

**Synthesis of Public Comment on the 2016 Progress Report under
the Agreement between the Government of Canada and the
Government of the United States of America on Air Quality**

International Joint Commission

Canada and United States

November 2018

International Joint Commission
Canada and United States



Commission mixte internationale
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1. Introduction

The *Agreement between the Government of Canada and the Government of the United States of America on Air Quality (Agreement)* was initially created because the governments recognized that transboundary air pollution is harmful to natural resources relating to the environment, the cultural and economic conditions of the region, and human health. The purpose of the agreement is to establish a practical and effective instrument to address concerns regarding transboundary air pollution between the two countries.¹

Article VIII of the *Agreement* led to the creation of a bilateral Air Quality Committee to implement the agreement, review progress, and prepare progress reports on a biennial cycle to inform the public of the work that has been undertaken. Article IX directs the International Joint Commission (IJC) to invite public comment on the biennial progress reports,² submit a synthesis of these comments to governments, and release the synthesis to the public.

This document provides a synthesis of comments received on the 2016 Progress Report and a concise analysis of common themes. The 2016 Progress Report is the thirteenth biennial report completed under the 1991 Canada-United States Air Quality Agreement and covers activities undertaken from 2014 to 2016. The report focuses on reducing transboundary air pollution between Canada and the United States, specifically referring to acid deposition and ground-level ozone.³ The report also addresses cooperation between both nations regarding the creation and implementation of harmonized regulations to reduce emissions from vehicles and engines as well as emissions produced by the oil and gas sectors.⁴

2. Invitation to Comment

Following the IJC's receipt of the 2016 Progress Report in February 2018, the IJC invited public comment on the report from March 28, 2018 to August 8, 2018. The IJC invited public comment by distributing a notice to news media, trade publications and stakeholders, as well as publishing an article in its *Water Matters* newsletter and sharing it via social media. Members of the public were invited to respond to three questions:

1. What do you think about the ongoing efforts of our two countries to address transboundary air quality issues?
2. What issues do you think should have the highest priority?

¹ *Agreement between the Government of Canada and the Government of the United States of America on Air Quality*, 1991.

² Canada – United States Air Quality Agreement Progress Report 2016.

³ *ibid*

⁴ *supra* note 2.

3. What do you think about the information provided in this report? In responding to these questions, the public could submit comments via an online form, email or regular post to either the Canadian or the US offices of the IJC.

3. Synthesis of Public Comments

The IJC received eight comments on the 2016 Progress Report, a small increase over the three comments received on the 2014 Progress Report. A synthesis of these comments is provided below. The individuals and organizations submitting the comments are listed in the appendix of this synthesis along with the full text of their comments.

Mr. Ron Arial explained that living conditions remain unsatisfactory in some areas of the country because these areas are affected by poor air quality, including exposure to radiation as well as chemical trails of nanoparticles that create smog. These conditions present many health risks as well as other challenges.

Mr. Gordon Dalzell of Saint John, N.B., from the Saint John Citizens Coalition for Clean Air, commented that local industries have made significant improvements in reducing emissions of sulfur dioxide through changes in sulfur content in fuels, the implementation of emissions control technologies, and using less Bunker C fuel. The same cannot be said for NO_x emissions as ground-level ozone concentrations have remained the same from 2014 to 2016. The U.S. Environmental Protection Agency (EPA) rule changes, resulting in the closure of coal-fired power plants, have had positive impacts on these restoration efforts as these plants were contributing to the introduction of SO₂, NO_x, and PM₂₅ in the Québec-Windsor corridor. There is ongoing concern that the reversal of these rule changes could potentially result in the re-introduction of coal-fired energy producing pollution levels similar to previous years.

