

(2) where the producer is an entity formed by a legal person,

(a) a natural person holding at least 50% of the interests in the legal person is carrying out the processing;

(b) one or several persons or partnerships holding at least 50% of the interests in the legal person also hold 50% of the interests in the legal person carrying out the processing;

(c) one or several persons or partnerships holding at least 50% of the interests in the legal person are also partners holding at least 50% of the interests of the partnership carrying out the processing;

(3) where the producer is an entity formed by a partnership,

(a) a natural person holding at least 50% of the interests of the partnership carries out the processing;

(b) one or more partners holding at least 50% of the interests of the partnership also hold at least 50% of the interests of the legal person carrying out the processing;

(c) one or more partners holding at least 50% of the interests of the partnership are also partners holding at least 50% of the interests of the partnership carrying out the processing.

For the purposes of this section, “interests” means either the outstanding voting shares or, for a person or a partnership without share capital, the shares of the partners or members.

17.2. The processing of farm products from other producers is allowed at the farm in the following circumstances:

(1) at least 25% of the processed products are from the producer’s farm;

(2) the other processed products are from producers whose main production site is situated in the same administrative region or less than 150 km from the processing site, insofar as the products are available at those production sites;

(3) the area dedicated to processing has a maximum floor area of 300 m² and includes the processing site, as well as any other related structure required for processing, but excludes the area dedicated to the transportation of persons and material.

17.3. The construction, development and use of a local slaughterhouse at the farm are allowed in the following circumstances:

(1) the producer holds a local slaughterhouse permit issued under the Food Products Act (chapter P-29);

(2) at least 10% of the slaughtered animals are from the producer’s farm.”

17. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

105697

Draft Regulation

Environment Quality Act
(chapter Q-2)

Cap-and-trade system for greenhouse gas emission allowances — Amendment

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), that the Regulation to amend the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances, appearing below, may be made by the Government on the expiry of 45 days following this publication.

The main object of the draft Regulation is to determine the rules for the allocation without charge of emission units for the period 2024-2030, in particular by defining the rules that apply to

— a gradual reduction in the allocation without charge of emission units during that period;

— estimates of the part of an allocation without charge to an emitter that can be auctioned to collect sums that can then be paid to the emitter, on the conditions set by the draft Regulation, for the implementation of certain projects by the emitter;

— the use of such sums and the implementation of greenhouse gas (GHG) emissions reduction projects and greenhouse gas research and development projects financed by such sums;

— the publication of information on the sums collected by auctioning the part of emission units allocated without charge to emitters, and the projects implemented using such sums;

—an increase in the allocation made without charge to certain establishments that become operational after 31 December 2022, compared to other establishments;

—the calculation of certain target intensities and the use of new reference units to calculate the allocation without charge.

The draft Regulation makes amendments to the mechanism for registering voluntary participants in the system by allowing them to bring forward by two years, on the conditions set out in the draft Regulation, the time when they become subject to the Regulation and eligible for the allocation of emission units without charge.

Other amendments concern the information that must be filed with the Minister when an emitter or participants registers, the filing of updated information with the Minister, and the consequences for an emitter or participant of failing to file an update.

The draft Regulation simplifies the process for closing an emitter's or participant's general account or compliance account in special circumstances, and at the same time makes it possible to re-open such an account when required, in particular for compliance purposes.

An emitter that ceases to be required to cover its emissions may, on the conditions set out in the draft Regulation, continue to cover its emissions for a 5-year period and continue to benefit from the rights provided by the system while remaining subject to the obligations of an emitter to which the Regulation applies.

Last, the draft Regulation includes monetary administrative penalties for failures to comply and penal sanctions for offences under the provisions of the draft Regulation, along with transitional provisions.

The rules governing the allocation without charge of emission units for the period 2024-2030, as set out in the draft Regulation, will have a major impact on the industrial enterprises subject to the cap-and-trade system for GHG emission allowances, mainly because the quantity of emission units allocated over that period will be gradually reduced. However, the impact will be partly compensated by the amounts collected by auctioning a part of the emission units allocated to emitters without charge, which will be paid to them on the conditions set out in the draft Regulation. The implementation of the GHG emissions reduction projects that are expected to result from the payment of these sums will improve the performance of emitters in terms of the GHG emissions and reduce the financial impact of their obligation to cover emissions under the system.

The other amendments made will have little impact on emitters and participants registered for the system.

Further information on the draft Regulation may be obtained by contacting Kim Ricard, Director, Direction du marché du carbone, Direction générale de la réglementation carbone et des données d'émission, Ministère de l'Environnement et de la Lutte contre les changements climatiques, édifice Marie-Guyart, 675, boulevard René-Lévesque Est, 5^e étage, boîte 31, Québec (Québec) G1R 5V7; email: kim.ricard@environnement.gouv.qc.ca.

Any person wishing to comment on the draft Regulation is requested to submit written comments within the 45-day period to Kim Ricard.

