

**Federal-Provincial Working Group on
Ozone-depleting Substances and Halocarbon Alternatives**

**Canada's Proposed Strategy to Accelerate the Phase-Out of
Uses of CFCs and Halons and to Dispose of the Surplus Stocks:**

**RESPONSE TO RECOMMENDATIONS FROM
STAKEHOLDER CONSULTATIONS HELD
DURING FEBRUARY, 2000**

July, 2000

INTRODUCTION:

In January 2000, the Federal-Provincial Working Group (FPWG) on Ozone-depleting Substances and Halocarbon Alternatives issued a proposed strategy for accelerating the phase-out of uses of CFCs and Halons¹. A series of consultation sessions were held in various centres in Canada during February, 2000. The results of the consultations are presented in a Synthesis Report prepared for the FPWG by Cantox Environmental Inc².

This report contains the responses of the FPWG to the stakeholder recommendations made during the consultations, as described in the Synthesis Report. Following the format of the Strategy and the Synthesis Report, this report is divided into seven major sections: General Issues, Mobile Air Conditioning, Mobile Refrigeration, Household Appliances, Commercial Refrigeration and Air Conditioning, Chillers, and Halons.

For the most part, there is a response to each recommendation; however, in cases where the same response applies to more than one recommendation, the recommendations are grouped. Changes to the Strategy that the FPWG will make or are considering are described at the end of each section.

2. GENERAL ISSUES

2.1 Extended Producer Responsibility

Stakeholder Recommendations and Government Response

1. *Industry can and should play a key role in the development of management strategies to phase-out, collect and dispose of surplus ODS in Canada.*

Response: The FPWG agrees with this recommendation. Industry has taken steps to initiate such an activity, as the HRAI proposed initiative demonstrates. The Working Group anticipates that other industry sectors will become similarly engaged.

2. *Appropriate roles for both government and industry should include:*

- *Education/communication on available alternative technologies and products;*

¹ Canada's Proposed Strategy to Accelerate the Phasing-Out of Uses of CFCs and Halons and to Dispose of the Surplus Stocks, Federal-Provincial Working Group on Controls Harmonization-ODS, January 14, 2000

² Synthesis Report – Public Consultations on Canada's Proposed Strategy to Accelerate the Phase-out of Ozone-depleting Substances, CANTOX ENVIRONMENTAL INC., March 31, 2000

- *Training of technical personnel;*
- *Developing cost impact analyses for management plans for ODS phase-out;*

Response: The FPWG agrees with this recommendation. Most of the past work on managing ODS has reflected these roles. The training program for refrigeration and air conditioning technicians is perhaps the best example of government and industry roles as set out above. The Working Group is confident that these roles will continue and improve where they can.

3. *Appropriate roles for industry in particular should include:*

- *Development of management plans for retrofitting, converting or replacement of existing systems using CFCs and halons;*
- *Research and development for alternative products and technologies;*
- *Partnering with government and other stakeholders to develop management plans for phase-out, collection, and disposal of surplus ODS;*

Response: The FPWG agrees with this recommendation.

4. *For some sectors, industry can play a lead role in developing a disposal program (e.g. HRAI)*

Response: The FPWG agrees with this recommendation, and encourages other sectors to follow the example set by HRAI. Environment Canada is preparing a disposal guide to assist industry.

5. *The participation of ODS suppliers should be sought for the development of management and disposal strategies for surplus ODS in Canada.*

Response: The FPWG agrees with this recommendation. The HRAI proposal involves participation of the CFC suppliers. The Working Group will encourage former Halon manufacturers and Halon suppliers to become involved in a similar manner.

2.2 Incentives

Stakeholder Recommendations and Government Response

1. *Government funding should be considered in order to develop appropriate programs for the conversion/replacement of existing systems and for the collection and disposal of ODS surplus.*

Response: The FPWG, while recognizing that incentives should be provided to accelerate the conversion or replacement of existing systems, (See response to item 2 below) believes it is the responsibility of the owners of the system to fund such replacement.