It is nice to see the significant efforts to reduce NO_x emissions such as the *Multi-Sector Air Pollutant Regulations* in limiting emissions from industrial boilers, heaters, and stationary engines in cement manufacturing facilities. To compliment these regulations, Canada has also implemented mandatory national air pollutant emissions standards for industrial facilities; however, Canada does not have any VOC emission standards. Although the 2016 Progress Report cites the *Canada-Wide Acid Rain Strategy for Post-2000*, it largely fails to mention that, in addition to the permanent closure of coal-fired electric generation facilities, there is also the reduced capacity of oil-fueled facilities like the Coleson Cave Electric Power Generation Facility in St. John, New Brunswick.

Levels of ground-level ozone have remained largely the same from 2013 to 2016. While the Progress Report claims that there have been significant reductions in emissions, New Brunswick's ozone levels remain higher than normal with little variance over the past few years.

Figure 11 demonstrates reductions but these are still insignificant when compared to the number of years that both countries have been working on the issue. The Progress Report does not demonstrate whether a regulatory approach is actually more efficient in producing greater reductions. It would have been more effective to draw comparative conclusions as to whether a regulatory approach, such as the one used in Canada, is more effective than other techniques.

Mr. Dalzell's final suggestion for the 2016 Progress Report would be to mention the Air Quality Health Index and make use of total figure amounts for the number of health advisories that were issued in the regions in question. There should also be more website references showing the impacts on human health. The report should have also mentioned in Figure 9 of the report that even healthy individuals can be impacted by these changes in air quality. A large improvement that should be made to the report would be to mention CO₂ emissions and the relationship between CO₂ and climate change (i.e. burning of fossil fuels).

Ms. Margaret Dochoda from Ann Arbor, Michigan and Wolfe Island, Ontario referenced the impacts of wind power generation and remarked that air quality does not interfere with the navigation of military aircraft or bird species.

Ms. Vicky Johnstone, a resident of Ontario and Florida, thought that the 2016 Progress Report presents a thorough and accurate representation of the transboundary air quality between Canada and the United States. It highlights recent improvements made regarding air quality and mentions the areas that require more work.

Dr. Tim Lambert, Ph.D., from the Health Protection Branch at the Ministry of Health Ministry of Health in British Columbia, Canada, responded to the request for remarks and respectfully stated that Ministry did not have a comment at this point in time.

Ms. Nathalie Laviolette, M.Sc., from the Ministry of Sustainable Development in Quebec City, Quebec, compliments the report in stating that it is well-written but that it presents a generalized argument. The measurements in figures 10 to 13, which are in ppm, should be in ppb.

Ms. Shannon Phillips, the Minister of Alberta for the office of Environment and Parks also commented that the province of Alberta has made a commitment to completely phase out coal-fired electricity production by 2030 which will contribute to the reduction of acidic emissions in the region. The 2016 Progress Report is a useful data source regarding the collaborative measures taken by both the Canadian and American governments to manage transboundary air quality.

Finally, Ms. Nancy Southern, the Chair and CEO of ATCO Ltd., responded to the three questions posed by the IJC. To the first question, she responded that the long-term initiative, set

out by the *Air Quality Agreement*, has allowed for significant emissions reductions while improving transboundary air quality between Canada and the United States. Examples include the *Acid Rain Annex* to the 1991 agreement, which has created reductions in both SO₂ and NO_x in both countries, and the *Ozone Annex* which resulted in decreased levels of ozone through efforts to reduce concentrations of NO_x and VOC's in the *Pollutant Emission Management Area* (PEMA).

In response to the second question, Ms. Southern responded that a high-priority item would be to ensure that the *Pan-Canadian Framework on Clean Growth and Climate Change* also aims to improve transboundary air quality so that policies can be better aligned between Canada and the United States while also avoiding redundancy in the regulations. Other possibilities that can provide significant reductions of air pollutants by the *Agreement* are in regards to increasing the use of clean-burning natural gas and renewable energy as well as increasing the use of energy storage technologies, electric transportation, and low-carbon alternatives in remote communities currently powered by diesel fuel.

