

Record of Stakeholder Comments

Stakeholder Consultation Workshop on Options to Reduce
Emissions from Residential Woodburning Appliances

October 24–25, 2002
Montreal, Quebec

Final Report

January 9, 2003

EXECUTIVE SUMMARY

This report is a summary of the comments made by stakeholders at the Stakeholder Workshop on Options to Reduce Emissions from Residential Woodburning Appliances, held in Montreal on October 24-25, 2002. The workshop was led by the Intergovernmental Working Group on Residential Wood Combustion (IGWGRWC), comprised of representatives from municipal, provincial, territorial and federal governments. The working group's first priority is to address four components related to residential wood combustion under the Joint Initial Actions on the Canada-wide Standards for fine particulate matter (PM2.5) and ozone:

- an update of the CSA standards for new wood burning appliances;
- development of a national regulation for new, clean burning residential wood heating appliances;
- national public education programs; and
- an assessment of the option of a national wood stove upgrade or change-out program."

The workshop was attended by 45 participants, including 1 representative of aboriginal groups, 6 representatives of environmental groups, 15 representatives of industry, 1 public interest organization, and 22 representatives of government (including resource staff). Written comments were received prior to the workshop from three representatives of environmental groups and five from industry.

Since this was the first national consultation on residential woodburning appliances, the discussion focused on being as open and flexible as possible by obtaining the advice and positions of stakeholders, rather than attempting to achieve consensus or agreement on specific options.

Since the majority of this report records the numerous and varying individual comments and personal views made at the workshop, it is not possible to summarize them here. However, the following sections highlight the recurring themes that occurred throughout the consultation.

BACKGROUND ON PM AND RESIDENTIAL WOODBURNING

Although there was some discussion on uncertainties related to the profile of residential wood combustion sector and its relative impact on air quality compared to other sectors, there was general acceptance of the need to reduce emissions from residential woodburning appliances.

CSA STANDARD

Current CSA Standard B415.1-00

There was general acceptance of the current CSA Standard B415.1-00, however it was noted that certain appliances (indoor and outdoor central systems, small commercial systems) require validation and testing to ensure that the standard can be applied consistently.

Revised or additional CSA standards for other woodburning appliances

There was general acceptance on the benefits of developing a standard for masonry heaters. Although there are benefits to developing a standard for fireplaces, more research and discussion may be required. Further research and development is needed to develop cleaner technology for outdoor boilers.

PUBLIC EDUCATION PROGRAM

There was general support for the benefits of and need for continuing a public education campaign. A common theme was the need to ensure balanced messages. Most participants supported the need for a public education campaign to promote the use of certified woodburning appliances over conventional appliances. Several supported the need to also inform users on proper burning practices and alternatives to woodburning appliances. Specific recommendations were made on the audience for, design, and implementation of a public education program. There was general acceptance that a public education campaign goes hand-in hand with a change-out program – one informs and supports the other. Views differed on the timing of a national public education campaign – some participants noted that the Burn it Smart campaign should be extended past this season, while others noted that a public education and change-out program would have greater impact if implemented together with a regulation.

CHANGE-OUT PROGRAM

General Messages on Change-out Programs

Most participants supported change-out programs as being useful and necessary to promote the replacement of conventional woodburning appliances, while several others noted that there are higher priorities. There was general support for the need to remove the old appliances from use and the need for incentives. Participants offered suggestions on the different types of incentives that could be used. There was general acceptance that change-out programs need to reach a wide audience and should be tailored to regional and local needs. There was general acceptance that a public education campaign goes hand-in hand with a change-out program – one informs and supports the other. Change-out programs are not the responsibility of one sector – they should be implemented in cooperation with industry, all levels of government and other stakeholders. Some participants noted that a public education and change-out program would have greater impact if implemented together with a regulation.

Evaluation of Change-out Programs

Individual comments were made on areas to consider in the evaluation of change-out programs.

REGULATIONS

Participants generally agreed that a regulation is required. The definition of a level-playing field (an objective of a regulation) means different things to different stakeholders. There were differing views on the legislative authority that should be used to develop a regulation. Several participants supported the priority development of a regulation under the HPA, at least temporarily until the revision of CEPA, to ensure that a regulation could be put in place as soon as possible. Other stakeholders viewed CEPA 1999 as the most appropriate tool to regulate woodburning appliances, expressed varying concerns with labelling a woodburning appliance as "hazardous," and suggested that other measures could be implemented in the interim. There were differing views on the scope and application of the regulation. Some stakeholders suggested that all woodburning appliances need to be regulated, while others noted that not all appliances are in a state of readiness (e.g., level of testing, technology) to be regulated. Stakeholders also identified the need to determine how a regulation would apply to sales of existing woodburning appliances, commercial applications, and change-out programs. Many stakeholders noted the importance of considering the environmental, social, and economic benefits of using a renewable resource as compared to alternative types of heating. Several stakeholders noted that the importance of woodheating in rural and Northern

communities should also be considered in the development of a regulation. Individual comments were made on implementing a regulation, taking complementary measures in addition to and/or in place of a regulation, and expanding the current consultations.

NEXT STEPS

Formation of Task Groups

Stakeholders generally agreed that the IGWGRWC should create a multistakeholder task group to address both the public education and change-out programs and a second multistakeholder task group to address both the development of CSA standards and regulations. The task groups would further explore the ideas raised at the workshop and make recommendations on a plan for moving forward. The IGWGRWC would develop draft Terms of Reference for the task groups and request stakeholders to identify their interest in being a member. The task groups would need to have balanced representation from stakeholder groups.

Formation of a Core Advisory Group

Stakeholders generally agreed that the IGWGRWC should create a Core Advisory Group (CAG). The group's role would be limited to providing strategic direction and advice on the consultation process (i.e., not to provide comments or positions on the subject of the consultations). The IGWGRWC would develop draft Terms of Reference for the CAG and request stakeholders to identify their interest in being a member. The first teleconference of the CAG would likely take place in January or February, 2003.

Follow-up Information Requirements

Stakeholders requested further background information and documents throughout the course of the workshop.

