# AGREEMENT BETWEEN THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA ON AIR QUALITY

The Government of Canada and the Government of the United States of America, hereinafter referred to as "the Parties",

Convinced that transboundary air pollution can cause significant harm to natural resources of vital environmental, cultural and economic importance, and to human health in both countries;

Desiring that emissions of air pollutants from sources within their countries not result in significant transboundary air pollution;

Convinced that transboundary air pollution can effectively be reduced through cooperative or coordinated action providing for controlling emissions of air pollutants in both countries;

Recalling the efforts they have made to control air pollution and the improved air quality that has resulted from such efforts in both countries;

Intending to address air-related issues of a global nature, such as climate change and stratospheric ozone depletion, in other fora;

Reaffirming Principle 21 of the Stockholm Declaration, which provides that "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction";

Noting their tradition of environmental cooperation as reflected in the Boundary Waters Treaty of 1909, the Trail Smelter Arbitration of 1941, the Great Lakes Water Quality Agreement of 1978, as amended, the Memorandum of Intent Concerning Transboundary Air Pollution of 1980, the 1986 Joint Report of the Special Envoys on Acid Rain, as well as the ECE Convention on Long-Range Transboundary Air Pollution of 1979;

Convinced that a healthy environment is essential to assure the well-being of present and future generations in Canada and the United States, as well as of the global community;

Have agreed as follows:

## Article I

*Definitions*

For the purposes of this Agreement:

1. "*Air pollution*" means the introduction by man, directly or indirectly, of substances into the air resulting in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems and material property and impair or interfere with amenities and other legitimate uses of the environment, and "air pollutants" shall be construed accordingly;

2. "*Transboundary air pollution*" means air pollution whose physical origin is situated wholly or in part within the area under the jurisdiction of one Party and which has adverse effects, other than effects of a global nature, in the area under the jurisdiction of the other Party;

3. "*Boundary Waters Treaty*" means the Treaty Relating to Boundary Waters and Questions Arising along the Boundary between Canada and the United States, signed at Washington on January 11, 1909;

4. "*International Joint Commission*" means the International Joint Commission established by the Boundary Waters Treaty.

## Article II

*Purpose*

The purpose of the Parties is to establish, by this Agreement, a practical and effective instrument to address shared concerns regarding transboundary air pollution.

## Article III

*General Air Quality Objective*

1. The general objective of the Parties is to control transboundary air pollution between the two countries.

2. To this end, the Parties shall:

   (a) in accordance with Article IV, establish specific objectives for emissions limitations or reductions of air pollutants and adopt the necessary programs and other measures to implement such specific objectives;
   (b) in accordance with Article V, undertake environmental impact assessment, prior notification, and, as appropriate, mitigation measures;
   (c) carry out coordinated or cooperative scientific and technical activities, and economic research, in accordance with Article VI, and exchange information, in accordance with Article VII;
   (d) establish institutional arrangements, in accordance with Articles VIII and IX; and
   (e) review and assess progress, consult, address issues of concern, and settle disputes, in accordance with Articles X, XI, XII and XIII.

## Article IV

*Specific Air Quality Objectives*

1. Each Party shall establish specific objectives, which it undertakes to achieve, for emissions limitations or reductions of such air pollutants as the Parties agree to address. Such specific objectives will be set forth in annexes to this Agreement.

2. Each Party's specific objectives for emissions limitations or reductions of sulphur dioxide and nitrogen oxides, which will reduce transboundary flows of these acidic deposition precursors, are set forth in Annex 1. Specific objectives for such other air pollutants as the Parties agree to address should take into account, as appropriate, the activities undertaken pursuant to Article VI.

3. Each Party shall adopt the programs and other measures necessary to implement its specific objectives set forth in any annexes.

4. If either Party has concerns about the programs or other measures of the other Party referred to in paragraph 3, it may request consultations in accordance with Article XI.

## Article V

*Assessment, Notification, and Mitigation*

1. Each Party shall, as appropriate and as required by its laws, regulations and policies, assess those proposed actions, activities and projects within the area under its jurisdiction that, if carried out, would be likely to cause significant transboundary air pollution, including consideration of appropriate mitigation measures.

2. Each Party shall notify the other Party concerning a proposed action, activity or project subject to assessment under paragraph 1 as early as practicable in advance of a decision concerning such action, activity or project and shall consult with the other Party at its request in accordance with Article XI.