2. *Accelerated Capital Cost Allowances and other tax incentives should be considered to provide mechanisms for stakeholders to finance the conversion or replacement of existing equipment.*

Response: The FPWG agrees that economic incentives should be considered to assist and encourage owners of ODS to phase them out in accordance with the Strategy. Environment Canada is looking at what incentives would be appropriate to achieve the objectives of the Strategy, and how to implement them. It is not expected that incentives will include direct funding for conversion or replacement of existing equipment.

3. *Industry-funded buy-back programs for ODS products should be considered for certain sectors, where appropriate.*

Response: The FPWG agrees with this recommendation. However, it is primarily a matter for industry to implement.

4. *Alternatives manufacturers or distributors should also consider providing incentives such as rebates on new equipment being sold or installed. Some stakeholders also proposed that other incentives such as an awards program be considered.*

Response: The FPWG agrees with this recommendation. However, it is primarily a matter for industry to implement.

2.3 Disposal of ODS

Stakeholder Recommendations and Government Response

1. *A program for the ultimate disposal of ODS in Canada must be established before proposals to accelerate the phase-out can be initiated.*

Response: The FPWG does not agree with this recommendation. The Working Group does not believe it is necessary to wait for development of a formal ODS disposal program in order to accelerate the phase-out of ODS uses in Canada. Disposal technology is available, both in Canada and elsewhere. The challenge is to encourage use of the technology by the owners of the ODS.

On-going activities will help in this regard. For example, Environment Canada is preparing an ODS disposal guide which will assist owners of ODS in their disposal decisions. The HRAI program, when implemented, will also encourage and facilitate disposal of ODS.

2. *Government needs to identify and partner with private-sector organizations in order to support initiatives that could lead the development of disposal programs. The major suppliers of ODS in Canada should be approached to solicit their participation in the development of disposal programs for surplus ODS.*

Response: The FPWG agrees with this recommendation. It is, in fact, the essence of the proposed Strategy. The suppliers of CFCs are participating in the HRAI initiative. Some of these companies were also suppliers of Halons. The Working Group will encourage the remaining Halon suppliers to become engaged in the program as well.

3. *Priority should be given to a Canadian solution of the disposal issue to ensure proper control over disposal and to avoid passing the problem onto other countries.*

Response: The FPWG agrees, in a general sense, with the principle of finding Canadian solutions to Canadian issues. The FPWG would prefer a Canadian solution, and the Strategy accommodates this. However, there does not need to be only a Canadian solution. The Montreal Protocol and other international agreements (e.g. the Basel Convention on Hazardous Wastes) have mechanisms in place to deal with international transport and disposal of hazardous wastes, including surplus ODS.

2.4 Regulatory Issues

Stakeholder Recommendations and Government Response

1. *A successful strategy to accelerate the phase-out of ODS use in Canada requires a clear and comprehensive regulatory backdrop as a starting point.*

Response: The FPWG agrees with this recommendation. The primary role of governments under the Strategy is to provide that clear and comprehensive regulatory backdrop.

2. *Regulations need to be consistent from province to province.*

Response: The FPWG agrees with this recommendation. The Working Group is confident that regulatory consistency will be achieved when the

Strategy is implemented.

3. *Harmonization of regulations with US initiatives needs to be given consideration.*

Response: The FPWG does not agree with this recommendation. The Strategy is a “made in Canada” initiative, and while harmonization with US initiatives may be desirable, it is not necessary. Important considerations relating to our trade partner include compliance with the NAFTA and not unduly disadvantaging the competitiveness of Canadian companies. These issues have been and will continue to be considered during development and implementation of the Strategy.

4. *Sufficient time to comply with regulations and appropriate communication are critical to the success of regulatory strategy.*

Response: The FPWG agrees with this recommendation. The Working Group will consider staggered phase-in of the Strategy’s requirements for the Commercial Refrigeration sector and possibly the Chillers sector. It will also consider the time required to propose regulatory measures and inform stakeholders. Communication mechanisms will be examined and improved where appropriate.

5. *Broad, long-term vision that considers other environmental issues and the future impacts of ODS replacements needs to be considered.*

Response: The FPWG agrees with this recommendation. The National Action Plan³ took important steps forward in this regard by including HFCs and other halocarbon alternatives to ODS because of their global warming potential. The Working Group expects that as initiatives like the HRAI proposal for managing disposal of CFCs and bigger concepts like Extended Producer Responsibility take hold, they will be applied to ODS alternatives as well.