Lastly, in reply to the final question, Ms. Southern said that figures 1 to 4 provide an effective way to convey the information in a user-friendly format. Figures 5, 6, and 7 were also useful in understanding the state of emissions reductions of SO₂ and NO_x in Canada and the United States. She suggested that it may be useful to incorporate information from the regional/local level in response to the *National Air Quality Management System* as the proximity of large industrial facilities to smaller communities may impact the strength of the effects of air pollution.

4. Analysis & Conclusion – Prominent Themes

a) Theme 1 – Clear & Accurate Data

The responses varied according to the specific focus and interest of each individual making the submission but there were three common themes that seemed to stand out. The first of these themes is the notion of having clear and accurate data to present. Many of the comments commended the IJC for producing a concise and readable progress report that is both simple to understand and easy to follow.

b) Theme 2 – Emissions Reductions

The second main theme concerned emissions reductions with reference to the *Acid Rain Annex*, *Ozone Annex*, *Pollution Emission Management Area* (PEMA) in reducing concentrations of harmful emissions, and *New Source Reviews* and the *Regional Haze Rule* from the United States. These initiatives have been helpful in reducing the harmful emissions of SO₂ and NO_x in both Canada and the United States. Canada has been successful in reducing both SO₂ and NO_x emissions but has been relatively ineffective in reducing VOC emissions as it currently does not

have standards in place for this pollutant. Additionally, ground-level ozone levels have also been declining through the implementation of these initiatives; however, these levels have remained relatively stable in some regions of Canada which demonstrates that reduction efforts could be enhanced. Overall, industry has made significant improvements regarding their emissions reductions. An example of this would be the closure of coal-fired plants across the country which has reduced levels of SO₂, NO_x, and PM₂₅ in the atmosphere. An issue that should be addressed in the following progress report would be concerning CO₂ and its contribution to climate change. The IJC must maintain its position of adapting to changing environmental conditions in continuing to be effective leaders in reducing transboundary air pollution between Canada and the United States.

c) Theme 3 – Focus on Local Issues

Lastly, the third theme found throughout the comments was in relation to the 2016 Progress Report's alignment with the *Pan Canadian Framework on Clean Growth and Climate Change* with a particular focus on the local effects of air pollution. This theme maintains a local perspective as opposed to making generalizations about the effects of air pollution at a global scale. Air pollution affects all regions of the world in different ways because of variable wind patterns and the concentration/density of industrial activity within a given area. It would be more important to focus the subsequent report on the effects of air pollution at the local scale by narrowing the scope and language of the report. This would provide the public with more relevant results that would pertain to specific communities spanning both countries. This narrowed focus would also provide a basis for broader-scoped work in the future if needed.

5. Appendix

a) Sources from Which Comments Were Received

1. Mr. Ron Arial
2. Mr. Gordon W. Dalzell – St. John Citizens Coalition for Clean Air, BA, BSW, RSW, (Retired)
3. Ms. Margaret Dochoda – Resident
4. Ms. Vicky Johnstone – Resident of Ontario and Florida
5. Dr. Tim Lambert – Ph.D., Executive Director, Health Protection Branch of the Ministry of Health
6. Ms. Nathalie Laviolette – Master of Science in Biology, Director.
7. Ms. Shannon Phillips – Minister of Alberta, Officer of the Minister of Environment and Parks
8. Ms. Nancy C. Southern – Chair and CEO, ARTCO Ltd.

b) Written Text of the Submitted Comments

1. Mr. Ron Arial

<https://www.facebook.com/MillionAWeekClub/videos/186131798778168/>. We have radiation, Chem trails, of Nano particulates we barely get sunny day where the skies are clear, I don't know how are you measuring the air quality?

2. Mr. Gordon W. Dalzell – St. John Citizens Coalition for Clean Air, BA, BSW, RSW, (Retired)

The full comment is presented on pages 11-15 of this document.

3. Ms. Margaret Dochoda – Resident of Ann Arbor, Michigan & Wolfe Island, Ontario

Good air quality does not have blades physically slashing it or EMR emissions that interfere with aerial navigation--Ft. Drum's as well as birds', especially in major flyways across the Great Lakes and St Lawrence River (<https://www.sciencenews.org/article/birds-get-their-internal-compass-newly-id-eye-protein>). Likewise, carbon emissions are kept at levels consistent with a healthy Arctic and Great Lakes.

