

**SPECIFIC AGREEMENT ON VOLUNTARY
GREENHOUSE GAS REDUCTIONS IN QUÉBEC**

BETWEEN

**MINISTER OF STATE FOR MUNICIPAL AFFAIRS AND GREATER
MONTRÉAL, THE ENVIRONMENT, AND WATER AND MINISTER OF
ENVIRONMENT, MR. ANDRÉ BOISCLAIR, FOR AND ON BEHALF OF THE
GOVERNMENT OF QUEBEC,**

hereinafter called "the Minister"

AND

**Alcan Inc., a legally constituted corporate body, with
headquarters at 1188, rue Sherbrooke Ouest in Montréal, Canada, represented
by Mr. Jean Simon, duly authorized as he so declares,**

hereinafter called "the Entity"

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WHEREAS an agreement entitled "Framework Agreement on voluntary greenhouse gas reductions in Québec" (attached to this agreement as appendix) was concluded between the government of Québec and the Aluminium Association of Canada (AAC) on January 31, 2002, hereinafter referred to as the "Framework Agreement";

WHEREAS the three entities that constitute the Aluminium Association of Canada have committed themselves to fulfill the Framework Agreement through the signing of Specific Agreements on voluntary greenhouse gas (GHG) reductions in Québec;

WHEREAS Alcan Inc. is part of the Aluminium Association of Canada and whereas the latter has signed the Framework Agreement;

WHEREAS the Framework Agreement defines the essential content of the Specific Agreements;

WHEREAS it is opportune to ensure the growth of the aluminium industry in Québec;

WHEREAS studies on the life cycle of aluminium and the impact of its use, in particular in the transport sector, reveal that aluminium compares favourably to other materials, it is advisable to record the direct and indirect GHG emissions which allows to register emissions particular to a sector as well as upstream and downstream emissions.

THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. INTERPRETATION

The parties aim to implement the Framework Agreement. To this end, the parties agree:

That the entirety of "whereas" clauses and articles of the Framework Agreement, entered into on January 31, 2002 with the Aluminium Association of Canada, as well as the appendices, constitute integral parts of this Specific Agreement;

That in the case of a conflict between the provisions of the Framework Agreement and those of this present agreement, the provisions of the Framework Agreement override those of this present agreement;

That this present Specific Agreement is fundamentally carried out on a contractual basis and does not exempt the Entity from adhering to the Environment Quality Act, hereinafter referred to as the "Law", and to its regulations, in particular to obtaining and adhering to certificate of authorization and depollution attestation prescribed by the Law, just as it does not entitle the Entity to sanctions due to this Law and its regulations, or to any other law by any party hereto;

That, should a provision of the Specific Agreement be incompatible with a provision of the Law and its regulations, or any other law, the latter provision shall have precedence over the one in the Specific Agreement.

2. PRINCIPLES OF IMPLEMENTATION

The parties agree:

That the GHG emission targets shall be determined annually or multi-annually;

That the reference years shall be determined according to the definition set forth in Appendix B of the Framework Agreement;

That, at the expiration of the Specific Agreement, the Minister shall officially inform the Entity of the GHG emissions and reductions that were calculated at the concluding stages of the Specific Agreement, in addition to providing an overview of all transactions, mechanisms and measures employed in order to keep in compliance with the agreement;

That the terms of this Specific Agreement shall be publicized jointly;

To resort to the best data available when determining the actual emissions and for setting the GHG emission targets according to the inventory methodology foreseen in the Framework Agreement;

To collaborate and to actively participate, when necessary, in identifying and obtaining the most relevant information for determining the actual emissions and for setting the GHG emission target;

That GHG emissions and emission reductions shall be derived from data or factors that best represent the different facilities of the Entity, and that, at the expiration of the Specific Agreement, the Entity will have at its disposal the GHG emission factors that are specific for each of its facilities (e.g. perfluorocarbons (PFCs) emanating from electrolytic processes and, if applicable, methane (CH₄), emitted through the Söderberg process;

That the GHG emission and emission reduction targets agreed upon in this Specific Agreement shall be regarded as strictly voluntary, excluding them thus from being viewed as criteria, norms, environmental emission objectives, or quota of legal nature;

That the implementation of this present agreement shall be carried out in a spirit of intra-and intersectorial equity and fairness, taking into account the particular circumstances of each Entity having signed a Specific Agreement and each industrial sector.