6. *HCFC and HFC stakeholders should be involved in the consultations on the phase-out of CFCs and halons.*

Response: The FPWG agrees with this recommendation. HCFC and HFC stakeholders have been invited to participate in the consultations, and, for the most part, they have participated. However, it is up to individual companies to decide whether and to what extent they will become involved.

³ National Action Plan for the Environmental Control of Ozone-Depleting Substances (ODS) and their Halocarbon Alternatives, Canadian Council of Ministers of the Environment, January 1998

2.5 Cost/Benefit Issues

Stakeholder Recommendations and Government Response

1. *The FPWG should include a cost/benefit analysis on a sector-by-sector basis in its development of a strategy to accelerate the phase-out of ODS use in Canada.*

Response: The FPWG agrees with this recommendation. Environment Canada is preparing a cost-benefit study of the impacts of the Strategy on a sector by sector basis. This study will be made available to the public and decision-makers once finalized.

3. SECTORS

3.1 Mobile Air Conditioning

Strategy Approach:

Prohibit refill of mobile air conditioning equipment with CFCs by 2000.

Stakeholder Recommendations and Government Response:

1. *A strategy for collecting/disposing of R-12 for this sector is needed immediately. Without incentives for collection and disposal, the existing stock will quickly disappear.*

Response: The FPWG agrees that a strategy is needed. The Working Group encourages this sector to become a partner in the HRAI proposal.

2. *Clear and effectively communicated guidelines for recovering CFCs from this sector are needed. What alternatives should be permitted? Blends need to be controlled.*

Response: The FPWG agrees in part with this recommendation. The Environment Canada Code of Practice⁴ contains guidelines for recovering CFCs from this sector. The Code of practice also recommends that special measures (unique fittings, labeling, etc..) be taken to allow service technicians to easily identify refrigerants and prevent their mixing. Many provinces require, through their regulations, that the Code of Practice be implemented. Governments' role with respect to alternatives will be limited to safety and human health and environmental protection. Industry is

⁴ Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems, Report EPS 1/RA/2, Environment Canada, March 1996

responsible for addressing performance and logistical (e.g. handling) aspects of alternatives.

3. *Aftermarket and vehicle manufacturer associations should be involved in addressing stewardship issues. It was suggested that these associations should meet with HRAI to explore the possibility of expanding HRAI's proposed disposal program.*

Response: The FPWG agrees with this recommendation.

4. *Older cars that cannot be retrofitted conveniently should be "grandfathered."*

Response: The FPWG does not agree with this recommendation. British Columbia and New Brunswick have regulations banning refilling air conditioning systems with CFCs. Vintage cars do not appear to be an issue in either province. However, the Working Group would welcome more information from vintage automobile clubs, etc. about the extent of need and technical difficulties that would be encountered with retrofitting.

Proposed Revision to Strategy for Mobile Air Conditioning Sector:

No change.

3.2 Mobile Refrigeration

Strategy Approach:

Prohibit refilling in the Mobile Refrigeration Sector with CFCs effective 2003.

Stakeholder Recommendations and Government Response:

1. *The effective date of the regulation should be 2-3 years after announcing the regulation.*

Response: The FPWG does not agree with this recommendation. The Working Group believes that 2003 is an appropriate implementation date. The publication of the Strategy will provide adequate warning and lead time.

2. *A strategy for collecting/disposing of R-12 for this sector is needed immediately. Without incentives for collection and disposal the existing stock will quickly disappear.*

Response: The FPWG agrees that a strategy is needed. The Working Group encourages this sector to become a partner in the HRAI proposal.

3. *Clear and effectively communicated guidelines for recovering CFCs from this sector are needed. What alternatives should be permitted? Blends need to be controlled.*

Response: The FPWG agrees in part with this recommendation. The Environment Canada Code of Practice⁵ contains guidelines for recovering CFCs from this sector. Government's role with respect to alternatives will be limited to safety and human health and environmental protection. Industry is responsible for addressing performance and logistical (e.g. handling) aspects of alternatives.

Proposed Revision to Strategy for the Mobile Refrigeration Sector:

No change.

3.3 Household Appliances

Strategy Approach:

Status quo with a ban on converting equipment to use R-12.