4. Ms. Vicky Johnstone – Resident of Ontario & Florida

The Air Quality Agreement Progress Report 2016 provides a thorough, concise, and accurate joint report from Canada and the United States on the quality of our transboundary air. I appreciate the Agreement being in place and the work of the IJC. The Report highlights the improvement in the air quality and the work that still needs to be done to safeguard our health and the health of our environment. I hope those that work and lead and live in our society will take into account the needs of the people and the environment in which we all live.

5. Dr. Tim Lambert – Ph.D., Executive Director, Health Protection Branch of the Ministry of Health

Thank you for your email of March 28, 2018, regarding the public comment period on the U.S. and Canadian governments' 2016 Progress Report under the Canada-United States 1991 Air Quality Agreement. The Honourable Adrian Dix, Minister of Health, has asked me to respond on his behalf. I apologize for the delayed response.

We appreciate you alerting us to this opportunity to submit comments on the 2016 Progress Report. The Health Protection Branch at the Ministry of Health reviewed the report and has no feedback at this time.

6. Ms. Nathalie Laviolette – Master of Science in Biology, Director

La Direction générale du suivi de l'état de l'environnement du Ministère a pris connaissance du document. Le rapport est bien fait, mais se veut très général. Nous

n'avons donc pas de commentaires précis à formuler si ce n'est d'une petite coquille : l'unité de mesure des concentrations d'O₃, des figures 10 à 13, est en "ppm" alors qu'elle devrait plutôt être en "ppb".

7. Ms. Shannon Phillips – Minister of Alberta, Officer of the Minister of Environment and Parks

Thank you for the invitation to provide comments on the International Joint Committee's 2016 Progress Report. I appreciate being kept apprised of Canada the United States' efforts to address transboundary air pollution and welcome the opportunity to provide the following information.

I commend the commission for its ongoing efforts to help Canada and the United States cooperatively manage air quality. The Government of Alberta is pleased to see that acidifying emissions are managed effectively in western Canada, as shown in your report.

I am pleased to note that Alberta has committed to phasing out all coal-fired electricity generation units by 2030, which will further reduce air pollution and acidifying emissions. The information contained in the report is very useful as a source of data and information on the collaborative measures being undertaken to manage air quality in North America.

Thank you again for allowing Alberta to provide feedback. Our government strives to make prudent management decisions to protect our province's air quality.

8. Ms. Nancy C. Southern – Chair and CEO of ATCO Ltd.,

The full comment is presented on pages 16-18 of this document.

August 8, 2018

FROM: Gordon W. Dalzell
Saint John Citizens Coalition for Clean Air
32 Dorothea Drive
Saint John, N.B. E2J 3J1
Canada

TO: Canadian Section
Secretary, Canadian Section
International Joint Commission
234 Laurier Avenue West 22nd Floor
Ottawa, ON K1P 6K6

On behalf of the Saint John Citizens Coalition for Clean Air, I am submitting comments on the 2016 Progress Report under the Canada – United States Air Quality agreement. This public interest environmental group has focused on air quality issues in our community of Saint John for the last twenty years or so. The ENGO is a registered member with the New Brunswick Environmental Network.

Unfortunately our volunteer typist was unable to type these comments therefore the handwritten format is submitted. I trust this will be satisfactory.

Please note I have mailed these comments on the deadline date of the Aug 8th, 2018. Please refer to the post mark on the envelope.

Respectively Submitted,
Gordon W. Dalzell

Overall as a clean air advocate, I am happy to learn that the ongoing efforts to address transboundary air quality continues to result in the improvement of the affected air sheds in both Canada and United States. In retrospect, I wish even more progress had been made at this point considering both countries have been working on this issue of long range transport of those pollutants contributing to acid disposition, ozone and smog for the last 5 years.

