Synthesis of Public Comment

on the 2006 Progress Report under the Canada-United States Air Quality Agreement

International Joint Commission
Canada and United States

July 2007

The views expressed in this synthesis are from the individuals and organizations who participated in the public comment process. They are not the views of the International Joint Commission.

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Executive Summary

Under Article VIII of the 1991 Canada-United States Air Quality Agreement, the governments of Canada and the United States established a bilateral Air Quality Committee to assist with implementation of the Agreement, to review progress made and to prepare progress reports at least every two years. Environment Canada and the United States Environmental Protection Agency are the lead agencies on the committee. Under Article IX of the Agreement, the International Joint Commission (IJC) is assigned responsibility to invite comments on each progress report prepared by the Air Quality Committee, to submit a synthesis of the comments received to the governments, and to release the synthesis of comments to the public.

This report provides a synthesis of the comments received on the 2006 Progress Report for the years 2004-2006. The views expressed are not those of the IJC but of individuals and organizations. As itemized in Appendix 1, 25 responses were received: four from the United States and 21 from Canada. Of these, 15 came from state, provincial or regional governments representing millions of people. Responses also came from an Environmental Commissioner and five nongovernmental organizations. In addition, 19 people participated in roundtable discussions held in Seattle and Vancouver; their names may be found in Appendix 2.

Nearly all the respondents expressed strong support for the Agreement and its success in fostering binational cooperation on pollution control, monitoring, research and information exchange. Overall, respondents were satisfied that substantial progress has been made by both countries relative to reductions of sulfur dioxide, nitrogen oxides and volatile organic compounds. Nevertheless, most agreed that much more needs to be accomplished to mitigate transboundary air pollution, as stated in the report itself. In addition, several advocated that more attention be paid to developments in the western parts of both countries.

Nearly half of all respondents were enthusiastic about the quality of the 2006 Progress Report and commended it as a well-produced document that combines text and graphics to provide a highly useful summary of initiatives and achievements under the Air Quality Agreement.

The Acid Rain Annex section of the report received the greatest number of comments. The views expressed were wide-ranging and encompassed such issues as health benefits analyses (there was endorsement of the report's approach) to wet deposition monitoring sites (with some respondents complaining that there has been a reduction in their number).

With respect to the Ozone Annex, a number of respondents expressed the view that the initiatives identified in the Report lacked detail and, as a result, were skeptical that these would actually achieve the objectives set out in the annex.

A number of respondents had suggestions about the future of the Agreement. Among the proposals put forward were ideas for a Particulate Matter Annex as well as one addressing western issues. Other suggestions to improve the effectiveness of the Agreement were to address greenhouse gas emissions and undertake public education initiatives on the health and environmental effects of air pollution.

Introduction

The 1991 Canada-United States Air Quality Agreement was put in place to establish "a practical and effective instrument to address shared concerns regarding transboundary air pollution."

Under Article VIII, the governments of Canada and the United States established a bilateral Air Quality Committee to assist with implementation of the Agreement, review progress made, and prepare progress reports at least every two years. Environment Canada and the United States Environmental Protection Agency are the lead agencies on the committee.

In accordance with Article IX, the International Joint Commission (IJC) invites comments on each progress report prepared by the Air Quality Committee, submits a synthesis of views to the governments, as well as the full record of views if either government requests, and releases the synthesis of views to the public.

The 2006 Progress Report is the eighth under the 1991 Agreement and was released in November. It reviews key actions taken by Canada and the United States in the previous two years to address transboundary air pollution under the Agreement – namely acid rain and ground-level ozone. The 2006 Progress Report also includes the third comprehensive review of the Agreement, and responds to public comments on previous reports.

> "The 2006 Progress Report includes the third five-year comprehensive review of the Air Quality Agreement, which has been organized in a question and answer format to better address requirements in the Agreement and public comments on the 2004 Progress Report submitted by the International Joint Commission. The review responds to several deferred issues from previous reviews in 1996 and 2002, highlights progress on several topics, and outlines future areas of potential focus."
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> Canada-United States Air Quality Agreement
> 2006 Progress Report

Following release of the Progress Report in November 2006, the IJC invited public comment in a variety of ways through:

- The Federal Register and Canada Gazette;
- The IJC website;
- The IJC email list (list serve);
- Letters to a targeted list of over 200 agency, environmental, industry and individual contacts in both countries;
- Follow-up telephone calls to targeted groups; and
- Roundtable discussions in Seattle on March 23, 2007 and in Vancouver on March 26, 2007.