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ACRONYMS

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|-----------|--------------------------------------------------------------------------------|
| CEPA 1999 | <i>Canadian Environmental Protection Act, 1999</i> |
| CSA | Canadian Standards Association |
| HPA | <i>Hazardous Products Act</i> |
| IGWGRWC | Intergovernmental Working Group on Residential Wood Combustion |
| PM | Particulate matter |
| PM2.5 | Fine particulate matter (particulate matter less than or equal to 2.5 microns) |
| US EPA | United States Environmental Protection Agency |
| WETT | Wood Energy Technical Training |

1. INTRODUCTION

This report is a summary of the comments made by stakeholders at the Stakeholder Workshop on Options to Reduce Emissions from Residential Woodburning Appliances, held in Montreal on October 24-25, 2002. It also includes a summary of comments received in writing prior to the workshop.

The Intergovernmental Working Group on Residential Wood Combustion (IGWGRWC), comprised of representatives from municipal, provincial, territorial and federal governments, was formed in 1999 to promote and coordinate government actions on the sustainable development of residential wood combustion. Its first priority was to address four components related to residential wood combustion under the Joint Initial Actions on the Canada-wide Standards for fine particulate matter (PM_{2.5}) and ozone. These standards were endorsed by the Canadian Council of Ministers of the Environment, except Quebec, in June 2000.

Under the Joint Initial Actions, governments committed to "participate in new initiatives to reduce emissions from residential wood burning appliances, including:

- an update of the CSA standards for new wood burning appliances;
- development of a national regulation for new, clean burning residential wood heating appliances;
- national public education programs; and
- an assessment of the option of a national wood stove upgrade or change-out program."

This workshop was the first opportunity for stakeholders at a national level to provide feedback on the above actions. The IGWGRWC will consider the comments and advice contained in this report as they further explore these actions and identify next steps.

This document is arranged as follows:

- Chapter 2 provides an overview of the workshop;
- Chapters 3 through 7 summarize the messages and advice provided by stakeholders;
- Chapter 8 summarizes the next steps;
- Appendix A contains the workshop agenda;
- Appendix B contains the list of workshop participants and invited stakeholders;
- Appendix C contains the overhead slides of the presentations.

2. ABOUT THE WORKSHOP

2.1 Workshop Agenda and Structure

The workshop agenda was developed by the IGWGRWC. Following the receipt of written comments and through a conference call held two weeks prior to the workshop, the agenda was changed to reflect advice from stakeholders. Comments made on the agenda and structure of the workshop are not included in this report.

The workshop was held in plenary, with presentations made on the four Joint Initial Actions, followed by questions of clarification and comments by stakeholders. Presentations on Day 1 included an overview of the stakeholder workshop and background on residential woodburning, the development of CSA standards, the Burn it Smart public education campaign, and the evaluation of a national change-out program. Day 2 focused on the regulation. The agenda can be found in Appendix A. The overhead slides of the presentations are included in Appendix C.

Since this was the first national consultation on residential woodburning appliances, the discussion focused on being as open and flexible as possible by obtaining the advice and positions of stakeholders, rather than attempting at this early stage in the process to obtain consensus or agreement on specific options. Further consultations are needed to allow for fulsome and in-depth discussions on the options. It should be noted that the proposals presented to stakeholders were made solely for the purposes of initiating and facilitating discussions and seeking advice on those proposals and other possible options. The IGWGRWC will be as open and inclusive as possible in the path forward.

2.2 Workshop Participants

There was a total of 100 participants invited to attend, with 41 representing government and 59 stakeholders. The workshop was attended by 45 participants, including 1 representative of aboriginal groups, 6 representatives of environmental groups, 15 representatives of industry, 1 public interest organization, and 22 representatives of government (including resource staff). Written comments were received from three representatives of environmental groups and five from industry. Several other stakeholders have asked to be kept informed of developments. The list of participants and invited stakeholders is included in Appendix B. It should be noted that other interested stakeholders are invited to participate in the consultation process by contacting the Secretariat.

2.3 Summarizing Results of the Workshop

The chapters on results are organized as follows:

- *General Observations* – represent comments of a general nature, comments of clarification that were made following presentations, and comments that were not included in the presentation slides;

- *Recommendations* – includes the comments and advice provided by stakeholders on the subject matter and contains two major parts:
 - text boxes serve to summarize and highlight the recurring themes that occurred throughout the consultations –they do not necessarily represent all comments made during the workshop;
 - individual comments are also recorded.

It should be noted that individual comments represent personal views and do not represent consensus of discussions at the workshop nor scientific consensus.

The results of the workshop have been summarized and organized by topic and sub-topic as appropriate to ensure their usefulness and facilitate further discussions – it does not represent a chronological discussion of the issues. For example, if a comment was made specifically on the CSA standard during the discussion on the regulations, the comment is noted under CSA standard. The results also include summarized comments provided in writing by stakeholders prior to the workshop.

3. RESULTS – BACKGROUND ON PM AND RESIDENTIAL WOODBURNING

3.1 General Observations

Although there was some discussion on uncertainties related to the profile of residential wood combustion sector and its relative impact on air quality compared to other sectors, there was general acceptance of the need to reduce emissions from residential woodburning appliances.

Individual comments included:

- transboundary flow of open sources may have an impact on air quality in Canada;
- wood heating is increasing in some parts of Canada;
- studies show that morbidity effects in summer are caused by ozone, whereas mortality effects in winter are caused by PM;
- smog (ozone and particulate matter (PM)) is the primary concern in summer, while PM is the primary concern in winter;
- air quality problems in urban centres are generally higher than in rural areas;
- air quality problems due to residential wood combustion have to be clearly identified (written comment).

4. RESULTS – CSA STANDARD

4.1 General Observations

General observations and comments of clarification on CSA standards included:

- there are four non-governmental, standards-setting agencies in Canada: CSA, Bureau de normalisation du Québec, Canadian General Standards Board, and Underwriters Laboratory;
- the Standards Council of Canada is the government body that regulates the standards-setting organizations;
- CSA standards have no force of law – they are voluntary standards unless referenced in federal or provincial legislation;
- CSA standards are reviewed every five years and either withdrawn or reaffirmed;
- any accredited testing laboratory can certify that woodburning appliances meet the CSA standard;
- there are five accredited laboratories in North America that can certify United States Environmental Protection Agency (US EPA) standards for woodburning appliances;
- Intertek in Montreal is the only Canadian laboratory that is accredited to perform tests to both EPA and CSA standards for woodburning appliances;
- the current CSA standard B415.1-00 will be reviewed in approximately two years – volunteers who wish to sit on the Technical Committee should contact CSA;
- the current standard B415.1-00 generally mirrors the EPA standard and was tailored to the Canadian situation by expanding the scope – differences between the two standards include:
 - extension of B415 to cover appliances up to 2 megawatt output – EPA covers up to approximately 0.016 megawatts;
 - B415 covers central systems (furnaces, boilers) and small commercial systems which are specifically exempted from EPA;
 - B415 requires determination of efficiency as part of the testing – EPA does not require efficiency testing and allows the use of a default value;
 - B415 has a single methodology for determining emissions – EPA has four.
- the current CSA standard will be translated in 2003.