It's good to see the positive level of co-operation between the two countries since 1991 when both countries organized the need to address transboundary air pollution. For Canada and especially for those Canadians living in my area of southwest New Brunswick and Maritime provinces this agreement and progress reported in the 2014-16 period was most welcomed. Here in the Saint John, southwest part of New Brunswick is at the end of a tailpipe where transboundary air pollution travels into and our region from the eastern seaboard of U.S. where millions of people live and use vehicles emitting pollution from the exhaust systems of those vehicles move into our area. That is not to say our own region does not have our own sources of acid rain and ozone causing pollutants. Our local industrial sources have made considerable improvements in reducing sulphur dioxide but not as much for NO_x emissions. Our local air shed has seen improvements but ground level ozone levels have basically remained the same over this period in this progress paper.

Improvements in sulphur content in fuels, less bunker C oil and emission control technologies have all contributed to these improvements from our local sources. From boundary air pollution that contribute to ozone levels being too high is still a problem. We still have moderate AQHI readings.

This Progress Report continues to see reductions in those pollutants contributing to ozone acid disposition but despite those improvements during the 2014-2016 period it's not been enough to protect the health of vulnerable populations or restore the damage from acid rain disposition in the natural environment such as, in our lakes. During this period from 2014-16 I acknowledge the U.S EPA rule changes had a positive impact in seeing many of these coal fired power plants shut down. Many of these coal fired plans in N.S. Midwest were contributing to the long-range transport of SO₂ NO_x particulate matter (PM) entering the air sheds in the Québec – Windsor corridor. Ontario shut down it's coal fired power plants as well which helped in reducing these ozone causing pollutants.

My concern in the next years ahead is the change in regulations/rules in N.S. in respect to coal rules being changed that will see a resurgence of coal mines and coal use in N.S. Midwest as well as more easing of U.S. EPA rules and regulations that will result in more coal fired powered plants shut down. Many of these coal fired plants in the U.S. Midwest were contributing to the long range transport of SO₂ NO_x PM entering the air sheds in the Québec-Windsor corridor. This could bring us back to former years when pollutants from such coal fired plants could end up in the air sheds of the Québec-Windsor corridor. As well as our area in addition to those pollutants coming up the eastern seaboard of U.S. as well as our own sources.

This Progress Report makes no mention of CO₂ emission reductions as the result of less fossil fuel burning and more efficiency. It's a fact that any reduction in fossil fuel use such as cited in this Progress Report will result in less CO₂ emissions but no acknowledgement of this relationship in this Progress Report even though this Progress Report is about long range transport or transboundary issues, the Report could have recognized this relationship between CO₂ and those pollutants contributing to ozone formation and acid disposition.

Comments on the following section titled: Acid Rain Commitment and Emission Reductions

SO₂ Emission Reductions:

The report cites the implementation of the Canada-Wide Acid Rain Strategy for Post 2000 as driving these emission reductions. Granted this is the case but the report fails to mention another reason apart from the permanent closure of coal fired electric power generation facilities in Ontario - That reason is the substantially reduced capacity of heavy oil fuelled facilities such as Coleson Cave Electric Power Generation Facility a 1150MW facility here in Saint John, N.B. that operates at about 10 % of its approved capacity. Price of oil is just too prohibitive to burn. It is cheaper to import power from cleaner hydroelectric power from Québec. Here in New Brunswick, several major pulp mills have closed as well as a smaller coal fired generator station in Minto, Grand Lake, N.B. These actions have been a big contributing factor in the SO₂ reductions. There is no recognition in this report of these reduced capacities, closures in this region as why SO₂ levels been reduced.

Despite the 63 per cent reduction from Canada's total SO₂ emissions of 3.1 million metric tons in 1990; more has to be done. As the Progress Report states "many areas across Canada are still exposed to concentrations that exceed the capacity of the soils and surface waters to neutralize the acidic disposition, most notably in eastern Canada." I am encouraged that more reductions from the targeted industrial sectors will be a direct result of Canada's fairly new Air Quality Management System (AQMS).