There was also a notice in the 2006 Progress Report itself, inviting readers to contact the IJC with their comments.

Comments were requested by February 28, 2007, but the comment period was subsequently extended to March 31, 2007. Twenty-five responses were received: four from the United States and 21 from Canada. Of these, 15 came from state, provincial or regional governments representing millions of people. Responses also came from an Environmental Commissioner and five non-governmental organizations. In addition, 19 people participated in roundtables held in Seattle and Vancouver. A full listing of the respondents is provided in the appendices to this report.

Every effort has been made to accurately reflect the views expressed and comments received, and the IJC apologizes for any errors that may have occurred. The views expressed are those of the respondents, not of the IJC. This is as required by Article IX of the Agreement. The full text of all comments received can be viewed on the IJC's website at www.ijc.org.

General Comments on the Air Quality Agreement

In assessing the 2006 Progress Report, many respondents offered very positive comments about the Canada-U.S. Air Quality Agreement itself. Most agreed that there has been a reduction of pollution emissions and pollution deposition levels, and that this has been achieved as a result of work undertaken under the auspices of the Agreement. The reduction of acid rain was noted in particular.

The volume of supportive comments about the Agreement may reflect the fact that, relative to previous years, respondents had less overall concern about specific issues and preferred to focus on the success of the Agreement.

One provincial minister wrote: "I am pleased with the progress in managing acid rain and ground-level ozone made under this Agreement. The continued collaboration between Canada and the United States benefits both countries, as we face similar environmental challenges."

Another minister noted that her province cannot remedy the situation on its own because a substantial proportion of air pollutants are transported from south of the border. "Clearly, strong action on transboundary air pollution is vital … We look forward to supporting further efforts to protect air quality through ongoing participation in the Canada-U.S. Air Quality Agreement process."

This perspective was shared by many other respondents:

- Canada and the United States each attempted to come to terms with the deteriorating air quality and in 1991 signed the Air Quality Agreement to come to grips to with transboundary air pollution. The 2006 Progress Report clearly indicates that the bilateral agreement has been beneficial to both countries.

- We were immediately struck by both the quantity and quality of work undertaken over the past 15 years. This unique arrangement has led to both Parties achieving the reductions of sulfur dioxide and nitrogen oxides stipulated by the Agreement, and positioned them to do the same with respect to ground-level ozone and its pre-cursor pollutants … There is no doubt that the relationship between Canada and the United States has been mutually beneficial, not only with respect to the specific tasks and goals of the Agreement, but also because of the productive collaboration between individuals on both sides of the border who share similar interests and passions.

- Over the years, the Canada and United States Air Quality Agreement has evolved from its beginnings to address acid precipitation to now include arrangements to deal with smog-causing pollutants. Great progress on commitments to reduce pollution that crosses borders, to share information, and to promote scientific understanding of pollution and its effects has been realized.

- The progress made in reducing acid rain and ozone in eastern North America is a tribute to what can be accomplished when neighboring jurisdictions collaborate on issues of common concern.

- We recognize the fact that over the last two years, Canada and the United States have continued to successfully reduce their emissions of sulfur dioxide and nitrogen oxides, the major contributors to acid rain. Additionally, we note in this report that both countries have also made considerable progress in meeting the requirements of the Ozone Annex to reduce emissions of nitrogen oxides and volatile organic compounds, the precursors to ground-level ozone."

A number of comments attributed binational cooperation to the Agreement and suggested that it provided a framework for systematic collaboration:

- The Air Quality Agreement has documented the elements of a successful process, that being establishing goals, collecting data that identify and track activities under the Agreement, and to routinely and objectively publicly report on progress toward achieving the goals of the Agreement … To report progress has required the parties to work cooperatively to harmonize and standardize scientific and engineering methods of data collection, analyses and reporting in order to present accurate and comparable data.