BENOIT CHARETTE
*Minister of the Environment and
the Fight Against Climate Change*

Regulation to amend the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances

Environment Quality Act

(chapter Q-2, ss. 46.1, 46.5, 46.8, 46.8.1, 46.15, 115.27 and 115.34).

1. The Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1) is amended, in section 2.1, by adding the following paragraph:

“A person or municipality operating an enterprise in a sector of activity referred to in Appendix A that is not an emitter within the meaning of section 2, that registers for the system for one of its establishments and that can demonstrate, in accordance with the conditions of section 7.2, that the emissions attributable to that establishment reported pursuant to section 6.1 of the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15) will be equal to or exceed 10,000 metric tonnes CO₂ equivalent, and that registers for the system for one of its establishments covered by the reporting without being required to do so, is also an emitter within the meaning of this Regulation.”.

2. Section 3 is amended

(1) by adding “or determined by the Minister in accordance with section 6.11 of that Regulation” at the end of the definition of “verified emissions”;

(2) by inserting the following after paragraph 9:

“(9.1) “newly operational establishment” means an establishment that

(a) is not considered on a sectoral basis pursuant to Division C of Part II of Appendix C;

(b) first became operational after 31 December 2022;

(c) was not covered by a GHG emissions report pursuant to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15) before becoming operational;

(d) emitted into the atmosphere, from its first year of operation, a quantity equal to or exceeding 25,000 metric tonnes CO₂ equivalent excluding the emissions referred to in the second paragraph of section 6.6 of the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere, or that is operated by a person or municipality that registered for the system for that establishment pursuant to subparagraph 3 of the second paragraph of section 2 or the second paragraph of section 2.1 from its first year of operation”;

3. Section 5 is amended by inserting “in printed or electronic format” after “Minister” in the first paragraph.

4. Section 6 is amended by replacing “fourth paragraph” in paragraph 6 by “third and fourth paragraphs”.

5. Section 7 is amended

(1) in the first paragraph,

(a) by replacing subparagraph 2 by the following:

“(2) a list of its directors and officers with, at the Minister’s request, their position within the enterprise and their work addresses;”;

(b) by inserting “in the case of an emitter referred to in the first paragraph or in subparagraph 3 of the second paragraph of section 2,” at the beginning of subparagraph 3;

(c) by inserting the following after subparagraph 3:

“(3.1) in the case of an emitter referred to in subparagraphs 1 and 2 of the second paragraph of section 2, if applicable, the 6-digit code under the North American Industry Classification System (NAICS Canada) and the operator number assigned under the Inventaire québécois des émissions atmosphériques kept by the Ministère du Développement durable, de l’Environnement, de la Faune et des Parcs;”;

(d) by replacing subparagraph 7 by the following:

“(7) in the case of a business corporation, the names of the persons controlling over 10% of the voting rights attached to all the outstanding voting securities of the emitter and, at the Minister’s request, their contact information;”

(e) by inserting the following after subparagraph 8:

“(8.1) in the case of an emitter that has no domicile or establishment in Québec, the name and contact information of its attorney designated under section 26 of the Act respecting the legal publicity of enterprises (chapter P-44.1), along with proof of designation if requested by the Minister”.

(2) by inserting the following after subparagraph 3.1 of the second paragraph:

“(3.2) on or after 1 June three years before the year for which a demonstration that the verified emissions for an establishment will be equal to or exceed 25,000 metric tonnes CO₂ equivalent must be made, in the case of an emitter referred to in subparagraph 3 of the second paragraph of section 2 that operates a newly operational establishment;

“(3.3) on or after 1 June preceding the year for which a demonstration that the verified emissions for an establishment will be equal to or exceed 10,000 metric tonnes CO₂ equivalent must be made, in the case of an emitter referred to in the second paragraph of section 2.1.”.

6. Section 7.2 is amended

(1) by adding “except, in the case of a person or municipality referred to in the second paragraph of section 2.1, the information and documents referred to in subparagraph 4 of the first paragraph of section 7” at the end of the first paragraph;

(2) by inserting “referred to in the first paragraph of section 2.1” after “The person or municipality” in the second paragraph;

(3) by adding the following after the second paragraph:

“Any person or municipality referred to in the second paragraph of section 2.1 must in addition, at the time of registering, demonstrate to the Minister that the emissions from one of its establishments for which it will be required to cover its emissions in accordance with section 19.0.1 will be equal to or exceed 10,000 metric tonnes CO₂ equivalent, the demonstration to be made using one of the following documents or items of information:

(1) an environmental impact assessment for the establishment prepared pursuant to section 31.3 of the Environment Quality Act (chapter Q-2);

(2) a mass balance calculation for greenhouse gas emissions, which must be based on the emissions attributable to the materials that contribute 0.5% or more of the total carbon introduced in the establishment’s process;

(3) a technical calculation using an emission factor used for the purposes of the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15);

(4) an emissions report made pursuant to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere accompanied by data explaining the anticipated production increase.”.