3. SCOPE OF APPLICATION

The parties agree that this Specific Agreement applies to the facilities listed below,

- a) Electric power plants;
- b) Harbourfront facilities;
- c) Alma plant;
- d) Arvida plant;

- e) Beauharnois plant;
- f) Grande Baie plant;
- g) Laterrière plant;
- h) Shawinigan plant; and
- i) Vaudreuil plant;

The Electric Power plants are listed in appendix 2.

The agreement will also apply to "La Compagnie de Chemin de Fer Roberval-Saguenay", a company wholly owned and managed by an Alcan subsidiary and the acceptance statement of which is included in this appendix.

To the end of implementing this present Article, the production capacity authorized by any certificate of authorization or by any other permit issued by the Law will be considered as the official production capacity for each facility.

4. AGREEMENT BETWEEN THE PARTIES ON CERTAIN VARIABLES FOR THE IMPLEMENTATION OF THE FRAMEWORK AGREEMENT

The parties agree:

That the base year chosen by the Entity starts on January 1, 1999 and ends on December 31, 1999. The non-audited direct emissions for that period were determined to be 4,475,553 tons of CO₂-equivalent. The total of non-audited emissions for that period, including non-audited, indirect emissions, were determined to be 4,600,971 tons of CO₂-equivalent;

That the Entity shall establish the emission targets in absolute values, i.e. a total quantity of CO₂-equivalent emissions for actually produced aluminium;

That the first target period for voluntary GHG reductions shall last from January 1, 1999 through December 31, 2002;

That the first direct emission target shall be 4,189,900 tons of CO₂-equivalent per year for the first target period of voluntary GHG reductions before adjustments specified in Article 5.2.4. It is understood that the indirect emissions (Appendix 1) will be calculated separately;

That the second target period for voluntary GHG reductions shall last from January 1, 2003 through December 31, 2003;

That the second direct emission target shall be 4,180,500 tons of CO₂-equivalent for the second target period of voluntary GHG reductions before adjustments specified in Article 5.2.4.;

That the independent expert who shall audit the data of the base year (1999) of the voluntary GHG reductions, shall be designated within the first three months after the signing of the Specific Agreement;

That the trial balance be examined at the end of the Specific Agreement, and, if requested by the Entity, at the end of a reduction period chosen by the Entity.

5. COMMITMENTS OF THE PARTIES CONCERNING THE IMPLEMENTATION OF THE SPECIFIC AGREEMENT

5.1. Emission data and other information

5.1.1. Determination of information

The parties agree to negotiate on the content of information to be transmitted throughout the duration of the Specific Agreement. The information, to be prepared by the Entity, should also be itemized in regard to its facilities.

The parties agree that the emissions inventory is to be produced in compliance with the methodology described in the Framework Agreement. To the satisfaction of the Minister, the parties also agree that comparable PFC emission measurements be available, by the end of the agreement, for each of the primary aluminium production facilities mentioned in Article 3. The Entity will verify, with a methodology agreed to by the Minister, if significant CH₄ emissions occur in the Söderberg potrooms of these facilities.

5.1.2. Audit

The parties agree that an audit of the results of the Specific Agreement be conducted at least twice during the agreement, i.e. at the beginning and at the end of the agreement. The Entity may also choose another point in time during the agreement period for the audit, e.g. during a trial balance.

The parties commit to agree upon an audit protocol of the GHG emission data.

The parties agree to appoint, during the three months before each end of a target period, an independent expert who shall conduct the audit of the reported and related data.