4.2 Recommendations

4.2.1 Current CSA Standard B415.1-00

There was general acceptance of the current CSA Standard B415.1-00, however it was noted that certain appliances (indoor and outdoor central systems, small commercial systems) require validation and testing to ensure that the standard could be applied consistently.

Individual comments on the current CSA standard included:

- the requirements that apply to indoor and outdoor central systems and small commercial systems are, to a large part, experimental and require validation through a testing program;
- a validation program would entail having the same appliance tested at various accredited laboratories to ensure that the standard can be applied consistently;
- such a testing program would require a significant commitment and funding – sources of funding need to be further explored;
- all appliances with a burn-rate greater than 8.3 kg/h are included in a single category – seamless emission rates and more testing is needed for this category;
- while emission standards may force manufacturer invention, the cost of testing may keep smaller but creative builders out of the business - the federal government, through funding of test facilities at the National Research Council or other agencies could encourage small, innovative companies to improve appliances (written comment);
- there are concerns and confusion surrounding pellet stoves and the air to fuel ratio – this will require clarification (written comment).

4.2.2 Revised or additional CSA standard for other woodburning appliances

There was general acceptance on the benefits of developing a standard for masonry heaters. Although there are benefits to developing a standard for fireplaces, more research and discussion may be required. Further research and development is needed to develop cleaner technology for outdoor boilers.

Individual comments are included in the following sections.

Masonry Heaters

- masonry heaters are currently "non-affected facilities" under EPA, partly because EPA recognized them as likely to be low in emissions; however, it has created problems for the industry because local jurisdictions tend to enact "EPA only" regulations when they address air quality, leaving masonry heaters out by default - due to the small size of the industry, it is an unfair and unreasonable burden to have to negotiate each individual local regulation that comes up (a position paper on this topic can be downloaded at <http://mha-net.org/docs/position.PDF>);
- it is likely that industry would voluntarily comply with a CSA standard if one was developed;
- a standard would need to recognize not only the per hour performance but also take into account the type and length of burn and other emission output factors (written comment).

Fireplaces

- a CSA standard should be developed for fireplaces;
- there may not be the political will to develop standards for fireplaces or to regulate them;
- before investing in developing a CSA standard for fireplaces, more research and discussion is required to determine if a standard is warranted and feasible;

- alternatives to standards for fireplaces include municipal by-laws (e.g., no-burn days under certain climatic conditions, requiring certified appliances in new construction or upon sale of houses);
- education of consumers and municipalities may have an impact on reducing emissions from fireplaces.

Outdoor Boilers

- the technology is less advanced for outdoor boilers than wood stoves – industry needs time for further research and development;
- outdoor boilers are designed to burn waste wood and other low quality wood – this also has benefits in reducing needs and costs for disposal of waste wood;
- outdoor boilers that provide high heat output compared to other woodburning appliances should not be subject to the same emission limits.

5. RESULTS – PUBLIC EDUCATION PROGRAM

5.1 General Observations

General observations and comments of clarification on the Burn it Smart campaign included:

- the Burn it Smart campaign and change-out workshops are just one tool to educate the public – it is not always a good fit for all needs;
- the messages of the Burn it Smart campaign have been extensively evaluated and revised based on focus group testing and feedback;
- composite wood products (e.g., designer logs) are not addressed in the Burn it Smart campaign since their ingredients are not known.

5.2 Recommendations

There was general support for the benefits of and need for continuing a public education campaign. A common theme was the need to ensure balanced messages. Most participants supported the need for a public education campaign to promote the use of certified woodburning appliances over conventional appliances. Several supported the need to also inform users on alternatives to woodburning appliances and proper burning practices. Specific recommendations were made on the audience for, design, and implementation of a public education program. There was general acceptance that a public education campaign goes hand-in hand with a change-out program – one informs and supports the other. Views differed on the timing of a national public education campaign – some participants noted that the Burn it Smart campaign should be extended past this season, while others noted that a public education and change-out program would have greater impact if implemented together with a regulation.

Individual comments are included in the following sections.

5.2.1 Audience

- the government should implement the Burn it Smart campaign in the Northwest Territories and Nunavut;
- a long-term, proactive outreach to and capacity-building of Aboriginal communities in Northern Canada is required;
- education needs to continue to target users of certified appliances to ensure proper burning practices;
- to build capacity, education should also be targeted at community leaders and municipalities.

5.2.2 Design

- messages should not promote the use of woodburning appliances;
- messages need to be clear that woodburning can be less polluting by using certified woodburning appliances;
- messages should be clear that even certified woodburning appliances emit pollution;
- messages should also include alternatives to woodburning appliances (e.g., gas fireplaces);
- messages need to balance the benefits of woodburning appliances over other types of appliances - certified woodburning appliances have low emissions and displace the use of fossil fuels (Environment Canada will conduct a life-cycle analysis that will look at the environmental benefits of different types of residential wood);
- messages should address all alternatives and fuel types and list advantages and disadvantages for each (written comment);
- the environmental, safety and health messages need to be balanced;
- masonry heaters has been proven as a safe, ecological, and energy saving alternative – the Burn it Smart website acknowledges masonry heaters but does not really seem to know what to do with them (written comment);
- messages should focus on increased health benefits rather than higher costs of appliances;
- education could include smog alerts in winter;
- offer information workshops on proper practices to buyers of certified woodburning appliances (written comment);
- the evaluation of the Burn it Smart campaign provides valuable insight on the best way to proceed with a social marketing campaign and should be considered in any new initiatives and messaging (written comment);
- the best educational solution is to fund a comprehensive ecological literacy program in our schools which would include fossil fuels and climate change, particulates and smog, and air quality related health problems (written comment).

5.2.3 Implementation

- the public education program should be tailored to regional and local needs;
- the Burn it Smart campaign has been successful – the federal, provincial, and territorial governments should continue the program past this season;
- do not rush into a national education campaign – rolling out public education and change-out programs to coincide with implementation of the regulation will result in better use of resources and greater impact;
- education, on its own, will not solve the problem – education needs to be combined with a change-out program and be backed by regulations to be effective;
- education and change-out efforts need the active support of all stakeholders, including the fire service, insurance industry, building inspectors, etc. (written comment);
- insurers have a great deal of educational influence on woodstove users and could potentially drive the process should their claims experience begin to reflect emissions impacts on climate, weather and health claims (written comment).