7. Section 8 is amended

(1) in the first paragraph,

(a) by inserting the following after paragraph 2.1:

“(2.2) the main reason why the applicant wishes to register as a participant in the system;”;

(b) by striking out “or, in other cases, a declaration signed by a director or any other officer, or a resolution of the board of directors” in subparagraph 4;

(2) by replacing “or a participant” in the second paragraph by “, by a participant, or by a person who belongs to the same group as that emitter or participant within the meaning of section 9 or whose function or family connection makes it reasonable to believe that the natural person could have privileged information about the operation of the system,”.

8. Section 9 is amended

(1) by adding the following after subparagraph 3 of the first paragraph:

“(4) in the case of a legal person and at the Minister’s request, the name of every person it employs whose function or family connection makes it reasonable to believe that the natural person could have privileged information about the operation of the system or about the activities of another emitter or participant in the system as well as the measures put in place by that legal person to prevent such information from being used to threaten the integrity of the system”;

(2) in the second paragraph,

(a) in subparagraph 4,

i. by adding “or may determine collective decisions;” at the end of subparagraph *b*;

ii. by adding the following after subparagraph *c*:

“(d) has, with regard to that other person, a business relationship defined in subparagraphs *a*, *c* and *d* of subparagraph 1 of the second paragraph that involves a percentage of over 50%”;

(b) by replacing subparagraph 5 by the following:

“(5) “related entity” means any emitter or participant

(a) with which the business relationship as defined in subparagraph 1 of the second paragraph involves a percentage of over 50%, a subsidiary, or an emitter or participant belonging to the same group, as well as any emitter or participant that shares an account representative who also works for one of them;

(b) which has a business relationship defined in subparagraph *a* of subparagraph 1 of the second paragraph with an emitter or participant that is a related entity within the meaning of that subparagraph.”.

9. Section 9.1 is amended

(1) by inserting “the nature of the services that the advisor will provide” after “contact information of the advisor,” in the first paragraph;

(2) by adding “and the nature of the advisory services provided” at the end of the second paragraph.

10. Section 10 is amended

(1) in the first paragraph,

(a) by striking out “at the person’s home address” in subparagraph 1;

(b) by replacing “a government or one of its departments or agencies” in subparagraph 3 by “the government or one of its departments or bodies or by the Government of Canada, the government of another province or the government of a partner entity”;

(c) by replacing subparagraph 5 by the following:

“(5) confirmation from a financial institution located in Canada that the person has a deposit account, credit account or loan account with the institution, which may be an original document from the institution or a copy certified true by the institution;”;

(2) by striking out “referred to in section 2.1” in the fourth paragraph.

11. Section 11 is amended

(1) by striking out subparagraph 1.1 of the third paragraph;

(2) by replacing the seventh paragraph by the following:

“The duties of the account representatives terminate when a request for revocation is received from the emitter or participant. When an emitter or a participant has only 2 representatives, a new account representative must be designated by the emitter or participant within 30 days after the request for revocation is received. The duties of the account representatives also terminate when all the accounts of the emitter or participant are closed.”.

12. Section 12 is amended by adding the following at the end:

“The attestation referred to in subparagraph 4 of the second paragraph must be sent to the Minister within 3 months of its date of issue.”

13. Section 13 is amended

(1) by striking out “natural” in the first paragraph;

(2) by striking out “who is a natural person” in the second paragraph;

(3) in the third paragraph,

(a) by inserting “and offset credits issued by a partner entity” in subparagraph 2 after “credits”;

(b) by replacing “offset credits” in subparagraph 3 by “other offset credits”.

14. Section 14.1 is amended

(1) by replacing “sections 7” by “section 7, except for the list of subsidiaries referred to in subparagraph 6 of the first paragraph that must be provided at the Minister’s request, sections”;

(2) by adding the following paragraphs:

“When communicating a change to the Minister in accordance with the first paragraph, the emitter’s account representative must include a signed declaration attesting that the information and documents provided are valid and that the emitter consents to their communication when necessary for the purposes of this Regulation and the corresponding rules and regulations of a partner entity.

The Minister may suspend access to the electronic system obtained pursuant to section 10 when a change referred to in the first paragraph has not been communicated to the Minister in accordance with that paragraph.”.

15. Section 14.2 is amended

(1) by striking out “whose account no longer contains any emission allowances” in the part of the first paragraph preceding subparagraph 1;

(2) in the second paragraph,

(a) by replacing “3 years” in the part preceding subparagraph 1 by “1 year”;

(b) by inserting “issued by a partner entity” after “offset credits” in subparagraph 2;

(c) by inserting the following after subparagraph 2:

“(2.1) by transferring the other offset credits to the environmental integrity account;”.

(3) by adding the following at the end:

“When the request referred to in the first paragraph concerns a general account that still contains emission allowances, a participant that is not a natural person must provide the signature of a director or officer.

When the Minister closes a general account that still contains emission allowances, the rules of the second paragraph concerning the recovery of emission allowances apply.”.