3. In addition, each Party shall, at the request of the other Party, consult in accordance with Article XI concerning any continuing actions, activities or projects that may be causing significant transboundary air pollution, as well as concerning changes to its laws, regulations or policies that, if carried out, would be likely to affect significantly transboundary air pollution.

4. Consultations pursuant to paragraphs 2 and 3 concerning actions, activities or projects that would be likely to cause or may be causing significant transboundary air pollution shall include consideration of appropriate mitigation measures.

5. Each Party shall, as appropriate, take measures to avoid or mitigate the potential risk posed by actions, activities or projects that would be likely to cause or may be causing significant transboundary air pollution.

6. If either Party becomes aware of an air pollution problem that is of joint concern and requires an immediate response, it shall notify and consult the other Party forthwith.

## Article VI

*Scientific and Technical Activities and Economic Research*

1. The Parties shall carry out scientific and technical activities, and economic research, as set forth in Annex 2, in order to improve their understanding of transboundary air pollution concerns and to increase their capability to control such pollution.

2. In implementing this Article, the Parties may seek the advice of the International Joint Commission regarding the conduct of monitoring activities.

## Article VII

*Exchange of Information*

1. The Parties agree to exchange, on a regular basis and through the Air Quality Committee established under Article VIII, information on:

   (a) monitoring;
   (b) emissions;
   (c) technologies, measures and mechanisms for controlling emissions;
   (d) atmospheric processes; and
   (e) effects of air pollutants,

   as provided in Annex 2.

2. Notwithstanding any other provisions of this Agreement, the Air Quality Committee and the International Joint Commission shall not release, without the consent of the owner, any information identified to them as proprietary information under the laws of the place where such information has been acquired.

## Article VIII

*The Air Quality Committee*

1. The Parties agree to establish and maintain a bilateral Air Quality Committee to assist in the implementation of this Agreement. The Committee shall be composed of an equal number of members representing each Party. It may be supported by subcommittees, as appropriate.

2. The Committee's responsibilities shall include:

   (a) reviewing progress made in the implementation of this Agreement, including its general and specific objectives;
   (b) preparing and submitting to the Parties a progress report within a year after entry into force of this Agreement and at least every two years thereafter;
   (c) referring each progress report to the International Joint Commission for action in accordance with Article IX of this Agreement; and
   (d) releasing each progress report to the public after its submission to the Parties.

3. The Committee shall meet at least once a year and additionally at the request of either Party.

## Article IX

*Responsibilities of the International Joint Commission*

1. The International Joint Commission is hereby given, by a Reference pursuant to Article IX of the Boundary Waters Treaty, the following responsibilities for the sole purpose of assisting the Parties in the implementation of this Agreement:

(a) to invite comments, including through public hearings as appropriate, on each progress report prepared by the Air Quality Committee pursuant to Article VIII;
(b) to submit to the Parties a synthesis of the views presented pursuant to sub-paragraph (a), as well as the record of such views if either Party so requests; and
(c) to release the synthesis of views to the public after its submission to the Parties.

2. In addition, the Parties shall consider such other joint references to the International Joint Commission as may be appropriate for the effective implementation of this Agreement.

## Article X

*Review and Assessment*

1. Following the receipt of each progress report submitted to them by the Air Quality Committee in accordance with Article VIII and the views presented to the International Joint Commission on that report in accordance with Article IX, the Parties shall consult on the contents of the progress report, including any recommendations therein.

2. The Parties shall conduct a comprehensive review and assessment of this Agreement, and its implementation, during the fifth year after its entry into force and every five years thereafter, unless otherwise agreed.

3. Following the consultations referred to in paragraph 1, as well as the review and assessment referred to in paragraph 2, the Parties shall consider such action as may be appropriate, including:

(a) the modification of this Agreement;
(b) the modification of existing policies, programs or measures.

## Article XI

*Consultations*

The Parties shall consult, at the request of either Party, on any matter within the scope of this Agreement. Such consultations shall commence as soon as practicable, but in any event not later than thirty days from the date of receipt of the request for consultations, unless otherwise agreed by the Parties.

## Article XII

*Referrals*

With respect to cases other than those subject to Article XIII, if, after consultations in accordance with Article XI, an issue remains concerning a proposed or continuing action, activity, or project that is causing or would be likely to cause significant transboundary air pollution, the Parties shall refer the matter to an appropriate third party in accordance with agreed terms of reference.