Stakeholder Recommendations and Government Response:

1. *The status quo is the only practical and appropriate approach.*

Response: The FPWG agrees with this recommendation. Existing programs for recovery of CFCs from household appliances should be maintained.

2. *Measures to minimize releases (e.g., use of non-corrosive components) and maximize CFC recovery (e.g., better training of technicians, proper labeling of equipment) should be considered.*

Response: The FPWG agrees with this recommendation. The latter part of the recommendation is addressed through the National Action Plan, regulations and the various training programs that exist in Canada. The Working Group examines these from time to time with a view to improve

⁵ Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems, Report EPS 1/RA/2, Environment Canada, March 1996

them. With regard to the first part of the recommendation (use of non-corrosive fittings) the Working Group will seek input from the industry, and, as a general principle, encourages industry to improve its practices wherever practical.

3. *Suppliers of white goods should be part of the communication/education strategy.*

Response: The FPWG agrees with this recommendation, and encourages industry to undertake the initiative.

Proposed Revision to Strategy for the Household Appliances Sector:

Existing household appliances will not be subject to an accelerated phase-out. The FPWG will explore opportunities to improve existing recovery programs and emission minimization practices.

3.4 Commercial Refrigeration and Air Conditioning

Strategy Approach:

Prohibit refilling with CFCs effective 2003

Stakeholder Recommendations and Government Response:

1. *The refill ban as proposed is not appropriate; either more time should be allowed or a staged approach should be considered based on the size, charge amount, or power capacity of a given system (e.g., ban refill for smaller systems in 2005, medium systems in 2007, large systems in 2009).*

Response: The FPWG agrees with this recommendation. The Group is considering providing a staged approach in the Strategy, as suggested. See below for suggested dates.

2. *The approach should focus on minimizing losses from existing equipment, i.e., establishing maximum leakage rates and/or minimum efficiency specifications, with penalties to provide disincentives for leaky systems to encourage conversion.*

Response: The FPWG does not agree with this as being the primary strategy for this sector. It is primarily the *status quo*, as current practices should already minimize emissions. The future strategy should focus on

phase-out and destruction.

3. *The HRAI proposal for developing a disposal program represents an important and welcome initiative, however, there are several important issues of equitability in terms of its implementation remaining to be resolved. Industry partnerships and agreements with appropriate regulatory authorities need to be established if the Strategy is to be successful.*

Response: The FPWG agrees with this recommendation. Governments' role is to provide the necessary regulatory backdrop. The Working Group will work with HRAI and others to coordinate the government and industry roles.

4. *The capacity for converting existing equipment in terms of the supply of alternative refrigerant, availability of trained personnel, and capacity for storage of reclaimed CFCs should be examined in order to establish achievable target dates for a refill ban, aside from financing issues.*

Response: The FPWG agrees with this recommendation. One of the main reasons for considering a staged approach for this sector is to more effectively coordinate phase-out timing with existing trades and new/used refrigerant capacities.

Proposed Revision to Strategy for the Commercial Refrigeration and Air Conditioning Sector:

A staged refill ban will be proposed according to the following:

- Small commercial units (< 5 HP): 2004
- Medium units (5 – 30 HP): 2005
- Large industrial units (> 30 HP): 2006

3.5 Chillers

Strategy Approach:

Limit releases of CFCs from low pressure chiller purges at less than 0.1 kg/kg air, effective 2003. Ban the refill of chillers with CFCs effective 2008

Stakeholder Recommendations and Government Response:

1. *The recommendation for purge efficiency should be adopted as proposed.*

Response: The FPWG agrees with this recommendation. Some jurisdictions have already adopted that purge efficiency.

- 2. A refill ban is appropriate, however the timing should be tied to the lifetime of equipment. Some flexibility should be provided to allow systems to continue to be used as long as losses/leakage rates are properly controlled. As with Commercial Refrigeration and A/C, a staged approach should be considered based on the size, charge amount, or power capacity of a given system. For example, the refill ban could be tied in with the normally scheduled overhaul of major systems.*

Response: The FPWG agrees with the principle of a staged approach for this sector. Further consultations are underway to develop an appropriate staged refill ban schedule.