Despite the successes to date, a number of respondents pointed to persistent problems and the need for ongoing collaboration:

- Our two countries must continue to work together for improvement where negative effects still exist. Of particular importance, and as the report recognizes, are the continuing problems of acid precipitation that exceeds critical loads in bordering regions of Eastern Canada and the Northeastern United States; degraded visibility, especially in key areas of natural heritage such as national parks; bordering regions that experience elevated concentrations of ground-level ozone as a result of emissions in another jurisdiction; and the health effects of particulate matter.

- While the parties should be commended on the progress made, the information in the report identifies that there is much more that needs to be accomplished in the mitigation of transbounday air pollution.

Expanding the Agreement

A number of respondents had suggestions about expanding the Agreement:

- The scope of the Agreement should be expanded to cover green house gas emissions because concerns that air quality could be a major factor affecting climate change have risen markedly since 1991 and this is a transboundary issue.

- The fine work in modeling, monitoring and controlling ground-level ozone should be expanded into fine airborne particulates, energy generation and transportation emissions.

- Some respondents supported the development of a Particulate Matter Annex to the Agreement and urged both countries to proceed toward this goal.

- Others expressed concern that the proposed annex appears to focus more on point sources while mobile sources are more significant in the western parts of both countries. In fact, participants at the roundtable discussions in Seattle and Vancouver believed that emissions from marine vessels should be incorporated into an annex under the Agreement.

- There was also a view that all transboundary population centres should be included in any Particulate Matter Annex, not just specific geographic locations.

- Emission-reduction targets for nitrogen oxides and volatile organic compounds should be codified into the Agreement itself and detailed progress reports mandated. Such provisions must also be part of future annexes, such as the proposed Particulate Matter Annex, to allow for a better gauge of progress and overall impacts.

- The principal transboundary air issues in northern Canada continue to be those related to the long-range transport of persistent airborne pollutants, such as persistent organic compounds and heavy metals, and their subsequent accumulation in the environment and wildlife, but these pollutants are not addressed under the Air Quality Agreement.

Advice for the Air Quality Committee

Several respondents had recommendations relating to the future work of the Air Quality Committee:

- We are very concerned that little is being done to track health impacts. We are concerned that the measures in the current Agreement may not be sufficient to improve the breathing health of our patients and strongly believe that the Parties must significantly improve health tracking.

- Given the number of mortalities associated with air pollution, the rise in childhood asthma, the increasing number of environmental allergies, and the resultant burden on health care systems, there must be a robust focus on the health side as science is performed and policies are developed.

- The 33 reactors on the shores of the Great Lakes emit a host of radioactive gases such as tritium, long lived carbon-14 (5,300 years half-life), and krypton-85 into the air together with toxic chemicals. These sources are huge contributors to air pollution and must be monitored, evaluated and reported on.

- Public education on the health and environmental effects of air pollution, complemented by incentives to change our individual contributions to air pollution, might be an area through which the reach and effectiveness of the Air Quality Agreement could be expanded.

- Regulations are most effective when the public understands and supports energy efficiency and emission reduction measures, so serious consideration should be given to developing public engagement through social marketing and public programming through nongovernmental organization partners.

- The appropriate structures under the Agreement need to monitor, report and analyze various developments, such as liquid natural gas facilities and other projects, so that their impacts can be factored into the objectives of the Agreement.

- Considering the preponderance of emissions from agricultural sources, the fact that agriculture has been identified as a significant contributor to regional air quality and that this sector has not historically been regulated, the Air Quality Committee should ensure that agricultural sources are included in the design of new air quality improvement strategies.

- Canada has not pursued a visibility reduction program that is consistent with legislated requirements in the United States, so the Air Quality Committee should pursue more aggressive action on visibility improvement in Canada.

General Comments on the Progress Report

Almost all respondents expressed satisfaction with the way in which the report presented information:

- The 2006 Progress Report is a useful document, consolidating a great deal of information into a concise, readable document, with excellent support of graphics.

- A fine publication. For those of us in the environmental policy field, it is a wonderful source of information. Emphasizing the differences/contrasts between sources of pollution in Canada and the U.S. is well done.

- I like the straight forward literary content and style of the report, which presents the facts with excellent graphs as well as outlooks and needs for more to be achieved to protect human health.

- The report is an excellent summary of progress to date, is clearly written with very useful tables and graphs.