## Article XIII

*Settlement of Disputes*

1. If, after consultations in accordance with Article XI, a dispute remains between the Parties over the interpretation or the implementation of this Agreement, they shall seek to resolve such dispute by negotiations between them. Such negotiations shall commence as soon as practicable, but in any event not later than ninety days from the date of receipt of the request for negotiation, unless otherwise agreed by the Parties.

2. If a dispute is not resolved through negotiation, the Parties shall consider whether to submit that dispute to the International Joint Commission in accordance with either Article IX or Article X of the Boundary Waters Treaty. If, after such consideration, the Parties do not elect either of those options, they shall, at the request of either Party, submit the dispute to another agreed form of dispute resolution.

## Article XIV

*Implementation*

1. The obligations undertaken under this Agreement shall be subject to the availability of appropriated funds in accordance with the respective constitutional procedures of the Parties.

2. The Parties shall seek:

   (a) the appropriation of funds required to implement this Agreement;
   (b) the enactment of any additional legislation that may be necessary to implement this Agreement;
   (c) the cooperation of Provincial and State Governments as necessary to implement this Agreement.

3. In implementing this Agreement, the Parties shall, as appropriate, consult with Provincial or State Governments, interested organizations, and the public.

## Article XV

*Existing Rights and Obligations*

Nothing in this Agreement shall be deemed to diminish the rights and obligations of the Parties in other international agreements between them, including those contained in the Boundary Waters Treaty and the Great Lakes Water Quality Agreement of 1978, as amended.

## Article XVI

*Entry into Force, Amendment, Termination*

1. This Agreement, including Annexes 1 and 2, shall enter into force upon signature by the Parties.

2. This Agreement may be amended at any time by agreement of the Parties in writing.

3. Either Party may terminate this Agreement upon one year's written notice to the other Party, in which case any annexes will also terminate.

4. Annexes constitute an integral part of this Agreement, except that, if an annex so provides, either Party may terminate such annex in accordance with the terms of that annex.

## ANNEX 1

## SPECIFIC OBJECTIVES CONCERNING SULPHUR DIOXIDE AND NITROGEN OXIDES

### 1. Sulphur Dioxide

A. *For the United States:*[1]

1. Reduction of annual sulphur dioxide emissions by approximately 10 million tons[2] from 1980 levels in accordance with Title IV of the Clean Air Act[3] i.e., reduction of annual sulphur dioxide emissions to approximately 10 million tons below 1980 levels by 2000 (with the exception of sources repowering with qualifying clean coal technology in accordance with section 409 of the Clean Air Act, and sources receiving bonus allowances in accordance with section 405(a)(2) and (3) of the Clean Air Act).

2. Achievement of a permanent national emission cap of 8.95 million tons of sulphur dioxide per year for electric utilities by 2010, to the extent required by Title IV of the Clean Air Act.

3. Promulgation of new or revised standards or such other action under the Clean Air Act as the Administrator of the U.S. Environmental Protection Agency (EPA) deems appropriate, to the extent required by section 406 of the Clean Air Act Amendments of 1990 (P. L. 101-549), aimed at limiting sulphur dioxide emissions from industrial sources in the event that the Administrator of EPA determines that annual sulphur dioxide emissions from industrial sources may reasonably be expected to exceed 5.6 million tons.

B. *For Canada:*

1. Reduction of sulphur dioxide emissions in the seven easternmost Provinces to 2.3 million tonnes per year by 1994 and the achievement of a cap on sulphur dioxide emissions in the seven easternmost Provinces at 2.3 million tonnes per year from 1995 through December 31, 1999.

2. Achievement of a permanent national emissions cap of 3.2 million tonnes per year by 2000.

### 2. Nitrogen Oxides

A. *For the United States:*[4]

With a view to a reduction of total annual emissions of nitrogen oxides by approximately 2 million tons from 1980 emission levels by 2000:

1. *Stationary Sources*

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[1]. Applies only to reductions in emissions in the forty-eight contiguous States and the District of Columbia.

[2]. 1 ton = 0.91 tonnes (metric tons).

[3]. All references to the Clean Air Act refer to the Act as amended November 15, 1990.

[4]. Applies only to reductions in emissions in the forty-eight contiguous States and the District of Columbia.

Implementation of the following nitrogen oxides control program for electric utility boilers to the extent required by Title IV of the Clean Air Act:

(a) By January 1, 1995, tangentially fired boilers must meet an allowable emission rate of 0.45 lb/mmBtu and dry bottom wall-fired boilers must meet an allowable emission rate of 0.50 lb/mmBtu (unless the Administrator of EPA determines that these rates cannot be achieved using low NOx burner technology).