6. RESULTS –CHANGE-OUT PROGRAM

6.1 Recommendations

6.1.1 General Messages on Change-out Programs

Most participants supported change-out programs as being useful and necessary to promote the replacement of conventional woodburning appliances, while several others noted that there are higher priorities. There was general support for the need to remove the old appliances from use and the need for incentives. Participants offered suggestions on the different types of incentives that could be used. There was general acceptance that change-out programs need to reach a wide audience and should be tailored to regional and local needs. There was general acceptance that a public education campaign goes hand-in hand with a change-out program – one informs and supports the other. Change-out programs are not the responsibility of one sector – they should be implemented in cooperation with industry, all levels of government and other stakeholders. Some participants noted that a public education and change-out program would have greater impact if implemented together with a regulation.

Individual comments on change-out programs in general are included in the following sections.

Usefulness

- while a certification and regulation program will have an impact in the long run, change-out programs are needed now to reduce emissions in the short and medium term;
- regulations will help deal with the future control of emissions – the need for consumer education seems essential at a time when funding for the Burn it Smart program is coming to an end (written comment);
- change-out programs contribute to broader community awareness;
- change-out programs may be getting only marginal benefits – directing funding towards research and development of new technology at the manufacturer level may have a greater impact;
- developing a regulation is a higher priority than evaluating and developing a change-out program.

Design

- change-out programs need to ensure that the old appliance is disposed of or recycled;
- a successful change-out program needs to be backed by incentives:
 - municipalities could provide a revolving loan program;
 - incentives need to be fair and based on clear rules;
 - incentives should be based on level of income of buyers;
 - fines collected under environmental laws could be directed towards incentives for lower-income families;

- discussions should take place with insurance companies to identify whether lower premiums are a possible incentive for certified, energy-efficient, and properly installed appliances;
- discussions should take place with insurance companies to determine whether refusal to insure conventional appliances (based on fire safety and toxic emissions) is possible (written comment);
- Retrofit programs will also help – Some conventional stoves can benefit from retrofit catalytic converter installation. It is currently difficult to locate catalyst replacement element. If retrofitting is to be a viable option these retrocatalytic elements need to be available. (written comment);
- change-out programs need to include alternatives to woodburning appliances (written comment);
- change-out programs need to reach as wide an audience as possible and give consumers a choice (wood, oil, and gas appliances) – oil and gas appliances are often simpler to use, cleaner burning, and more economical (written comment).

Implementation

- change-out programs need to be paired with public education to be effective;
- a change-out program at the national level may be too resource and time intensive;
- change-out programs need to be tailored to regional and local needs – what works in one community may not work for another;
- change-out programs should be available to all industry, including smaller manufacturers and distributors who are not members of industry associations, as well as large store chains (written comment);
- for credibility reasons, change-out programs need to be managed by environmental groups in partnership with industry; rebates should be made by the environmental groups to foster partnerships with all retailers (written comment);
- industry is willing to participate in change-out programs but direction, participation, and funding is also required by government in order to be effective;
- because of the time and resources involved, change-out programs need to be implemented with provinces, municipalities, and industry;
- municipalities should take action to change-out old stoves;
- implementing a change-out program and public education campaign to coincide with the implementation of a regulation will result in better use of resources and greater impact.

6.1.2 Evaluation of Change-out Programs

Individual comments were made on areas to consider in the evaluation of change-out programs.

Individual comments made on the evaluation of change-out programs included:

- it will be difficult to evaluate the success of change-out programs based on immediate results – many people will still consider the messages when making future buying decisions;

- the evaluation should consider change-out programs implemented in Chile, Nairobi, France, and Australia;
- the evaluation should focus on the most successful change-out programs;
- the evaluation should identify the methods for disposal or recycling of the old appliances and the effectiveness of those methods;
- the evaluation should also provide a model for future change-out programs.

7. RESULTS – NATIONAL REGULATION

7.1 General Observations

General observations and comments of clarification on a national regulation included:

- clarifications and discussion of possible regulations under the *Hazardous Products Act* (HPA) included:
 - the HPA can ban or set conditions on the sale, advertising, or import of substances or products – it cannot ban or set conditions on use or manufacture;
 - under the HPA, a substance or product is declared hazardous and then either banned or controlled to a safe level through regulations that typically reference a standard;
 - the definition of hazardous could be defined as an appliance that is not certified;
 - the definition could apply to all appliances (existing and new) or just new appliances;
 - CSA standards are not required to develop regulations under the HPA– the HPA regulation itself could define the standard;
- both Health Canada and Environment Canada have the authority and capacity to enforce regulations that apply to the sale, advertising, and import of substances and products;
- the review of the *Canadian Environmental Protection Act, 1999* (CEPA 1999) is not set to begin until 2004 and may take several years – it is not feasible to undertake amendments to section 93 of CEPA 1999 before that review;
- the time required for the development of a regulation, in practice, takes three to four years;
- all provinces and territories, through their commitments to the Joint Initial Actions, support the development of a federal regulation for woodburning appliances – there is political will to develop a regulation;
- although Quebec did not sign the CWS for PM and ozone, they expect a federal regulation - meanwhile, Quebec is looking at the opportunity of developing its own regulation;
- the federal government was not able to provide the legal opinion on the authorities of CEPA to industry because of solicitor-client privilege – industry would be more comfortable if it had the legal opinion so that they could have it independently reviewed;
- the federal government has the resources and expertise to do the actual drafting of the regulation – stakeholders will provide recommendations on its content, scope, etc.;
- the IGWGRWC needs to have a fully formed workplan and proposed budget to discuss with stakeholders before requesting additional funding.

7.2 Recommendations

Participants generally agreed that a regulation is required. The definition of a level-playing field (an objective of a regulation) means different things to different stakeholders.

There were differing views on the legislative authority that should be used to develop a regulation. Several participants supported the priority development of a regulation under the HPA, at least temporarily until the revision of CEPA, to ensure that a regulation could be put in place as soon as possible. Other stakeholders viewed CEPA 1999 as the most appropriate tool to regulate woodburning appliances, expressed varying concerns with labelling a woodburning appliance as "hazardous," and suggested that other measures could be implemented in the interim.

