the ministry or a local government may want to know the quantity of units out there”

“It is good to see that records and appliance labelling demonstrating that certification has been ‘achieved’ will be required, rather than just testing against certain standards”

5.b. Users of solid fuel appliances

Ministry intentions: “users of solid fuel burning appliances will be responsible for burning acceptable fuels. In addition, if they install or operate an OWB, users will be responsible for complying with installation and phase-out requirements for those appliances.”

Beyond general comments on the need for a compliance strategy and the means to enforce regulatory provisions, few respondents commented specifically on this topic.

Sample of respondent comments:

“One can only expect that the penalty for non-compliance [with air emission standards] is the seizure and removal of the OWB”

“The keeping of records informing of OWB installation and phase-out requirements is one thing, but this should also include operational requirements (dry non-treated wood only)”

6. ADDITIONAL COMMENTS

Many respondents provided additional comments for the ministry to consider and/or additional information in a covering letter with their response to the ministry's questions. These comments have been compiled and passed to ministry staff for consideration. A sample of these comments is provided below.

Sample of additional comments from respondents:

"I would welcome a conversation with someone in your office [regarding] other items that are not discussed in your proposal... such as used furnaces, coal burning, commercial application"

"[Our association] broadly supports the ministry's proposed revisions and in particular the province's continued commitment to maintaining wood and pellet heating as an affordable and sustainable option for the people of British Columbia – wood burning appliances are now extremely clean burning when used properly and responsibly – we encourage all owners of wood burning appliances to view the best burning practices at the US EPA's burn wise website"

"The new proposals would be a huge injustice to the rural residents of B.C. ... one of the major problems with society today is every new rule and regulation is commonly dealt with in a blanket approach, 'one size fits all' manner – failing to acknowledge that not every circumstance is the same as the next – I strongly believe the same idea was applied when drafting the SFBDR proposal... the majority of properties outside of the city centers are large spacious, primarily remote, and open also well ventilated – very few of same properties are located within areas serviced with Natural Gas, therefore limiting options for heating to either Propane, Hydro or Wood and two of these options have quickly become unaffordable for many"

"[Our agency's] major questions... relate to process, why did it take so long? How long will this process take to reach regulatory change"

"I would appreciate knowing what reductions in domestic wood burning fine PM emissions (total, not intensity) have been achieved in the past two decades, following phase-in of the SFBDR and other air quality management strategies. I'm particularly interested in any benefits to the most impacted communities, such as Prince George, Smithers, Cranbrook, and various other northern interior and Kootenay communities"

"While it is true there are carcinogens in wood smoke, these are far less harmful to humans than the many fossil fuels used to heat homes. Many of the electric heated homes in Canada are powered by coal-fired plants which discharge far more toxic emissions than wood fires. Houses with kerosene or coal oil heaters also dump far more toxic elements into our air shed than wood burners. Even propane and methane heaters are more dangerous than wood... If you want to make a difference in the health of Canadians, please forget the small number of wood heaters and apply yourselves to reducing greenhouse gasses by moving to renewables like hydro, solar and wind – these are far more important issues to deal with than the relatively minor effects of wood-burning heaters for houses"

"All in all, a very weak effort to address what has been problematic in some circumstances, and does little to limit proliferation of an unsafe practice [respondent advocated a complete ban of wood burning impacting residential and populated areas]"

"We recommend that governmental agencies only subsidize or incentivize change-outs to heating devices with real-world emissions values that are far lower than EPA-certified wood stoves and that have a much lower impact on climate change. Specifically, no funding should go towards change-outs to wood-burning devices or towards expanding natural gas service"

"Regardless of how wood is burnt municipality rules are inadequate and we need enforceable provincial regulations on eliminating nuisance and health threatening smoke emissions from chimneys"

Sample of additional comments from respondents (continued):

“It is highly recommended and advised that subsequent revisions to the B.C. Building Code need to align with changes to this Regulation to address consistency and assist with compliance – further to [this] point it is strongly encouraged that disclosure be made upon title transfer of homes and the required removal of non-compliant devices occur at this opportune time”

“Wood smoke contains a number of pollutants, such as PM2.5 and PAHs, that can pose serious human health risks, including respiratory and cardiovascular problems, and in some parts of B.C., domestic wood heating represents a significant source of these harmful pollutants – [our] ministry supports the proposed changes to the Solid Fuel Burning Domestic Appliance Regulation, which will help to reduce emissions associated with domestic wood burning, and encourages the Ministry of Environment to continue its efforts to minimize exposure to wood smoke in the province”

“The element of wood stove use for comfort heating seems [absent] from the Summary. How does this factor into the new Regulation? Are there exemptions for this type of sole heat source? It could be recommended that wood stove exchange and assistance programs target substandard or lower income homes as a form of air quality improvement and poverty alleviation”

“I would like to see more stringent regulations, if not a complete ban on the use of open fireplaces. They simply are too wasteful and too polluting. I would also like to see a province wide ban on burn barrels and open burning of yard waste”

“My suggestions are: [1] establish and enforce a maximum emissions standard for both new and old / existing installations of all solid fuel burning devices including traditional fireplaces, wood stoves, etc. – punishable by escalating fines [and 2] perhaps look at a possible ban on urban residential burning as a primary heating source (i.e., the occasional fire is OK, but not as a primary heating method) considering population density”

“It could have been beneficial to review the true draft contents of the Regulation rather than a summarized information update, which would lead to increased clarity and applicability of this feedback”

“Unfortunately, I do not see any policies in the most recent Air Action Plan that endeavour to manage air quality impacts on the community level, which is the only rationale basis to achieve the motherhood political objective of reducing health risks, using the most direct strategy”

“The *Public Health Act* gives [health authorities] extensive powers to investigate and address public health hazards, and I would suggest that the presence of health hazards in close proximity to a Cancer Centre should be a matter of very great concern”

“Wood burning should be banned in any crowded area. Central heat is a modern luxury and warm clothes can be worn in a colder house with the thermostat turned down for those who claim poverty. Heating with wood is an inconsiderate act which forces needless pollution on neighbours”

Appendix A: Acronyms and Abbreviations

Acronym or Abbreviation	Definition
B.C.	British Columbia
CSA	Canadian Standards Association
e.g.	for example
EMA	<i>Environmental Management Act</i>
i.e.	that is
OWB(s)	outdoor wood boiler(s) (also known as hydronic heaters or outdoor wood-fired hydronic heaters)
PAHs	Polycyclic aromatic hydrocarbons (also polyaromatic hydrocarbons)
PM	Particulate matter
SFB DAR	Solid Fuel Burning Domestic Appliance Regulation
US EPA	United States Environmental Protection Agency