- I found the 2006 Progress Report to be succinct, yet very informative on issues related to the Air Quality Agreement. The report's format allowed for quick reference to commitments on other issues, and easy comparison of efforts and accomplishments in Canada and the United States.

One respondent requested that the Parties post the underlying technical data on which the 2006 Progress Report relies on their respective websites. This was deemed to be critical because the data sets created to support the Progress Reports were said to be unique in combining air emissions and air quality data for Canada and the United States: "Having these data available to other government entities, the academic community, independent researchers and the public would be of great assistance in furthering the understanding of transboundary air pollution. Making these base data available would allow for greater public dialogue, based on objective information, on this important matter."

Another concern was that there was some inconsistency in the baseline year used for comparisons in each of the two countries: "Not using the same baseline year can be very confusing and misleading when one speaks of percent change, especially when these changes are used to show progress." Another respondent said that the information provided was not sufficient to determine whether the reported progress in several areas was actually being achieved.

The geographic focus of the Progress report also elicited some comments. One respondent put it bluntly: "It is clear that the focus remains on the eastern part of both countries." Another respondent noted that, although there has been some discussion of developing an annex to address transboundary issues in the western and Pacific regions, "the progress report is silent on the status of a Western Annex, and the path forward is unclear."

Acid Rain Annex

Comments about this part of the report were wide-ranging. One respondent stated that the U.S. section on nitrogen oxides was too brief and also suggested that there should have been a discussion about the link between climate change and reductions of sulfur dioxides and nitrogen oxides.

Another respondent had a favourable opinion of the report's acknowledgement that more remains to be done: "We are pleased to see the stated recognition that the goal of reducing acidifying emissions below critical loads has not yet been achieved. Recognition of this shortfall will continue to justify further reductions in sulfur oxides and nitrogen oxides, both of which contribute to the formation of particulate matter and smog."

However, another respondent had a different opinion: "When one reads statements in the Introduction, one may be drawn to conclude that the goal of Canada's acid rain program has somehow been achieved. That goal — to reduce acid deposition to aquatic and terrestrial ecosystems below critical loads for sulfur and nitrogen — is far from being achieved. We are concerned that, despite progress, we still have a long way to go to restore ecosystems, lakes and forests impacted by acid rain."

A health association expressed appreciation for the fact that the Progress Report included an analysis of the health benefits of the U.S. acid rain program: "Cost/benefit analyses are very useful to the advocacy process that must pitch health values against the dollar cost to industry". An environmental group agreed with this assessment: "The 40-to-one benefit/cost ratio certainly makes the point that reducing emissions is not only saving on the health side, but as well on the bottom line."

Other comments touched on a variety of issues:

- Nitrogen deposition appears to be having significant ecosystem impacts in the Georgia Basin/ Puget Sound area, and more attention to this issue is needed. We recommend that the critical load assessment work in eastern regions be extended to include this international airshed.

- Other parts of Canada need to develop plans similar to those in British Columbia where approaches to addressing continuous improvement and keeping clean areas clean appear to be all that is done in the country.

- It seems clear to our environmental group that the U.S. has a far superior emissions monitoring system. We note audits help ensure the completeness, high quality and integrity of emissions data, as well as highlight a number of 'red flags' that require additional verification. Accurate emissions monitoring remains the backbone of trading program integrity. We don't see that kind of analysis for the Canadian emissions monitoring system.

- We are of the belief that having a U.S. federal, legally-binding Clean Air Act has played a critical role in the cap and trade program. This is what we need in Canada: a clean air act with real teeth, not something that would reduce emissions 15 years from now.

One respondent expressed disappointment that wet deposition monitoring sites appear to have been lost in Ontario, Quebec and Newfoundland: "These locations continue to have acid deposition and should be collecting data."

Ozone Annex

Comments on this section were also wide-ranging, but several dealt with issues related to the utility of data. For example, while the Progress Report does attribute the apparent decrease in ozone levels in part to the cool rainy summer of 2004 in eastern North America, one respondent felt that, "The data on ozone, nitrogen oxides and volatile organic compounds VOC concentration in Figures 19-21 would be much more valuable if some corresponding climatic data were also presented."