There were differing views on the scope and application of the regulation. Some stakeholders suggested that all woodburning appliances need to be regulated, while others noted that not all appliances are in a state of readiness (e.g., level of testing, technology) to be regulated. Stakeholders also identified the need to determine how a regulation would apply to sales of existing woodburning appliances, commercial applications, and change-out programs.

Many stakeholders noted the importance of considering the environmental, social, and economic benefits of using a renewable resource as compared to alternative types of heating. Several stakeholders noted that the importance of woodheating in rural and Northern communities should also be considered in the development of a regulation.

Individual comments were made on implementing a regulation, taking complementary measures in addition to and/or in place of a regulation, and expanding the current consultations.

Individual comments are included in the following sections.

7.2.1 Priorities

- developing a regulation is a priority and should be the focus of attention;
- municipalities should impose bylaws now instead of waiting for a national regulation – there has been little response from municipalities to date (the Communauté métropolitaine de Montréal did not respond to a letter on this issue from L'Association des propriétaires de St-Bruno in May 2002);
- if quality of wood is identified as a problem, emphasis should be on public education campaigns, not certification or regulation – if the problems are tied to the type of equipment, then certification might be the solution (written comment).

7.2.2 Level Playing Field (Objectives)

- a level playing field means that it applies nation-wide at a given date to all who fall under certain criteria; it does not mean that all affected parties will enjoy the same financial costs or benefits;
- the regulation needs to be applied equitably – the current CSA standard and resulting regulation would primarily target rural users, while urban users of fireplaces would not be regulated;
- a level playing field needs to consider the total amount of heat output when setting emission limits.

7.2.3 Legislative Authority (CEPA 1999 or HPA)

- a regulation under the HPA is required now – we cannot rely on the review of CEPA, which could take years;
- an HPA regulation could be seen as a temporary measure until the proper authorities are in place to develop a regulation under CEPA 1999 – this issue needs to be explored;
- implementing a regulation under the HPA does not preclude using CEPA in the future for other regulations;
- clear timelines for development of regulations under both CEPA 1999 and HPA are required:
 - municipalities and provinces need to know if they should regulate in the interim;
 - it might make sense to wait for the review of CEPA 1999;
- CEPA 1999 is the most appropriate tool for regulating woodburning appliances – government should wait for the revision of CEPA 1999 and implement other measures in the interim, such as education and change-out programs;
- utilizing one of the most ecologically sustainable energy sources should not be called hazardous – at a later time, these regulations can be moved to CEPA 1999, their logical home (written comment);
- the HPA is not designed to apply to these appliances – the time required for assessment and development of a regulation under the HPA may take as long as waiting for the CEPA review;
- government needs to think about suggested changes to CEPA 1999 now – don't wait until 2004;
- industry was ready to move ahead in 1997 with a regulation under CEPA 1999 – more discussions are required to determine if a regulation under the HPA is appropriate and agreeable;
- discussions regarding the development of regulations need to include frank, informed dialogue on the social and economic impacts of using the HPA –classifying woodburning appliances under the HPA will result in a negative grassroots movement of rejection and denial (written comment);
- woodburning appliances should not be labelled as hazardous:
 - labelling certain woodburning appliances as hazardous raises equity issues – other appliances that have even higher emissions (e.g., fireplaces) or others that still present risks (e.g., oil furnaces) are not labelled as hazardous;
 - labelling certain woodburning appliances as hazardous may promote the sale of other, high-emitting appliances;
 - the HPA is not the appropriate tool use, especially if only to save time; the regulation should be developed under CEPA with interim measures implemented by industry;
- there are outstanding questions in the HPA regarding the paper trail and who must keep records – the term "retailer" would seem to mean something different than what is commonly used within the woodburning appliance industry (written comment);

- British Columbia's regulation grants equivalency to appliances with US EPA certification – there is no reciprocity for US EPA to the CSA B415, which will impose an unnecessary hardship for Canadian manufacturers (written comment).

7.2.4 Scope and Application

- not all appliances covered by the current CSA standard are ready to be regulated since more testing and validation of the standard is required – consideration should be given to regulating those appliances that are ready now (e.g., wood stoves) and phasing-in requirements for other appliances;
- regulations could be effective immediately for wood stoves, inserts and high-efficiency fireplaces, and regulations phased in over the next 5 to 10 years for cook stoves, fireplaces, and central systems to give industry a chance to work with the new standards and develop new technology (written comment);
- the regulation should apply to all woodburning appliances, including fireplaces;
- the regulation should apply to all back-up heating systems, including fireplaces, to ensure the change-out of conventional woodburning appliances (written comment);
- CSA standards need to be in place before regulating all appliances (e.g., fireplaces);
- regulating fireplaces may not be warranted since they are used occasionally and not for home heating purposes;
- it needs to be determined whether the regulation will apply to sales of appliances between private and commercial parties (e.g., if the HPA regulation is applied to "new" appliances only, it would not apply to sales of old stoves);
- banning the sale of existing non-certified appliances should be considered (e.g., private sales);
- in addition to regulating the manufacture and performance of woodburning stoves, the government should consider the delinquency and individual behaviour of users (written comment);
- the types of appliances and scope of application of the term "residential" needs to be defined;
- the regulation should apply to commercial and other operations using woodburning appliances, such as restaurants, greenhouses, and tin heaters;
- ways to incorporate a change-out program in the regulation should be explored.

7.2.5 Development and Design

- the impacts as well as the benefits of using woodburning appliances should be considered, including the impact on fossil fuel use and climate change;
- it is important to examine the environmental, social, and economic benefits of residential woodburning (written comment);
- as a renewable resource, wood as an energy source may have an important role to play in some parts of Canada as component of a national climate change strategy (written comment);
- the development of a regulation should include fair, complete, and open analysis of the pros and cons of alternatives – full cost accounting comparing the several types of fossil fuels, nuclear, wood, wind, solar, etc. should be developed (written comment);
- the impact on flora, fauna, and habitat destruction resulting from raw material (wood) extraction should be considered (written comment);
- the impacts on rural, remote and first nations should be considered (written comment);

- to avoid the problem of unintended consequences, some consideration of potential impacts different from those experienced in the U.S. should be undertaken (written comment);
- government might wish to consider volume of pollutants emitted on an annual basis (written comment);
- most equipment degrades over time, including certified stoves and can result in significantly degraded emission performance – the regulation process should include direction, ways and means to require follow-up assessment of certified appliances (written comment);
- the regulation should be written in plain language as much as possible or be accompanied by plain-language guidance documents.