United States – Canada – NO_x Emission Reduction

Canada:

Pleased to see Canada developing programs to further reduce NO_x emissions nationwide. Canada is taking NO_x emissions seriously with its 2016 regulations Multi Sector Air Pollutant Regulations to limit NO_x emissions from industrial boilers, heaters and stationary engines to limit NO_x and SO₂ emissions from cement manufacturing facilities. Legally binding regulations is the way to address these harmful emissions. I am very pleased that Canada established first ever mandatory national air pollution emission standards for major industrial facilities. It's regrettable that such a legally binding regulatory approach had not been established years ago. It would have saved lives especially for vulnerable populations such as those with respiratory and health conditions.

Ozone Annex:

Thankfully, the Ozone Annex was added to this agreement in 2000. It's just too bad that the precursor to ground level ozone VOOR and NO_x emissions were not substantially reduced to present transboundary ground level ozone from being formed and transported to the regions like ours. As the report clearly states, "Ground level ozone, a key component of smog, can cause or exacerbate respiratory illnesses and is especially harmful to young children, the elderly, and those suffering from chronic asthma and or bronchitis." Good to see this report acknowledges health impacts.

Despite the regulations in NO_x and VOC levels much more has to be done to achieve even more reductions of these pollutants that with sunlight cause this secondary pollutant being formed. In my view, VOC emissions reductions have been the weak area. Canada has no VOC

standards, same for New Brunswick. New Brunswick won't even adopt the Ontario standard for Benzene, a known cause of cancer. I am very concerned that ground level ozone levels for New Brunswick have pretty much stayed the same over years 2013, 2014, 2015, 2016. See reference 2015 Air Quality Monitoring Report by Department of Environment for New Brunswick. Despite decrease in levels of ambient ozone in the U.S and Canada it has not been sufficient to get ground level ozone reduced. Most of our high levels of ground level ozone are transported up here in the Québec-Windsor corridor from the U.S. precursors' pollutant. We are at the end of an exhaust pipe from pollution travelling up the northeast U.S. as well as pollutants from coal plant transported into Ontario and Québec. I am very concerned that recent changes in U.S. to re-open coal mines as an energy fuel will set both countries back. Along with those changes with allowing coal, I am really worried that slashing various U.S. EPA policy rules will also set us back causing ground level ozone and acid rain to either remain the same or even increase. Lets hope I am wrong and we will continue to see reductions in these problematic emissions that impact both countries with local and long range transport of such emissions.

This report needs to explain why New Brunswick's ozone levels are high (with little change over the years) with ground level ozone has basically remained at the same levels when Progress Report states "ambient concentrations of NO_x and VOC's reflect the significant reductions in emissions of those ozone precursors." If this is correct why aren't we seeing a reduction in ground level ozone levels here in New Brunswick?

Figure 11 is alarming:

Yes there have been some reductions but considering the two countries have been working on this for 19 years it's not good enough as far as I am concerned.

Comment on page 18 actions to address ozone:

In respect to Canada's action to address ozone, I cannot but help notice how much more Canada has implemented on the regulatory front compared to the United States. The report does not clarify whether such a regulatory approach results in far greater reductions in those ozone causing pollution. For example, in the United States, the report states "From 2013 to 2014 ozone season NO_x emissions from sources in the Clean Air Interstate Rule (CAIR) NO_x ozone season program decreased by 25,000 short tons (23,000 metric tons) or 5 per cent." That's not much of a decrease. I would have liked the report to draw some conclusions whether a regulatory legislative approach (like Canada) is more effective in seeing these precursors to ground level ozones reduced. I believe that regulatory approach is in fact more effective. I have to admit I am pretty impressed with Canada's regulatory approach in dealing with ozone levels.