- 3. The approach should focus on minimizing losses from existing equipment, i.e., establishing maximum leakage rates and/or minimum efficiency specifications, with penalties to provide disincentives for leaky systems to encourage conversion.*

Response: The FPWG does not agree with this recommendation. The recommendation is calling for essentially the regulatory status quo. The Strategy will use a different approach to achieve higher conversion rates.

- 4. The HRAI proposal for developing a disposal program represents an important and welcome initiative, however there are several important issues of equitability in terms of its implementation remaining to be resolved. Industry partnerships and Memoranda of Understanding with appropriate regulatory authorities need to be established quickly if the strategy is to be successful.*

Response: The FPWG agrees with this recommendation. The Working Group will work with HRAI to help address these and other issues, and help HRAI to implement their proposal.

- 5. The capacity for converting existing equipment in terms of the supply of alternative refrigerant, availability of trained personnel, and capacity for storage of reclaimed CFCs should be examined in order to establish achievable target dates for a refill ban, aside from financing issues.*

Response: The FPWG agrees with this recommendation. A staged approach will be proposed for chillers. It will take into consideration the capacity of conversion and the strategies to reduce conversion costs.

Proposed Revision to Strategy for the Chillers Sector:

The FPWG will propose a refill prohibition upon major overhaul of equipment. The date at which such prohibition will take place still need to be determined. Those interested in the details of this measure should contact the chair of the FPWG to be kept informed.

3.6 Halons

Strategy Approach:

Prohibit refilling of portable equipment by 2003 and fixed equipment by 2005, except under permits for critical uses.

Stakeholder Recommendations and Government Response:

1. *The proposed refill ban for 1211 (portables) is realistically achievable.*

Response: The FPWG agrees with this recommendation. Some jurisdictions have already implemented this refill ban.

2. *Some form of extension for large semi-portable systems (100 lbs or more) should be considered.*

Response: The FPWG agrees with this recommendation. In the case of large portable systems, greater than 25 kg, they would be considered fixed systems and be subject to the same provisions as fixed systems.

3. *The proposed refill ban for 1301 (fixed systems) is appropriate assuming some mechanism is provided to allow for "top-up" maintenance and equipment testing.*

Response: The FPWG does not agree completely with this recommendation. Removing a charge for maintenance or equipment testing and then putting it back in the equipment will be accepted, but topping up is considered to be refilling.

4. *A mechanism to allow fixed systems to be recharged in the case of a release is needed in order to ensure continuous protection. A provision to convert to an alternative system within a given time frame (one year?) in such cases could provide a workable deterrent for accidental releases.*

Response: The FPWG agrees with this recommendation.

5. *Critical uses should be exempted from any refill ban.*

Response: The FPWG agrees with this recommendation. The Strategy provides for the obtaining of permits to continue to use halons for critical uses.

6. *There is a need to define critical uses precisely and to develop a mechanism for applying for an exemption from the refill ban.*

Response: The FPWG agrees with this recommendation. Definitions of critical uses will be done when regulations are being developed by each jurisdiction.

7. *Several representatives of the service sector suggested that a ban on use of Halon 1211 and Halon 1301 would be more appropriate than a refill ban.*

Response: The FPWG does not agree with this recommendation. It does not provide the flexibility sought by system owners. There are also implementation and enforcement issues associated with a use ban.

8. *A more accurate estimate of the Halon inventory in Canada is needed.*

Response: The FPWG agrees with this recommendation. Environment Canada will be undertaking an extensive Halons use survey this year.

9. *Supplies of Halon 1301 for critical uses need to be ensured for the foreseeable future.*

Response: The FPWG agrees with this recommendation, but doesn't anticipate large quantities of Halon 1301 being required. The Working Group expect that users with critical uses will take appropriate measures to ensure adequate supplies for their uses.

10. *The insurance industry should be approached to explore possibilities for providing incentives to convert to alternative fire protection systems.*

Response: The FPWG agrees with this recommendation and will discuss it with the insurance industry.

Proposed Revision to Strategy for the Halons Sector:

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- No change for portables (Halon 1211)
- For fixed systems (Halon 1301), retain the refill ban date of 2005 but allow one recharge, under permit, between 2005 and 2010. The permit would be granted on the condition that the system is replaced by an alternative within one year of the permit being issued.