The parties agree that past GHG emission data, audited by an independent expert for the years of the first target period until 2002, be issued within 12 months of the signing of the Specific Agreement.

The parties agree that the Entity shall provide the chosen independent expert with the necessary information for auditing the achievement of the fixed target. The information shall be, among other things, itemized for each of the facilities.

5.1.3. Transmission

The Entity agrees that the unverified, to-be-transmitted information and all other information relevant to the implementation of the Specific Agreement be transmitted to the Minister within four months following the end of each calendar year.

The Entity agrees to submit the verified data to the Minister no later than:

- December 31, 2003 for historical data and data from the base year, and
- Six months after the end of each subsequent audit mentioned in Article 5.1.2.

5.1.4. Validation

The Minister agrees to begin the process of validating the verified data produced by the Entity within two months following its receipt.

The Minister agrees to acknowledge the validity or invalidity of the verified data produced by the Entity within six months following its receipt.

5.1.5. Registration

The Minister agrees to record the audited, and by him to be validated, data in an appropriate register. In the case of indirect reductions, or reductions related to life cycle activities listed in Appendix 1, the data will be managed separately.

5.1.6. Publication

The parties agree to collaborate closely and diligently to publicize the results of the Specific Agreement. The publication may be done individually or jointly at the discretion of the parties.

5.2. Emission targets

5.2.1. Emission target proposals

The Entity agrees to propose to the Minister GHG emission targets for a future period as well as for this target period. These should be proposed at the latest at the end of the first quarter of the new target period, otherwise the target of the previous target period will be carried over.

The Minister may propose, for negotiation purposes, GHG emission targets or emission reductions to be reached by the Entity. The proposal of these targets is subject to the same, above-mentioned deadlines. These targets should be evaluated on a strictly voluntary basis and cannot be considered as criteria, standards, emission objectives, or legal quotas.

5.2.2. Setting emission targets

The parties agree that emission targets of multi-year targets shall maintain an average during the target period.

The parties agree to proceed diligently in setting GHG emission targets during the present Specific Agreement.

When setting the emission target for each future target period, the parties agree to take into account the emissions and situations specific for each of the Entity's facilities in addition to other significant parameters.

The Minister agrees to begin negotiating target emissions with the Entity no later than two months after receiving the Entity's proposal.

5.2.3. Review of emission targets

The parties agree to diligently review any target or other parameter of an agreement should exceptional circumstances so require.

5.2.4. Determining adjustments

The parties agree that target adjustments, following a modification of the production capacity or of the use of this capacity, will be made at the end of the year during which modifications occur and in accordance with the terms and conditions of the Framework Agreement.

5.3. Emission reduction transfers

The Minister agrees to diligently certify and register the results of the emission reduction transfers. Transfers must meet the terms and conditions established by the Minister under Article 5 of the Framework Agreement.

6. SPECIFIC COMMITMENTS OF THE ENTITY

6.1. GHG reduction

The Entity agrees that the present Specific Agreement is part of a commitment to an overall GHG emission reduction of its facilities mentioned in Article 3 of the present Specific Agreement. This commitment begins with the base year (as determined in Article 4) and lasts through the expiration of this agreement.

Provided the condition of continuous electricity supply, the Entity agrees that the GHG-emission performance per production unit achieved by the Entity during the base year shall be, if not improved, maintained for the entire duration of the Specific Agreement. This assessment shall take into consideration the normal variability of emissions, start-up periods of the pots, and major operational changes.

6.2. Reported information

The Entity agrees to assure the Minister that the reported data reflects reality and that they will be inventoried in compliance with the principles and methodologies specified in the Framework Agreement and in the present Specific Agreement.

The Entity agrees that the data shall be registered and reported in the format agreed upon under Article 7.2. The Minister will receive an electronic and a printed version of the data.

The Entity agrees that reported data shall be consistent with those submitted to the different levels of government or to government and paragonovernmental organizations.