(b) By January 1, 1997, EPA must set allowable emission limitations for:

— wet bottom wall-fired boilers;
— cyclones;
— units applying cell burner technology; and
— all other types of utility boilers.

2. *Mobile Sources*

Implementation of the following mobile source nitrogen oxides control program to the extent required by Title II of the Clean Air Act:

(a) Light Duty Trucks (LDT) (up to 6000 lbs gross vehicle weight rating (GVWR)) and Light Duty Vehicles (LDV) — standards for model years after 1993:

| | **5 yrs/50,000 miles (useful life)** | **10 yrs/100,000 miles** |
|---|---|---|
| LDTs (0 to 3750 lbs Loaded Vehicle Weight (LVW)) and LDVs | 0.4 grams per mile (gpm) | 0.6 gpm |
| Diesel LDTs (0 to 3750 lbs LVW) and LDVs (before 2004) | 1.0 gpm | 1.25 gpm |
| LDTs (3751 to 5750 lbs LVW) | 0.7 gpm[5] | 0.97 gpm |

In model year 1994, 40% of each manufacturer's sales volume must meet the above standards. In 1995, the percentage shall increase to 80% and, after 1995, to 100%.

(b) Light Duty Trucks more than 6000 lbs GVWR (after model year 1995):

[5]. This standard does not apply to diesel-fueled LDTs (3751 to 5750 lbs LVW).

| | Gasoline 5 yrs/50,000 miles | Gasoline and Diesel 11 yrs/120,000 miles |
|---|---|---|
| LDTs (3751 to 5750 lbs Test Weight (TW)) | 0.7 gpm | 0.98 gpm |
| LDTs (over 5750 lbs TW) | 1.1 gpm | 1.53 gpm |

In model year 1996, 50% of each manufacturer's sales volume must meet the above standards. Thereafter, 100% of each manufacturer's sales volume must meet the standard.

(c) Heavy Duty Trucks (HDT) of more than 8500 lbs GVWR (after model year 1990):

| | Gasoline and Diesel Engines |
|---|---|
| HDT (effective model year 1991[6]) | 5.0 grams per brake horsepower-hour[6] (gbhp-hr) |
| HDT (model year 1998 and later) | 4.0 gbhp-hr |

Useful life[6]:

| | |
|---|---|
| gasoline engines | 8 years/110,000 miles |
| diesel engines | |
| light heavy-duty: | 8yrs/110,000 miles |
| medium heavy-duty: | 8yrs/185,000 miles |
| heavy heavy-duty: | 8yrs/290,000 miles |

B. *For Canada:*

1. *Stationary Sources*

(a) As an interim requirement, reduction, by 2000, of annual national emissions of nitrogen oxides from stationary sources by 100,000 tonnes below the year 2000 forecast level of 970,000 tonnes.

(b) By January 1, 1995, development of further annual national emission reduction requirements from stationary sources to be achieved by 2000 and/or 2005.

2. *Mobile Sources*

(a) Implementation of a more stringent mobile source nitrogen oxides control program for gasoline powered vehicles with standards no less stringent than the following:

[6]. As set forth in EPA regulations in effect as of the entry into force of this Agreement.

**Light Duty Vehicles** (up to 6000 lbs GVWR)
(By model year 1996 for passenger cars)
(By model year 1996 for light duty trucks[7])

| | **5 yrs/80,000 kilometres (useful life)** |
|---|---|
| Cars and Light Duty Trucks (0 to 3750 lbs LVW) | 0.4 gpm |
| Light Duty Trucks (3751 to 5750 lbs LVW) | 0.7 gpm |

**Medium Duty Vehicles** (6001 to 8500 lbs GVWR)
(By model year 1997[7])

| | **5 yrs/80,000 kilometres (useful life)** |
|---|---|
| 0 to 3750 lbs LVW | 0.4 gpm |
| 3751 to 5750 lbs LVW | 0.7 gpm |
| Over 5750 lbs LVW | 1.1 gpm |

**Heavy Duty Vehicles** (over 8500 lbs GVWR)
(By model year 1998[7])

| | **8 years/110,000 miles (useful life)** |
|---|---|
| Over 8500 lbs GVWR | 4.0 gbhp-hr |

(b) Implementation of a more stringent mobile source nitrogen oxides control program for diesel powered vehicles and engines with standards, to the extent possible, no less stringent than the standards for the respective duty classes of gasoline powered vehicles and engines.