16. Section 15 is amended

(1) in the first paragraph,

(a) by replacing “section 19.1, the emitter has met all the requirements of Chapter III, and the offset credits placed in the account by a partner entity and used by the emitter to cover its GHG emissions can no longer be cancelled” in subparagraph 1 by “section 19.0.1 and has met all the requirements of Chapter III”;

(b) by replacing “section 18, has met all the requirements of Chapter III, and the offset credits placed in the account by a partner entity and used by the emitter to cover its GHG emissions can no longer be cancelled” in subparagraph 3 by “section 18 and has met all the requirements of Chapter III”;

(2) by adding the following paragraphs at the end:

“The Minister may open a general account for any person whose general account has been closed pursuant to section 14.2 and a compliance account for any person whose compliance account has been closed pursuant to the first paragraph to allow that person, as the case may be,

- (1) to place in the account any offset credit paid and cancelled by a partner entity that it used, as an emitter, to cover GHG emissions;
- (2) to place in the account any illegitimate offset credit referred to in section 70.5 or section 70.7;
- (3) to place emission allowances in the account to cover its GHG emissions in accordance with section 23.1.

The Minister, when opening an account pursuant to the third paragraph, may require the person concerned to provide the Minister, as soon as possible, with the information and documents referred to in sections 7 to 13.”.

17. Section 16 is amended, in the second paragraph,

- (1) by inserting “issued by a partner entity” after “offset credits” in subparagraph 2;
- (2) by inserting the following after subparagraph 2:

“(2.1) by transferring the other offset credits to the environmental integrity account;”.

18. The following is inserted after section 17:

“17.1 When an emitter or a participant changes its legal structure, by merger or otherwise, the person resulting from the change must so notify the Minister as soon as possible. If the change leads to the dissolution of the emitter or participant, the person resulting from the change must, within 30 days of the change, register for the system in accordance with this Chapter. The new emitter or new participant is required, in place of the former emitter or former participant, as the case may be, to meet all the requirements that applied to the former emitter or participants pursuant to this Regulation.

If the change referred to in the first paragraph concerns at least two covered emitters or participants, the person resulting from the change must revoke or confirm the mandate of the account representatives and viewing agents referred to in sections 11 and 12 to ensure that their number does not exceed the limits set in those sections.”.

19. Section 19 is amended by adding the following paragraphs at the end:

“Despite the first paragraph, every emitter referred to in section 2, except an emitter referred to in subparagraph 2 of the second paragraph of that section, that ceases to be subject to the coverage requirement provided for in the first paragraph, that does not meet the requirements of section 2.1, and that wishes to continue to cover emissions from an establishment or, as the case may be, its enterprise, must send the Minister a written notice setting out its intention not later than 1 September following the third consecutive emissions report for which the emissions from the establishment or enterprise are below the emissions threshold.

An emitter that sends a notice under the sixth paragraph has, for a period of 5 consecutive years beginning on 1 January following the end of its coverage requirement under the first paragraph, the same rights and obligations as an emitter referred to in section 2.”

20. Section 19.0.1 is amended

(1) by replacing subparagraph 2 of the first paragraph by the following:

“(2) for the period ending in 2020, until 31 December of the year following the year during which GHG emissions are equal to or exceed the emissions threshold;

(2.1) for the period beginning in 2021, until 31 December of the year preceding the year during which GHG emissions are equal to or exceed the emissions threshold;”;

(2) in the second paragraph,

(a) by adding “in the case of an emitter referred to in the first paragraph of section 2.1” at the end of subparagraphs 1 and 2;

(b) by adding the following after subparagraph 3:

“(4) as of 1 January of the year for which the demonstration is made, in the case of an emitter referred to in the second paragraph of section 2.1 that has demonstrated that the emissions from an establishment will be equal to or exceed 10,000 metric tonnes CO₂ equivalent.”;

(3) by adding the following at the end:

“Despite the first paragraph, an emitter referred to in section 2.1 that ceases to be subject to the coverage requirement provided for in the first paragraph and that wishes to continue to cover emissions from an establishment or, as the case may be, its enterprise, must send the Minister a written notice setting out its intention not later than 1 September following the third consecutive emissions report for which the emissions from the establishment or enterprise are below the emissions threshold referred to in section 6.1 of the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere. The notice must include the information and documents required for the registration of an emitter referred to in section 2.1, with the necessary modifications.

An emitter that sends a notice under the third paragraph has, for a period of 5 consecutive years beginning on 1 January following the end of its coverage requirement under the first paragraph or until it is once again required to cover its emissions, the same rights and obligations as an emitter referred to in section 2.1.

Despite the fourth paragraph, an emitter that continues to cover the emissions from an establishment cannot ask the Minister to cancel its registration until the expiry of the 5-year period provided for in that paragraph.”

21. The following is inserted after section 21:

“21.1. An emitter that ceases to be subject to this Regulation and that has, in its compliance account, enough emission allowances to meet its coverage requirement under section 19 or 19.0.1 may, at any time during a compliance period, request that the Minister deduct its emission allowances in accordance with the second paragraph of section 21 to be paid into the Minister’s retirement account and extinguished.”.