Other comments were of a similar nature:

- Much less useful is the cataloguing of emission reduction initiatives, with no clear analysis of the net benefit (the reported reductions within the context of overall emissions). The report does not provide a transparent view of the whole emissions picture, and is of little benefit in the determination of whether we are on-track toward healthier air or the Canada-wide Standards.

- With respect to the quantitative emission reduction estimates (volatile organic compounds and nitrogen oxides), a respondent called for transparency in the claim. "It is not clear how these reductions are to be achieved, what sector-specific reductions will be attained, what share of this reduction can be attributed to measures outlined in the Ozone Annex or even how successful attainment of these reductions will be determined. The fact that the estimated emission reductions attributable to the Ozone Annex have changed since 2000, but the measures themselves haven't been changed, is confusing.

Progress was an issue for some respondents, especially whether the estimated emission reductions necessary for meeting Canada's commitments under the Ozone Annex will be accomplished:

- We have no way to gauge whether the emission reduction commitments that have been made are working to clear the air. It would appear from our observations that they might not be.

- There exists considerable skepticism that this will not be achieved due to the continued delay in closing the coal-fired power plants in the Toronto area.

- The Progress Report notes that the United States has shown greater emission reductions than Canada for volatile organic compounds and nitrogen oxides. In fact, figures 28 and 29 indicate that Canadian emissions have been essentially flat-lined since 1990. This is a point of concern, and confirms the need to pursue additional emission-reduction measures.

- Regulations should be developed for emission reductions in a number of industries as backstops for voluntary ozone-reduction measures such as environmental performance standards, prevention plans, codes of practice, and benchmarking exercises.

The matter of eastern focus was raised again with respect to this section:

- We recognize the good work undertaken by the Parties in eastern Canada and the northeast states to reduce emissions of ozone precursors and that it has proven to be effective in reducing ozone levels. In light of increasing ozone trends in the Fraser Valley Regional District, we request that the Air Quality Committee recommend to the Parties that this area be similarly designated for specific action to reverse this trend.

Related Air Quality Efforts

One respondent stated that the summary of the Canada-U.S. Emissions Cap and Trade Feasibility Study identified certain critical program elements but did not discuss the probability of them being implemented. Therefore, the program elements were seen as "kind of pie in the sky."

Scientific and Technical Cooperation and Research

One respondent drew attention to the Transboundary Particulate Matter Science Assessment, noting that the update describes the impact of Canadian sources of $PM_{2.5}$ (particulate matter less than or equal to 2.5 microns) on U.S. jurisdictions: "A similar analysis of the impact of U.S. sources on Canada would be useful."

This respondent also stated that the section on health effects research, which detailed activities in a number of regions in the two countries, lacked information about the Health Costs of Air Pollution study undertaken in Saint John, New Brunswick.

Another respondent suggested that air quality scientists in the regulatory agencies in both countries should develop stronger working relations with the research community involved in atmospheric chemistry, biogeochemical cycling and emissions, meteorology and regional climate: "Considerable synergy exists between these communities that would allow a North American systems approach to understanding the natural and anthropogenic impacts on air quality … Such a system could allow for a more comprehensive approach to evaluating health and ecosystem impacts and, as such, serve as an extremely useful resource for policy makers."

The report was said not to place enough emphasis on nitrogen oxides emissions and the complexity of acid deposition: "There is too much emphasis on sulfur dioxide, despite the fact that their reductions have not resulted in changed pH levels (a measure of acidity or alkalinity) in some places".

Response to Issues Raised Previously by the Public

One respondent voiced concern that the numeric targets established in the Canada-wide Standards for fine particulate matter and ozone are "inadequate and far less stringent enough to offer the Canadian people the required health and environment protection they deserve and need to protect them."

A regional environmental agency asked that the decision not to establish regional air quality committees be revisited: "We believe that the concept of establishing regional air quality committees could be effective in more readily achieving the goals of the Agreement. Involving local agencies would provide greater focus on emission reduction actions and result in prioritized, consistent actions in each airshed."

Another respondent said it would be very valuable if more attention were paid to atmospheric deposition of pollutants other than acids: "There is a small section related to mercury, but it needs expanding for this metal and for other pollutants."

Signed on this 13th day of July, 2007 as a synthesis of views received from the public on the 2006 Progress Report of the Canadian and United States Air Quality Committee under the Canada-United States Air Quality Agreement of March 13, 1991.