The Entity agrees to provide the Minister, inasmuch as it is possible, with all the necessary information to ensure proper management of the present Specific Agreement.

6.3. Management of the Specific Agreement by the Entity

The Entity agrees to provide the necessary resources to ensure proper management of the Specific Agreement.

The Entity agrees to cover the costs for auditing the information required for submitting its reports to the Minister.

6.4. Promotion of Best Practices

The Entity agrees to develop, implement, and periodically update appropriate protocols and guidelines in order to reduce its GHG emissions. The Entity will strive to involve operation personnel directly in its efforts to reduce GHG emissions.

The Entity agrees to maintain, between each of the facilities listed in Article 3 of the present Specific Agreement, a climate that is conducive for exchanging information on methods and technologies that contribute to optimizing operations while minimising GHG emissions. This commitment ensures the preservation of the environment and climate, as well as sustainable development.

The Entity agrees that, in addition to meeting the targets set out in the present Specific Agreement, it will seek to raise awareness among suppliers and the local community to promote GHG emission reductions.

7. SPECIFIC COMMITMENTS OF THE MINISTER

7.1. Considerations for target definition

The Minister agrees that emission targets shall be established by taking into account the Entity's emission history, its previous reductions, as well as particular circumstances of its facilities.

7.2. Management of the Specific Agreement

The Minister agrees to provide available resources for the proper management of the Specific Agreement.

The Minister agrees to provide the Entity with the information, in electronic form, to be forwarded in the framework of this Specific Agreement within four months following the signing of this agreement.

7.3. Collaboration

The parties agree to collaborate in the promotion of projects related to

GHG emission reductions, the efficient use of energy, and the awareness raising for the importance of reducing GHG emissions.

7.4. Additional recognition

The Minister agrees to qualitatively acknowledge those entities that distinguish themselves by the excellence of their results. To this effect, an Entity may submit to the Minister's acknowledgement and appreciation any documentation relating to GHG management that shows obtained results and expended efforts in the following areas:

- a) Reaching, maintaining, or improving a level of excellence in GHG management in a specific facility;
- b) Establishing a standard of excellence in GHG management in all or several of the Entity's facilities with respect to:
 - basic or applied research;
 - the application or transfer of technology;
 - the promotion of the sharing of exemplary practices between the Entity's facilities or between entities;
 - the involvement of employees on all levels;
- c) The involvement of an Entity or one of its facilities in its community;
- d) Any other activity directly or indirectly related to GHG emissions management.

8. TERM OF AGREEMENT

This specific agreement will take effect on the date it is signed and will expire on December 31, 2007, unless one of the parties terminates it by giving the other party a one-year written advance notice to this effect. This agreement is not subject to automatic renewal.

The parties agree that the expiration or termination of the Framework Agreement will automatically entail the termination of the present Specific Agreement. The parties agree furthermore that the taking effect of any regulatory standard related to a subject covered by this Specific Agreement will also automatically entail the termination of said Specific Agreement without compensation or delay.

9. REPRESENTATIVES OF THE PARTIES

Both parties agree to each appoint one person with the required authority to ensure the follow-up of the agreement.

The Minister appoints the following person as representative for this Specific Agreement:

The Director of the *Direction des changements climatiques*
Québec ministry of the Environment
Marie-Guyart Building (9th floor)
675 René-Lévesque Blvd East, box 30

Québec City, QC G1R 5V7
Tel: (418) 521-3813, extension 4980

The above-designated person shall implement a technical committee to ensure the analysis and follow-up of the present agreement. This committee will include a representative of the Ministère des Ressources naturelles and a representative of the Ministère de l'Industrie et du Commerce.

The Entity appoints the following person as representative for this Specific Agreement:

The Director of the Environment
Primary Metal Group, Quebec smelters
Alcan Inc. Division
1188 Sherbrooke Str. West
Montréal, QC H3A 3G2
Canada

Tel: (514) 848-8495

10. SIGNATURES

The parties acknowledge that they have read and agreed to each and every clause of this agreement.