22. Section 23.1 is amended by replacing “Criterion 2” in the first paragraph by the following:

“(GHG_{corr} - Allowances_{surrendered}) ≥ 500 metric tonnes CO₂ equivalent”.

23. Section 27 is amended by adding the following after subparagraph 2 of the first paragraph:

“(3) the reason for which the emitter or participant wishes to retire the emission allowances, if applicable.”.

24. Section 27.1 is amended by inserting the following after the third paragraph:

“No request for the retirement of emission allowances may be made for compliance purposes under another cap and trade system for GHG emission allowances or GHG emissions reduction program.”.

25. Section 33 is amended by adding the following at the end:

“The distribution referred to in the second paragraph must be confirmed by all the related entities subject to the distribution. Despite section 32, until all the related entities have confirmed the distribution, the holding limit of the last emitter or participant to join the group of related entities is set at zero.”.

26. Section 35 is amended by adding the following:

“The Minister may post, on the website of the department, a compilation of the information obtained pursuant to subparagraphs 2 and 3 of the first paragraph of section 27.”.

27. Section 39 is amended by adding the following:

“Despite the first paragraph, an emitter referred to in the second paragraph of section 2.1 operating a covered establishment and pursuing an activity referred to in Table A of Part I of Appendix C is not eligible for the allocation of emission units until the year in which the emissions attributable to that establishment, reported in accordance with the first paragraph of section 6.1 of the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15), are equal to or exceed 10,000 metric tonnes CO₂ equivalent.”.

28. Section 40 is amended:

(1) by inserting “Until the year 2023,” at the beginning of the second paragraph;

(2) by inserting the following after the third paragraph:

“Beginning in the year 2024, the total quantity of emission units that may be allocated without charge to an eligible emitter is calculated in accordance with Part II of Appendix C using, depending on the year concerned, equation 18-1, and replacing

(1) the factor “ $P_{Ri,j}$ ” in equations 19-1, 20-1, 21-1, 21-3, 23-1 and 24-1 by the factor “ $P_{Ri-2,j}$ ”, which corresponds to the total quantity of reference units produced or used in the year two years before the allocation year;

(2) the factors “ $EC_{TOTAL,i,j}$ ”, “ $GHG_{FP,i,j}$ ”, “ $GHG_{O,i,j}$ ” and “ $GHG_{i,j}$ ” in equations 21-2, 22-1 and 24-7 by the factors “ $EC_{TOTAL,i-2,j}$ ”, “ $GHG_{FP,i-2,j}$ ”, “ $GHG_{O,i-2,j}$ ” and “ $GHG_{i-2,j}$ ”, which correspond respectively to energy consumption, fixed process emissions, other emissions and total emissions in the year 2 years before the allocation year;

(3) where the data needed to use the factors “ $GHG_{FP,2023,j}$ ”, “ $GHG_{FP,cu,2023}$ ”, “ $GHG_{C,2023,RSM}$ ”, “ $F_H,2023$ ”, “ $P_{R,2023,j}$ ”, “ $P_{R,cu,2023}$ ”, “ $P_{R,RSM,2023}$ ” and “ $A_{recycl,2023}$ ” in equations 19-13, 19-14, 19-15 and 19-16 are not available, by the factors “ $GHG_{FP,2022,j}$ ”, “ $GHG_{FP,cu,2022}$ ”, “ $GHG_{C,2022,RSM}$ ”, “ $F_H,2022$ ”, “ $P_{R,2022,j}$ ”, “ $P_{R,cu,2022}$ ”, “ $P_{R,RSM,2022}$ ” and “ $A_{recycl,2022}$ ”, which correspond respectively to fixed process emissions, hydrogen consumption, the total quantity of reference units produced or used and the carbon content of recycled secondary materials introduced into the process during year 2022.

Beginning in the year 2024, the Minister estimates annually the part of the emission units allocated without charge to be paid to an emitter.

The part is calculated in accordance with Part II of Appendix C using, depending on the year concerned, equation 18-2, and replacing

(1) the factor “ $P_{Ri,j}$ ” in equations 19-5, 20-4, 21-3, 23-3 and 24-4 by the factor “ $P_{Ri-2,j}$ ”, which corresponds to the total quantity of reference units produced or used in the year two years before the allocation year;

(2) the factors “ $EC_{TOTAL,i,j}$ ”, “ $GHG_{FP,i,j}$ ”, “ $GHG_{O,i,j}$ ” and “ $PFF_{i,j}$ ” in equations 19-7, 22-3, 22-5, 24-6 et 24-8 by the factors “ $EC_{TOTAL,i-2,j}$ ”, “ $GHG_{FP,i-2,j}$ ”, “ $GHG_{O,i-2,j}$ ” and “ $PFF_{i-2,j}$ ”, which correspond respectively to the energy consumption, fixed process emissions, other emissions and proportion factor of fixed process emissions in the year two years before the allocation year.

Beginning in the year 2024, the Minister also estimates annually the part of the emission units allocated without charge to an emitter that is to be auctioned.