Herb Gray
Chair, Canadian Section

Irene B. Brooks
Acting Chair, United States Section

Robert Gourd
Commissioner

Allen I. Olson
Commissioner

Jack Blaney
Commissioner

APPENDIX I

Sources of Comments Received on the United States-Canada Air Quality Agreement Progress Report 2006

1. Government of British Columbia, Minister of Environment, Hon. Barry Penner
2. Boise State University, College of Social Sciences and Public Affairs, Professor Les Alm
3. Government of Ontario, Minister of Environment, Hon. Laurel C. Broten
4. Soil and Water Conservation Council, Canadian Policy Representative , James P. Bruce
5. Vermont Agency of Natural Resources, Deputy Director, Harold Garabedian,
6. Government of Nova Scotia, Minister of Environment and Labour, Hon. Mark Parent
7. Government of British Columbia, Ministry of Environment, Assistant Deputy Minister, Lynn Bailey
8. Central Valley Naturalists, Co-Director of Conservation, H.J. Saaltnik
9. Government of Northwest Territories, Ministry of Environment and Natural Resources, Deputy Minister, R.P. Bailey
10. Ontario Medical Association, President, Dr. David B. Bach
11. Government of Saskatchewan Minister of Environment, Hon. John T. Nilson, Saskatchewan
12. Government of Quebec, Minister of Sustainable Development, Environment and Parks, Hon. Claude Béchard
13. Government of Alberta, Minister of Environment, Hon. Rob Renner
14. Government of Manitoba, Minister of Conservation, Hon. Stan Struthers
15. Government of Yukon, Minister of Environment, Hon. Dennis Fentie
16. Lung Association of New Brunswick, President and CEO, Kenneth Maybee
17. Environmental Commissioner of Ontario, Senior Policy Advisor, Ellen Schwartzel
18. Saint John Citizens Coalition for Clean Air, Chairperson, Gordon Dalzell
19. National Center for Atmospheric Research, Atmospheric Chemistry Division, Earth and Sun Systems Laboratory, Acting Director, Sue Schauffler
20. Government of Saskatchewan, Deputy Minister of Environment, Alan Parkinson
21. Doug Hagar, St. Catharines, Ontario
22. Government of Prince Edward Island, Minister of Environment, Energy and Forestry, Hon. Jamie Ballem
23. Fraser Valley Regional District, Director of Planning, Hugh Sloan
24. New York State Department of Environmental Conservation, Division of Air Resources, Director, David J. Shaw
25. Citizens for Renewable Energy, Coordinator, S. (Ziggy) Kleinau
26. Roundtable Discussion, Seattle, Washington
27. Roundtable Discussion, Vancouver, British Columbia

APPENDIX 2

Participants at Roundtable Discussions on United States-Canada
Air Quality Agreement Progress Report 2006

Seattle, Washington, March 23, 2007

1. Puget Sound Clean Air Agency, Dennis McLerran

2. U.S. Environmental Protection Agency, Region 10
   Office of Air, Waste and Toxics, Gina Bonifacino

3. U.S. Environmental Protection Agency, Region 10
   Office of Air, Waste and Toxics, Janis Hastings

4. Washington State Department of Ecology
   Air Quality Program, Douglas J. Brown

Vancouver, British Columbia, March 26, 2007

1. British Columbia Ministry of Environment, Jennifer Alderson
2. Department of Fisheries and Oceans, Marie Noel
3. Environment Canada, Leigh Greenius
4. Environment Canada, Martin Mullan
5. Environment Canada, Bahareh Toghiani Rizi
6. Environment Canada, Peter Schwarzkopf
7. Environment Canada, Roxanne Vingarzan
8. Environment Canada, Rheannon Wylie
9. Fraser Valley Regional District, Hugh Sloan
10. Fraser Valley Regional District, Bob Smith
11. Georgia Basin Action Plan, Shannon Bradley, Environment Canada
12. Georgia Basin Action Plan, Judy Kwan, Environment Canada
13. Health Canada, Raymond Poon
14. Washington State Conservation Commission, Lynn Bahrych
15. Western Canada Wilderness Committee, Geoff Senichenko