7.2.6 Implementation

- a regulation for new appliances is not enough – a change-out program is also required;
- the coming into force date of the regulations should be January 1, 2005; therefore the regulation needs to be in place before that date;
- an implementation date for the regulations of 2005 is too far – a regulation is needed now;
- there is reason to suspect a strongly negative public perception of this regulatory initiative, particularly if it is introduced in what is perceived as a patronizing or heavy-handed manner (written comment);
- communications will be key in implementing the regulation – complementary implementation of public education, change-out programs, and a regulation are mutually reinforcing;
- the successful implementation of new regulations will have to involve WETT members – consumers, manufacturers, retailers, insurers, municipal offices and fire officials all turn to Wood Energy Technical Training (WETT) for guidance on wood burning activities and, as such, WETT members will, by default, become the messenger (written comment).

7.2.7 Complementary or Alternative Measures

- CEPA guidelines are better than nothing;
- the CSA standard could be incorporated in National Building Codes;
- voluntary agreements could be developed with industry to implement the CSA standard;
- industry could voluntarily implement the CSA standard;
- voluntary agreements are not seen as feasible--it is unlikely that industry associations would be able to get consensus by the representative industries;
- amend the 2005 deadline for implementation of the regulation;
- a credit system could be implemented, where carbon neutral biomass would get credit against emissions of PM;
- a regulation template should be developed for use by federal, provincial, territorial, and municipal governments;
- municipalities should impose by-laws (e.g., no-burn days under certain climatic conditions, requiring certified appliances in new construction or upon sale of houses, encourage the change-out of old stoves) – there has been little response from municipalities;
- municipal regulations are only feasible in large centres;
- some municipalities have the authorities to regulate, such as the Greater Vancouver Regional District and Communauté métropolitaine de Montréal, while others may only be able to impose nuisance by-laws;

- the overall quantity of annual emissions is what needs to be considered as well as peak heating season output needs to be considered – for site built units, could issue licenses for a maximum quantity of emissions as presently done with some industrial releases (e.g., X tonnes of SO₂ per day) (written comment);
- governments could issue licenses or permits for allowable emission hours, more on a combination of typical emission estimates for site-built units of particular dimensions and regional and local meteorology – a standardized onsite field burn tests and monitoring equipment could be developed over time to assess particulate and other selected indicator chemical emissions (written comment).

7.2.8 Consultations

- government should establish a Core Advisory Group that would advise the IGWGRWC on the consultation process;
- the active participation of other aboriginal groups is required;
- representatives from the Secretariat of Sustainability should be invited to attend the next consultation (Note: they were invited to participate);
- rural Canadians and communities should be represented (e.g., Ministry responsible for rural communities, Environmental Commissioner, Agriculture Canada's Rural Secretariat) (written comment) (Note: they were invited to participate);
- non-Canadian manufacturers and importers and Canadian manufacturers not listed in the workshop discussion document should be notified of consultations (written comment);
- it is important that all stakeholders be given an equal opportunity to participate in consultations; governments have a responsibility to provide support and expertise to stakeholders who are not technical experts;
- communication with stakeholders should occur primarily through email to enhance the speed and effectiveness of information transfer, reserving the use of surface mail for those without access (written comment).

8. NEXT STEPS

8.1 Formation of Task Groups

Stakeholders generally agreed that the IGWGRWC should create a multistakeholder task group to address both the public education and change-out programs and a second multistakeholder task group to address both the development of CSA standards and regulations. The task groups would further explore the ideas raised at the workshop and make recommendations on a plan for moving forward. The IGWGRWC would develop draft Terms of Reference for the task groups and request stakeholders to identify their interest in being a member. The task groups would need to have balanced representation from stakeholder groups.

With respect to the development of a regulation, the following actions are important in the near term:

- clarify timelines for development of a regulation;
- define the options and implications of the "hazardous" label under the HPA;
- explore the uncertainty of the availability of CEPA 1999 versus the implications of the HPA;
- consider the availability of alternative or complementary measures.

8.2 Formation of a Core Advisory Group

Stakeholders generally agreed that the IGWGRWC should create a Core Advisory Group (CAG). The group's role would be limited to providing strategic direction and advice on the consultation process (i.e., not to provide comments or positions on the subject of the consultations). The IGWGRWC would develop draft Terms of Reference for the CAG and request stakeholders to identify their interest in being a member. The first teleconference of the CAG would likely take place in January or February, 2003.

8.3 Follow-up Information Requirements

Stakeholders requested further background information and documents throughout the course of the workshop, including:

- written comments submitted by stakeholders who were unable to participate in the workshop;
- Environment Canada's 1995 Criteria Air Contaminant Emissions Inventory (available on the internet at <http://www2.ec.gc.ca/pdb/ape>):
 - emissions estimates including open sources (Note: the website sums the emissions according to total open sources, total with open sources, and total without open sources);
 - emissions estimates by province and season;
 - whether the basis for the revised emissions estimates for dioxins and furans (e.g., fuelwood consumption) were taken into account in the inventory;
 - relative contribution of emissions from commercial and other uses (e.g., restaurants, tin heaters);
 - relationship of air quality problems to an area's density of population (rural vs. urban environment) (written comment);

- relationship of air quality problems on a day to day use and occasional use (written comment);
- relationship of air quality problems due to decorative fireplaces, woodburning stoves or woodburning furnaces (written comment);
- relationship of air quality problems compared to the type and quality of wood or solid fuel that is used (wood species, dry or wet wood, chips or pellets) (written comment);
- breakdown of human health impacts of PM by season;
- which jurisdictions in Canada are able to regulate the manufacture and import of woodburning appliances;
- information from British Columbia on experiences in implementing their regulation on woodburning appliances;
- the results of the Burn it Smart focus groups conducted in 2000–01 should be circulated – they provide a sampling of consumer research on woodburning practices (written comment).