That part is calculated in accordance with Part II of Appendix C using, depending on the year concerned, equation 18-3, and replacing

(1) the factor “ $P_{Ri,j}$ ” in equations 19-1, 19-5, 20-1, 20-4, 21-1, 21-3, 23-1, 23-3, 24-1 and 24-4 by the factor “ $P_{Ri-2,j}$ ”, which corresponds to the total quantity of reference units produced or used in the year two years before the allocation year;

(2) the factors “ $EC_{TOTAL\ i, j}$ ”, “ $GHG_{FP\ i, j}$ ” and “ $GHG_{O\ i, j}$ ” in equations 22-1, 22-3, 24-7 and 24-8 by the factors “ $EC_{TOTAL\ i-2, j}$ ”, “ $GHG_{FP\ i-2, j}$ ” and “ $GHG_{O\ i-2, j}$ ”, which correspond respectively to the energy consumption, fixed process emissions and other emissions in the year two years before the allocation year.”;

(3) by replacing, in the fifth paragraph, “fourth” by “ninth” and “calculated in accordance with this section” by “from which, beginning in 2024, 75% of the part of the units to be auctioned has been subtracted”;

(4) by inserting the following after the fourth paragraph:

“Beginning in the year 2024, on 14 January of each year or, if that day is not a working day, on the first following working day, provided that an agreement on the implementation by the emitter of a project referred to in Part III of Appendix C has been signed by the emitter and the Minister in accordance with section 46.8.1 of the Environment Quality Act (chapter Q-2) before the previous 1 September, the Minister pays into the Minister’s auction account 75% of the quantity of emission units calculated in accordance with the seventh paragraph.”.

29. The following is inserted after section 40:

“40.1 To be considered in the calculation of emission units allocated without charge referred to in the first, second, fifth and seventh paragraphs of section 40, any change to the information provided for in subparagraph 4 of the first paragraph of section 7 and provided by the emitter when registering for the system must be sent to the Minister, together with any supporting document, not later than 1 June following the end of the compliance period affected by the change. Any change sent to the Minister within the time limit applies from the beginning of that compliance period.

In addition, to be considered in the calculation of emission units allocated without charge, any change concerning the type of reference unit used must be sent to the Minister not later than 1 June prior to the beginning of a compliance period. Any change sent within the time limit applies from the beginning of that compliance period.

Beginning in the year 2024, when the changes to the information provided for in subparagraph 4 of the first paragraph of section 7 lead to an increase in the number of emission units allocated without charge to be auctioned, they are paid by the Minister into the Minister’s auction account. When the changes lead to a decrease in the number of such units, an equivalent number of emission units is deducted from the next payment of the emission units allocated without charge to that emitter to be auctioned.”.

30. Section 41 is amended

(1) by replacing “fourth paragraph” in the first paragraph by “ninth and tenth paragraphs”;

(2) by replacing “places, in the emitter’s general account,” in the third paragraph by “places, either in the emitter’s general account or in the Minister’s auction account,”;

(3) by inserting “for units paid in accordance with the ninth paragraph of section 40” after “calculation” in the fourth paragraph;

(4) by replacing “allocation free of charge” in the fifth paragraph by “payment of such units”;

(5) by inserting the following after the fifth paragraph:

“When the result of the calculation for the adjustment of units paid in accordance with the tenth paragraph of section 40 is negative, the Minister notifies the emitter. The Minister then removes an equivalent quantity of emission units from the following payments of such emission units.”;

(6) by inserting “, when it concerns emission units paid in accordance with the ninth paragraph of section 40” after “third paragraph” in the sixth paragraph.

31. Section 41.1 is replaced by the following:

41.1. An emitter who, in accordance with section 6.5 of the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15), communicates a notice of correction to its emissions report to increase the allocation without charge of emission units referred to in the ninth paragraph of section 40 or the third paragraph of section 41, receives at the next payment a quantity of additional units equal to the difference between the quantity calculated for the first emissions report and the quantity calculated for the corrected emissions report, in accordance with Part II of Appendix C. At the next payment of emission units referred to in the tenth paragraph of section 40 or the third paragraph of section 41, the Minister also places in the Minister’s auction account a quantity of additional emission units equal to the difference between the quantity of emission units allocated without charge, for auction, to an emitter that has signed an agreement in accordance with the tenth paragraph of section 40, as calculated for the first emissions report, and the quantity calculated for the corrected emissions report in accordance with Part II of Appendix C.

No additional emission units are paid for a notice of correction to an emissions report communicated after 1 August of the year following the year concerned by the allocation without charge.

When the notice of correction referred to in the first paragraph reduces the allocation without charge of emission units referred to in the ninth paragraph of section 40 or the third paragraph of section 41, the Minister subtracts, in the same proportion, a quantity of emission units from the next payments of such admission units whether or not the compliance deadline has expired.”.

32. Section 42 is amended

(1) by replacing “allocated without charge in accordance with this Division” in the first paragraph by “referred to in the ninth paragraph of section 40 and the first paragraph of section 41.1”;

(2) by replacing “The units” in the second paragraph by “The units referred to in this Division”;

(3) by replacing “allocated, the units that remain to be allocated” in the third paragraph by “paid in accordance with this Division, the units that remain to be paid”.