In witness thereof, the parties have duly signed this agreement as follows:

In _____ on the _____ day of October_2002

**MINISTER OF STATE FOR MUNICIPAL AFFAIRS AND GREATER MONTRÉAL,
THE ENVIRONMENT, AND WATER AND MINISTER OF ENVIRONMENT**

ANDRÉ BOISCLAIR

ALCAN INC.

Jean Simon, Vice President, Saguenay Lac-Saint-Jean Division

APPENDIX 1

Addresses of the facilities

Electrical energy:	1954 Davis Str., Jonquière, QC G7S 4R5 (administrative headquarters). See appendix 2 for the list of targeted operations.
Harbourfront facility:	262 1 ^{re} Rue, La Baie, QC G7B 3R1
Alma plant:	300 Des Pins Str. West, Alma, QC G8B 5W2
Arvida plant:	1955 Mellon Blvd., Jonquière, QC G7S 4L2
Beauharnois plant:	40 Rue de l'Industrie, Melocheville, QC J6N 1W5
Grande-Baie plant:	5000 Route du Petit-Parc, La Baie, QC G7B 4G9
Laterrière plant:	6301 Talbot Blvd., Laterrière, QC G7N 1A2
Shawinigan plant:	1100 Saint-Sacrement Blvd., Shawinigan, QC G9N 6W4
Vaudreuil plant:	1955 Mellon Blvd., Jonquière, QC G7S 4L2

APPENDIX 2

GREENHOUSE GAS EMISSIONS ASSOCIATED WITH ELECTRIC ENERGY PRODUCTION

Alcan Inc. Primary Metal Group (Québec and Sebree), wholly owns and manages the following hydro-electric power stations:

1. Station Chute-des-Passes, at the Péribonka River
2. Station Chute du Diable, at the Péribonka River
3. Station Chute à la Savane, at the Péribonka River
4. Station Isle Maligne, at Lake St-Jean, at the mouth of the Grande Décharge River
5. Station Chute-à-Caron, at the Saguenay River
6. Station Shipshaw, at the Saguenay River

The average of the total annual productions of these six stations is 1,975 Megawatts.

These are stations with reservoirs. The emissions and reductions associated with the operation of these stations are included in those of the Entity.

APPENDIX 3

Intervention of La Compagnie du Chemin du fer Roberval-Saguenay

La Compagnie du Chemin de Fer Roberval-Saguenay, a legally constituted corporate body with headquarters at 1188 Sherbrooke Str. West, Montréal, represented by Mr. Yvon D'Anjou in his function as president of *La Compagnie du Chemin de Fer Roberval-Saguenay*, duly authorized as he so declares, hereinafter referred to as "*Chemin de fer R-S*".

Chemin de fer R-S becomes party to the present agreement to accept that its activities shall be among, for purposes of implementing this present agreement, the facilities covered by Article 3 of the present agreement and accepts each and every term and condition of this agreement. Without limiting the generality of the foregoing, it is explicitly understood that emissions of *Chemin de fer R-S* are to be included and calculated and will be an integral part of emission targets specified or to be specified in this agreement.

La Compagnie du Chemin de Fer Roberval-Saguenay

Jean Simon
President of the Board of Compagnie du
Chemin de Fer Roberval-Saguenay

Louise Ouellet
Compagnie du Chemin de Fer Roberval-
Saguenay

APPENDIX 4

INDIRECT ACTIVITIES AND LIFE CYCLE ACTIVITIES

List of indirect activities included in the Specific Agreement

Electric energy consumption
Fuel consumption
Shipping of products

List of life cycle activities included in the Specific Agreement

To be defined

APPENDIX 5

**Copy of the Framework Agreement on voluntary greenhouse gas reductions
concluded between the
government of Québec and the Aluminium Association of Canada**