The question is whether the current ozone standards are health protective. I submit they are not. Much more must be done by both countries to reduce the pollutants that create the secondary pollutant ozone. This is particularly urgent due to the increase in heat and the sun's intensity, a component in ozone formation. Add particulate to it and the smog levels still a problem. I observed this while visiting Hamilton area recently. Local sources such as the large steel mill as well as long range transport and the vehicle traffic all contribute to the problem. More must be done to protect the health of Canadians and Americans. On Aug 6 I noticed health air quality advisories were issued. In respect to the third question I found this Progress Report very informative in understanding the efforts and actions of both Canada and U.S. in reducing

the air pollutants subject of this agreement. It was a very good overview. I particularly liked the regulatory actions cited in this report. The stats, graphs were easy to understand for the most part.

More information on the impacts to the natural environment such as acid disposition as well as human health impacts need to be included in this report.

The report does cite and note that ground level ozone/smog can cause or exacerbate respiratory illnesses, harmful to young children, elderly and those suffering from chronic asthma/or bronchitis. This kind of information I expected to see in this report. I would recommend you include website references and these health impacts. There are web page references in this report but ones on health impacts seem to be lacking. The more web sites the better so the public can access more detail in their area of interest.

Question 2

The highest priority should be on reducing NO_x VOC's precursors to ground level ozone formation. The monitoring results for New Brunswick are too high and not being reduced fast enough. The report failed to identify that even reasonably healthy people can be impacted when ground level ozone rates are high. This needs to be noted as even healthy people playing golf for example, or bike riding or playing soccer can have their lungs harmed when these ozone levels are high. It's not just vulnerable individuals being harmed. The report should have included this fact on page 12 bottom paragraph under Figure 9.

Regarding Question 3 again

This report doesn't even mention CO₂ emissions, climate change or the relationship between these criteria air pollutants as fossil fuels and the CO₂ emissions. Although this international agreement is about transboundary air pollution between the two countries that are from burning fossil fuels; the burning of these fuels cause CO₂ emissions that cause climate change. There is no mention of this relationship fact. The report needs to correct this information gap. Anyone reading this who may not be informed about what causes e CO₂ emissions may think there is no connection. Hopefully, future reports will have some linkage information between CO₂ emissions and the burning of fossil fuels that produce the pollutants subject to this Air Quality Transboundary pollution problem.

There is no information or state on AQHI such as how many days were determined to be high in the 1 to 10 range. How many health advisories were issued in that Québec-Windsor corridor? How many Public Health advisories were declared during the 2014-2016 period? The public can relate to this kind of information as they are using the Air Quality Health Index (AQHI). I am recommending such information be included in the final Progress Report.

Respectfully submitted,
Gordon W. Dalzell, BA, BSW, RSW, (Retired)

P.S. Please review NB's 2015 Air Quality Monitoring Report page 8 for ozone. See page 13, 14. Re. VOC's. VOC's by concern here in Saint John's, N.B.

OFFICE OF THE CHAIR

August 3, 2018

Canadian Section

Secretary, Canadian Section
International Joint Commission
234 Laurier Avenue, West, 22nd Floor
Ottawa, Ontario
K1P 6K6

Attention: Ms. Sarah Lobrichon,

United States Section

Secretary, United States Section
International Joint Commission
1717 H Street NW, Suite 801
Washington, DC 20006

Attention: Mr. Frank Bevacqua,

We welcome the opportunity to provide comments to the *International Joint Commission (IJC)* on the 13TH biennial report prepared by the Canada-United States Air Quality Committee. This *2016 Progress Report* on the *Canada-United States 1991 Air Quality Agreement* describes progress by Canada and the United States to reduce transboundary air pollution. It summarizes the key bilateral actions initiated in the last two years as required under Article VIII. The report also provides an update on progress made towards meeting the commitments established in the Acid Rain and Ozone Annexes of the Agreement along with significant scientific and technical trends related to air pollution.