33. Section 43 is amended by adding “, or when the Minister has reasonable grounds to believe that the integrity of the system is threatened” at the end.

34. The following is inserted after section 43:

“**43.1.** The Minister publishes, on the website of the Ministère du Développement durable, de l’Environnement et des Parcs, within 45 days after the payment of emission units allocated without charge pursuant to sections 40 and 41, a summary of the payment including, in particular, the following information:

- (1) the total quantity of emission units allocated without charge to all emitters;
- (2) the total quantity of emission units allocated without charge that have been paid to all emitters and a list of the emitters concerned;
- (3) the total quantity of emission units allocated without charge to be auctioned and paid into the Minister’s auction account in accordance with sections 40 and 41, and a list of the emitters on whose behalf the payment was made.”.

35. Section 46 is amended by striking out the fourth paragraph.

36. Section 47 is amended by replacing “register an emitter or a participant for any auction if, when applying for registration for the system or for a previous auction or sale by mutual agreement, the emitter or participant provided false or misleading information, omitted to disclose information required by this Regulation, or contravened a rule of procedure for the auction or sale by mutual agreement” by “, for any auction, an emitter or participant that fails to comply with the provisions of this Regulation”.

37. Section 48 is amended by inserting “, must be sufficient to purchase a lot of emission units at the minimum price set pursuant to the third paragraph of section 49,” after “date of the auction” in the part of the second paragraph preceding subparagraph 1.

38. Section 50 is amended

(1) by adding the following at the end of the fifth paragraph: “The allocation must be confirmed by all the related entities concerned. Until all the related entities have confirmed the allocation, the overall purchasing limit of the last emitter or participant to join the group of related entities is set at zero.”;

(2) by adding the following paragraph at the end:

“Despite subparagraph 1 of the third paragraph, beginning on 1 January 2023, the total quantity of emission units that may be purchased by the same bidder is limited, for the year preceding the year in which the bidder’s coverage requirement begins, to 4% of the units to be auctioned.”

39. Section 52 is amended by inserting “and with the lots containing emission units allocated without charge to be auctioned in accordance with Division II of this Chapter” after “highest bids” in the fifth paragraph.

40. Section 53 is amended by replacing “section 48” in the fourth paragraph by “subsection 1 of the first paragraph of section 48”.

41. Section 54 is amended

(1) by adding “, except for units allocated without charge to be auctioned in accordance with Division II of this Chapter, which are put up for sale at the next auction” at the end of the first paragraph;

(2) by adding “and cannot, for units allocated without charge to be auctioned, increase the total quantity of emission units put up for sale at the next auction” at the end of the third paragraph;

(3) by adding the following at the end:

“All emissions units to be auctioned that have not been sold at the expiry of a three-year period after first being put up for sale as units of the vintages of the current year or of the previous years are transferred to the Minister’s reserve account.”.

42. The following is inserted after section 54:

54.1 The sums collected at an auction of emission units allocated without charge to an emitter to be auctioned in accordance with Division II of this Chapter are determined, for each emitter having signed an agreement for the implementation by the emitter of a project referred to in Part III of Appendix C, by multiplying the quantity of the emission units by the final auction sale price in US dollars, converted into Canadian dollars using the daily average exchange rate published on the website of the Bank of Canada on the day prior to the sale.

When the emission units allocated without charge to be auctioned in accordance with Division II of this Chapter are not all sold at the auction, the quantity referred to in the first paragraph is determined as follows:

(1) the part of such units attributable to the emitter is obtained by dividing the quantity of such units by the total quantity of emission units allocated without charge to be auctioned in accordance with Division II of this Chapter and put up for sale;

(2) the part of units attributable to the emitter is then multiplied by the quantity of emission units allocated without charge to be auctioned in accordance with Division II of this Chapter that were sold, and the result is rounded down to the nearest whole number;

(3) when emission units remain to be allocated, the Minister assigns a random number to each emitter and allocates 1 emission unit per emitter, in ascending order of the numbers assigned, until all the emission units have been allocated.

In accordance with the fifth paragraph of section 53, the sums determined pursuant to the first and second paragraphs are paid into the Electrification and Climate Change Fund established under the Act respecting the Ministère du Développement durable, de l'Environnement et des Parcs (chapter M-30.001) and reserved in the Fund in the emitter's name for a period of five years beginning on 31 December of the year in which they are paid into the Fund. During that period, the sums can be paid to the emitter in accordance with the rules of Part III of Appendix C and the rules of the agreement signed by the emitter with the Minister in accordance with section 46.8.1 of the Environment Quality Act (chapter Q-2).

When the operator of a covered establishment that has signed an agreement with the Minister for the implementation of a project referred to in Part III of Appendix C has notified the Minister, pursuant to the first paragraph of section 17, that the operator of the establishment has changed, the new operator may, if it has also signed such an agreement with the Minister, use the sums determined pursuant to the first paragraph that have not yet been paid to the former operator. The new operator is subject, in accordance with the third paragraph of section 17, to all the obligations of the former operator concerning the project implemented pursuant to that Part.”.