APPENDIX A: WORKSHOP AGENDA

STAKEHOLDER CONSULTATION WORKSHOP ON OPTIONS TO REDUCE EMISSIONS FROM RESIDENTIAL WOODBURNING APPLIANCES

October 24-25, 2002

Novotel, 1180 rue de la Montagne (Room *Alsace-Lorraine*)

Montréal, Québec

DAY 1: OCTOBER 24

0800 **Arrival, Check-in and Continental Breakfast Available**

0900 **Opening Remarks**

- Words of Welcome from Co-Chairs
- Round-Table Introduction of Participants (name, affiliation and brief statement of interests in the initiative)
- Review of Purpose, Background and Context of the Initiative, and Commitments Regarding Follow-up and Use of Workshop Results (Sue-Ellen Maher, Co-Chair)

0930 **Review and Discussion of the Consultation and Workshop Processes** (Presentation by facilitator, followed by group discussion)

- Overview of the Consultation Process (including provisions for possible follow-up consultation activities to be determined at or immediately following this workshop)
- Workshop Objectives, Agenda, Process and Protocols

1000 **Updates on JIA's Recent Activities and Highlights of Other Inputs Received** (Working Group Member)

1015 **Break**

1030 **Overview Discussion of Major Issues and Options to be Discussed** (facilitated group discussion)

- Brief review of the set of proposed discussion issues and options, and how they are frame
- Discussion and agreement on any additional or refined issues, options and recent developments to be discussed, including the rationale and/or parameters for emission reduction actions to be considered
- Finalization of workshop topics, agenda/timing and process

1100 **DISCUSSION OF PROPOSAL #1: CSA STANDARD** (Mario Micallef, CSA)

- Introduction:
 - Brief presentation of the proposal and its rationale, including a general discussion of the nature, use and strengths/limitations of a CSA standard
 - Questions and answers for clarification, prior to in-depth discussion
- Discussion:
 - Is there a need and adequate rationale to develop a CSA standard for site-built decorative fireplaces or fireplaces with a minimum burn rate above 5 kg/h?
 - What factors and parameters need to be taken into account in the development of such a standard?
 - What concerns are there about the development of such a standard? How might these concerns be addressed?
 - What other complementary or alternative options or approaches should be considered to achieve comparable results?
 - What outstanding issues and questions need to be addressed, either now or over the longer term? What process?
- Conclusions and wrap-up

1200 **Lunch**

1300 **DISCUSSION OF PROPOSAL # 3: PUBLIC EDUCATION CAMPAIGN** (Kathleen Molloy, NRCan)

- Introduction:
 - Brief presentation of the proposal and its rationale, including a general discussion of the nature, use and strengths/limitations of a public education campaign
 - Questions and answers for clarification, prior to in-depth discussion
- Discussion:
 - How prominent a role should an education campaign play in overall efforts to encourage reduction in emissions?
 - What factors and parameters need to be taken into account in the design and implementation of such a public education campaign?
 - What concerns are there about such a public education campaign? How might these concerns be addressed?
 - More specifically, what concerns and what suggestions are there with respect to the proposals regarding:
 - The overall objectives and scope of a public education campaign?
 - The types – and suggested typical contents – of educational and promotional materials that would be developed and disseminated?
 - The role and subject matter of community workshops or equivalent?
 - The rationale for, and potential approaches to voluntary household audits?

- The scope, nature and feasibility of potential incentive regimes?
- Funding and delivery options for public education initiatives pending/following the phase-out of the “Burn it Smart!” program?
- The specific roles or different stakeholder groups (governments, industry, NGOs and others) in the design, funding and/or delivery of public education measures.
- What other complementary or alternative options or approaches should be considered to achieve comparable results?
- What outstanding issues and questions need to be addressed, either now or over the longer term? What process?
- Conclusions and wrap-up

1500 **Break**

1515 **DISCUSSION OF PROPOSAL # 4: NATIONAL CHANGE-OUT PROGRAM** (Chantal Duhaime, EC)

- Introduction:
 - Brief presentation of the proposal and its rationale, including a general discussion of the nature, use and strengths/limitations of a change-out program
 - Questions and answers for clarification, prior to in-depth discussion
- Discussion:
 - Is there a need and adequate rationale for a national change-out program?
 - What factors and parameters need to be taken into account in the design and implementation of such a change-out program?
 - What concerns are there about such a change-out program as it has been proposed? How might these concerns be addressed?
 - More specifically, what concerns and what suggestions are there with respect to:
 - The content of the proposed evaluation template for the program?
 - The scope of change-out programs to which the proposed template (or equivalent) should be applied?
 - What other complementary or alternative options or approaches should be considered to achieve comparable results?
 - What outstanding issues and questions need to be addressed, either now or over the longer term? What process?
- Conclusions and wrap-up

1645 **Re-Cap of Day 1 Process, Discussion of Any Revised Plans for Day 2 and Close of Day 1 Formal Session**

1700 **Informal Reception with Cash Bar and Light Refreshments**

DAY 2: OCTOBER 25

0730 **Continental Breakfast Available**

0830 **DISCUSSION OF PROPOSAL # 2: NATIONAL REGULATION** (Alain Gosselin, Co-Chair)

- Introduction:
 - Brief presentation of the proposal and its rationale, including a general discussion of the nature, use and strengths/limitations of a national regulatory approach
 - Questions and answers for clarification, prior to in-depth discussion
- Discussion:
 - What factors and parameters need to be taken into account in the development of such a national regulation?
 - What concerns are there about the development of such a regulation, as proposed? How might these concerns be addressed?
 - More specifically, what concerns and what suggestions are there with respect to the proposals regarding:
 - The overall objectives of a national regulation?
 - Concerns re: publicly credible science behind the initiative?
 - The scope of the regulation, including the range of appliances and related activities/factors to which the regulation should apply?
 - Need to adjust to different circumstances in urban vs rural and remote settings?
 - Application to restaurants and food stores?
 - Need and rationale for any exemptions, and the implications of this?
 - Specific terms of such a regulation?
 - Enforcement/compliance strategies and mechanisms?
 - Treatment of existing appliances that might become non-compliant?
 - The scope of, and approach to, the design, conduct and use of the proposed Regulatory Impact Analysis Statement for the draft regulation (i.e., analysis of costs and benefits)?
 - What other complementary or alternative options or approaches should be considered to achieve comparable results?
 - Implications and options for legislative amendments (e.g., to CEPA)?

1015 **Break**

1030 **CONTINUATION OF DISCUSSION ON PROPOSAL #2: NATIONAL REGULATION**

- Completion of discussion on above topics
- What outstanding issues and questions need to be addressed, either now or over the longer term? What process?
- Conclusions and wrap-up

1200 **Lunch** (Note: This can be a working lunch to allow continuation of discussion of the regulation theme.)