## 3. Compliance Monitoring

### A. *Utility Units*

#### 1. *For the United States:*

Requirement that, by January 1, 1995, each new electric utility unit and each electric utility unit greater than 25 MWe existing on the date of enactment of the Clean Air Act Amendments of 1990 (November 15, 1990) emitting sulphur dioxide or nitrogen oxides install and operate continuous emission monitoring systems or alternative systems approved by the Administrator of EPA, to the extent required by section 412 of the Clean Air Act.

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[7]. The Government of Canada will propose this effective date; the final effective date is subject to the procedures and outcome of the regulation development process.

2. *For Canada:*

Requirement that, by January 1, 1995, Canada estimate sulphur dioxide and nitrogen oxides emissions from each new electric utility unit and each existing electric utility unit greater than 25 MWe using a method of comparable effectiveness to continuous emission monitoring, as well as investigate the feasibility of using and implement, where appropriate, continuous emission monitoring systems.

3. *For Both Parties:*

The Parties shall consult, as appropriate, concerning the implementation of the above.

B. *Other Major Stationary Sources*

Requirement that the Parties work towards utilizing comparably effective methods of emission estimation for sulphur dioxide and nitrogen oxides emissions from all major industrial boilers and process sources, including smelters.

**4. Prevention of Air Quality Deterioration and Visibility Protection**

Recognizing the importance of preventing significant air quality deterioration and protecting visibility, particularly for international parks, national, state, and provincial parks, and designated wilderness areas:

A. *For the United States:*

Requirement that the United States maintain means for preventing significant air quality deterioration and protecting visibility, to the extent required by Part C of Title I of the Clean Air Act, with respect to sources that could cause significant transboundary air pollution.

B. *For Canada:*

Requirement that Canada, by January 1, 1995, develop and implement means affording levels of prevention of significant air quality deterioration and protection of visibility comparable to those in paragraph A above, with respect to sources that could cause significant transboundary air pollution.

C. *For Both Parties:*

The Parties shall consult, as appropriate, concerning the implementation of the above.

## ANNEX 2

## SCIENTIFIC AND TECHNICAL ACTIVITIES AND ECONOMIC RESEARCH

1. For the purpose of determining and reporting on air pollutant concentrations and deposition, the Parties agree to coordinate their air pollutant monitoring activities through:

   (a) coordination of existing networks;
   (b) additions to monitoring tasks of existing networks of those air pollutants that the Parties agree should be monitored for the purposes of this Agreement;
   (c) addition of stations or networks where no existing monitoring facility can perform a necessary function for purposes of this Agreement;
   (d) the use of compatible data management procedures, formats, and methods; and
   (e) the exchange of monitoring data.

2. For the purpose of determining and reporting air emissions levels, historical trends, and projections with respect to the achievement of the general and specific objectives set forth in this Agreement, the Parties agree to coordinate their activities through:

   (a) identification of such air emissions information that the Parties agree should be exchanged for the purposes of this Agreement;
   (b) the use of measurement and estimation procedures of comparable effectiveness;
   (c) the use of compatible data management procedures, formats, and methods; and
   (d) the exchange of air emission information.

3. The Parties agree to cooperate and exchange information with respect to:

   (a) their monitoring of the effects of changes in air pollutant concentrations and deposition with respect to changes in various effects categories, e.g. aquatic ecosystems, visibility, and forests;
   (b) their determination of any effects of atmospheric pollution on human health and ecosystems, e.g. research on health effects of acid aerosols, research on the long-term effects of low concentrations of air pollutants on ecosystems, possibly in a critical loads framework;
   (c) their development and refinement of atmospheric models for purposes of determining source receptor relationships and transboundary transport and deposition of air pollutants;
   (d) their development and demonstration of technologies and measures for controlling emissions of air pollutants, in particular acidic deposition precursors, subject to their respective laws, regulations and policies;
   (e) their analysis of market-based mechanisms, including emissions trading; and
   (f) any other scientific and technical activities or economic research that the Parties may agree upon for purposes of supporting the general and specific objectives of this Agreement.

4. The Parties further agree to consult on approaches to, and share information and results of research on, methods to mitigate the impacts of acidic deposition, including the environmental effects and economic aspects of such methods.