ATCO is a diversified global corporation delivering service excellence and innovative business solutions in Structures & Logistics, Electricity, Pipelines & Liquids and Retail Energy, with approximately 7,000 employees and assets of \$22 billion. Our Pipelines & Liquids business operates 9,400 km of natural gas transmission pipeline and serves almost 1.2 million Canadian customers via 41,000 km of natural gas distribution pipelines. We build, own and operate non-regulated industrial water, natural gas storage, hydrocarbon storage and NGL-related infrastructure with 52 PJ natural gas storage capacity. ATCO's electricity business unit has an ownership position in 15 power generating facilities in Canada. Approximately 12,000 km of transmission lines and 72,000 km of distribution lines that serve 241 communities. Our Structures & Logistics division has 4 manufacturing plants in North America and 655,000 square feet of manufacturing space dedicated to delivering workforce housing, innovative modular facilities, construction, site support services, and logistics and operations management.

OFFICE OF THE CHAIR

Guided by the request from the IJC report, ATCO is responding to the following three questions:

1. What do you think about the ongoing efforts of our two countries to address transboundary air quality?

The efforts to address transboundary air pollution by the Canada-United States Air Quality Committee are to be commended. This long-term initiative has yielded significant emissions reductions and continues to deliver material improvements in transboundary air quality. For example, the Acid Rain Annex to the 1991 Agreement has resulted in notable reductions in SO₂ and NO_x in both countries. As emerging issues have evolved, the commission has been able to add new initiatives demonstrating flexibility from the original agreement in a changing environment. Examples include the initiatives to protect visibility in Canada via the *Canadian Environmental Protection Act, 1999* and in the United States via the *New Source Review* and the *Regional Haze Rule*. Another example is the *Ozone Annex* which was added to the agreement in 2000. This has resulted in decreasing levels of ambient ozone due to focused efforts to reduce levels of NO_x and VOCs in the Pollutant Emission Management Area (PEMA).

2. What issues do you think should have the highest priority?

In recent years, considerable focus in Canada has been placed on progressing climate change policy. Several climate policy initiatives have been implemented in the past decade and, in 2016, the Canadian government introduced the *Pan Canadian Framework on Clean Growth and Climate Change*. As many of the actions required under climate policy will simultaneously reduce air emissions, it is essential that actions planned to address transboundary air quality be aligned with and account for climate policy in both countries. Aligning these policy initiatives will avoid unnecessary “pancaking” of redundant regulatory requirements and avoid inefficient environmental and economic outcomes.

Items that can deliver significant further reductions of air pollutants identified by the Canada – United States Air Quality Agreement are:

1. increased use of clean-burning natural gas to replace coal generation
2. increased renewable energy generation
3. increased use of energy storage technologies
4. increasing the electrification of transportation
5. increasing grid connections or the use of low-carbon alternatives in northern and remote communities to replace diesel

Substantial reductions of SO₂, NO_x, VOC, particulate matter and other pollutants can be realized through increasing the electrification of transportation (eliminating the emissions at the source) and the lowering of the emissions intensity of the electricity grid by using low emitting natural gas (new gas generation and enabling coal to gas boiler conversions), non-emitting renewables and energy storage technologies.

OFFICE OF THE CHAIR

3. What do you think about the information provided in this report?

The information presented provides a clear understanding of the reductions in priority emissions and the opportunities for further action. The use of the heat maps in Figures 1 to 4 to illustrate the reductions in wet sulfates and wet nitrates was an effective method to convey the information in an easy to understand visual format. Similarly, the use of graphs in Figures 5, 6 and 7 were useful in illustrating the significant reductions of SO₂ and NO_x in Canada and the USA.

Emissions inventories are useful however, the largest sources of emissions may not coincide with the potential opportunity to improve ambient air quality at the regional level (small sources in a local area may impact air quality more significantly than large industrial sources several hundred kilometers away). Going forward, information from activities undertaken in Canadian regions responding to the *National Air Quality Management System* should also be included.

Respectfully,

A handwritten signature in black ink, appearing to read "Nancy Southern". The signature is fluid and cursive, with a long horizontal stroke at the end.

Nancy C. Southern
Chair & Chief Executive Officer