1300 **Discussion of Other Concerns and Suggestions for Effective Emission Reduction Efforts**

1400 **Conclusions and Path Forward**

- Review of Principal Areas of Agreement and Divergence (highlights recap only)
- Identification/review of Outstanding Issues and Questions Warranting Follow-up and Possible Further Consultation, Including Possible Processes and Timing
- Discussion of Immediate Next Steps:
 - Reporting on workshop results
 - Follow-up with the Working Group
 - Follow up with Stakeholder Advisory Group

1500 **Close of Consultation Session**

APPENDIX B: WORKSHOP PARTICIPANTS AND INVITED STAKEHOLDERS

B.1. Workshop Participants

Aboriginal Groups

Cheezie, Gerry Dene Nation

Environmental Groups

Bergeron, André l'Association pour l'air pur
Rivest, Michèle l'Association pour l'air pur
Serafini, Ersilia Pollution Probe
Skulska, Edwidge Association des propriétaires de Saint-Bruno
Vincent, Keith Conservation Corps of Newfoundland
Walker, Bruce STOP

Industry

Bélanger, Ghyslain Association des professionnels du chauffage
Bonar, Ray Compagnie de Cheminée Industrielle Inc
Cantin, Marc-Antoine Drolet Poêles & Foyers
Crouch, John Hearth Patio Barbecue Association, United States
Dessureault, Pierre Recyclone
Dupont, Steve Recyclone
Lamy, Eric Security Chimneys Ltd
Marcheterre, Marcel Association des propriétaires de boisés privés
McLeod, Tex Hearth Patio Barbecue Association, Canada
O'Shea, Charles Heatmore Furnaces
Percival, Vanessa WETT Inc.
Senf, Norbert Masonry Heaters Association
Tollefson, Rodney Central Boilers
Wallis, Paul Heatmore Furnaces

Others

Gulland, John Wood Heat Organization Inc.

IGWGRWC Members

Duhaime, Chantal Secretariat, Environment Canada
Fugler, Don Canada Mortgage and Housing Corporation
Gagné, Carol Ministère de l'environnement du Québec
Gosselin, Alain Co-chair, Environment Canada
Maher, Sue Ellen Co-chair, Newfoundland Dept. of Environment

| | |
|------------------|---------------------------------------------------------|
| Molloy, Kathleen | Natural Resources Canada |
| Piercey, Randy | New Brunswick Dept. of Environment and Local Government |
| Poissant, Ronald | Ville de Montréal |

IGWGRWC Corresponding Members

| | |
|----------------------|---------------------------------------------------------|
| Desrochers, François | Communauté métropolitaine de Montréal |
| Dobbelsteyn, Hal A | Nova Scotia Dept. of Natural Resources |
| King, Norman | Direction générale de la Santé publique-Montréal Centre |

Resource Staff

| | |
|-------------------|------------------------------|
| Collins, James | Environment Canada |
| Enns, Victor | Environnement Canada |
| Garron, Christine | Environnement Canada |
| Germain, André | Environnement Canada |
| Gillies, Bruce | Environnement Canada |
| Lalonde, Pierre | Product safety-Health Canada |
| Laurus, Linda | Notetaker |
| Micallef, Mario | CSA |
| Nicholson, Phil | Workshop Facilitator |
| Walters, Paul | Health Canada |
| Weber, Christian | Environment Canada |

B.2. Written Comments Received from Stakeholders

Environmental Groups

| | |
|-----------------|-------------------------------------------------|
| Laparé, Richard | Biologiste |
| Rivest, Michele | l'Association pour l'air pur |
| Scott, Harvey | Friends of the Athabasca and Greenesmiths Farms |

Industry

| | |
|----------------------|-------------------------------------------|
| Cantin, Marc-Antoine | Drolet Poêles & Foyers |
| deMarsh, Peter | Canadian Federation of Woodlot Owners |
| Gulland, John | Wood Heat Organization Inc. |
| Laycock, Anthony | WETT Inc. |
| McLeod, Tex | Hearth Patio Barbecue Association, Canada |

B.3. Stakeholders Invited but Unable to Attend

Aboriginal Groups

| | |
|------------------|-------------------------------------------------------|
| Horn, Margaret | National Indian & Inuit Community Health Organization |
| Ignace, Lawrence | Assembly of First Nations |
| Mongeon, Michel | Assemblée Autochtone du developpement durable |
| Morin, Gerald | Metis National Council |
| Nickels, Scott | Inuit Tapirisat of Canada |
| Paci, Chris | Dene Nation |
| Peters, Marcie | Stolo Nation |
| Rourke, Bernie | Native Women's Association of Canada |

Environmental Groups

| | |
|------------------|----------------------------------------------------------------------|
| Bélisle, André | Association québécoise de la lutte contre la pollution atmosphérique |
| Bois, Chantal | Canadian Environmental Network |
| Chiotti, Quentin | Pollution Probe |
| Hjertaas, Paule | Nature Saskatchewan |
| Olsen, Craig | Yukon Conservation Society |
| Peckfield, Sara | Conservation Corps Newfoundland |
| Scott, Harvey | Friends of the Athabasca |

Health Groups

| | |
|------------------|----------------------------------------------------|
| Brazeau, Michel | Royal College of Physicians and Surgeons of Canada |
| Haromy, Chris | Asthma Society of Canada |
| Maybee, Kenneth | New Brunswick Lung Association |
| Schwartz, Sandra | Canadian Institute of Child Health |
| (no contact) | North York Public Health |
| (no contact) | Ontario Medical Association |
| (no contact) | The Lung Association |

Industry

| | |
|--------------------|------------------------------------------------|
| Bergamin, Mario | Hearth Patio Barbecue Association, Canada |
| Coulas, Nancy | Alliance of Manufacturers and Exporters Canada |
| De Marsh, Peter | Canadian Federation of Woodlot Owners |
| Lalonde, Catherine | Canadian Wood Council |
| Laycock, Anthony | Wett Inc. |
| Pavlin, Jessica | Vermont Casting Majestic Products |
| (no contact) | Canadian Home Builders Association |

Municipalities

Comeau, Louise

Hynes, Jackie

Paré, Christian

Shwaikoski, Ross

Mahesh Patel

Federation of Canadian Municipalities

City of WhiteHorse

Ville de Longueuil

Greater Vancouver Regional District

Toronto Public Health

Other

Gélinas, Johanne

Jabs, Lynda

Mitcheal, Dona

(no contact)

Commisioner of Sustainable Development

Consumer Association of Canada

Agriculture Canada's Rural Secretariat

Insurance Bureau of Canada

APPENDIX C: OVERHEAD SLIDES OF PRESENTATIONS