43. Section 55 is amended by adding the following after paragraph 3:

- “(4) the quantity of units allocated without charge that were put up for auction;
- (5) the quantity of units referred to in paragraph 4 that were sold;
- (6) the sums collected from the auctioning of the units referred to in paragraph 4.”.

44. Section 59 is amended by striking out the fourth paragraph.

45. Section 60 is amended by replacing everything following “register an emitter” by “that fails to comply with the provisions of this Regulation for a sale by mutual agreement”.

46. Section 71 is amended by replacing “fifth” in paragraph 1 by “sixth”.

47. Section 74 is amended by replacing “fifth” in the part of the first paragraph preceding subparagraph 1 by “sixth”.

48. Section 75.5 is amended by adding the following:

“The Minister may, in addition, when the Minister has reasonable grounds to believe that the integrity of the system is threatened, refuse to register an emitter for an auction of emission units or suspend all emission allowance transactions pursuant to Chapter IV of Title II.

The Minister must, before exercising a power under the first or second paragraph, send the interested party a notice of intention setting out the grounds for exercising the power and granting the interested party at least 10 days to present its observations.”.

49. Appendix A is amended by replacing “21” in the third column of the second row of the table by “211 or 212”.

50. Table B in Part I of Appendix C is amended

(1) by inserting the following rows after the row concerning “milk processing”:

| | | |
|----------|---------------------|---|
| Agrifood | Food manufacturing | Metric tonne of cleaned flour |
| Agrifood | Animal slaughtering | Metric tonne of pork products finished at the slaughterhouse after cutting and boning |
| Agrifood | Poultry processing | Metric tonne of processed products |

“

(2) by replacing the third column in the row concerning “Manufacturing of aerospace products and parts” by the following:

| |
|--|
| Number of aircraft delivered |
| Number of aerospace parts delivered |
| Number of aircraft with internal fittings manufactured on site |
| Number of aircraft painted at the paintshop on site |
| Number of aircraft tested prior to delivery |

“

(3) by inserting the following after the row concerning “Production of copper drawing stock”:

| | | |
|------------|----------------------|--|
| Metallurgy | Magnesium production | Metric tonne of primary magnesium entering the foundry |
| | | Metric tonne of magnesium produced |

“

(4) by inserting the following after the row concerning “Gold production”:

| | | |
|----------------|---|--|
| Pulp and paper | Electricity production through cogeneration | Megawatt-hour (MWh) of electricity produced through cogeneration |
|----------------|---|--|

“

(5) by replacing the third column of the row concerning “Production of pulp and paper” by the following:

“

Metric tonne of various saleable air-dried products
 Metric tonne of saleable commercial pulp air-dried to 10% moisture content
 Metric tonne of saleable newsprint air-dried to 10% moisture content
 Metric tonne of saleable fine paper (from kraft pulp or deinked kraft pulp) air-dried to 10% moisture content
 Metric tonne of saleable semi-fine uncoated paper (from mechanical pulp) air-dried to 10% moisture content
 Metric tonne of saleable semi-fine coated paper air-dried to 10% moisture content
 Metric tonne of saleable sanitary tissue air-dried to 10% moisture content
 Metric tonne of saleable uncoated cardboard air-dried to 10% moisture content
 Metric tonne of saleable coated cardboard air-dried to 10% moisture content
 Metric tonne of saleable corrugated board and linerboard air-dried to 10% moisture content
 Metric tonne of saleable cellulosic filament air-dried to 10% moisture content

”.

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51. Part II of Appendix C is amended

(1) in Division A, containing the definitions,

(a) by replacing “2019 or for any of the subsequent years” in the definition of “covered establishment as of 2021” in paragraph 5 by “2019 to 2023”;

(b) by inserting the following after paragraph 5:

“(5.1) “covered establishment prior to 2024” means an establishment referred to in paragraph 1, 2, 3, 4 or 5, or an establishment referred to in section 2.1, that is still targeted by the system in 2024.”;

(2) by adding the following at the end of the first paragraph of Division C, concerning establishments and new facilities considered on a sectoral basis for the allocation of emission units without charge:

“(5) aluminum production using inert anode cells installed in a building which, when the cells were installed, already contained prebaked anode cells;

(6) aluminum production using inert anode cells installed in a building to replace the prebaked anode cells installed in that building;

(7) aluminum production, in an establishment covered on (*insert here the date of coming into force of this Regulation*), using inert anode cells installed in a building adjacent to the building in which prebaked anode cells are installed.”;

(3) in Division D, concerning calculation methods,

(a) in the third paragraph:

i. by replacing subparagraph 9 by the following:

“(9) in the case of an establishment covered prior to the year 2021 that produces cement, lime, prebaked anodes or aluminum by using a prebaked anode technology other than the side-worked prebaked anode technology, using equations 7-1 and 9-1 for the years 2021 to 2023”;

ii. by striking out subparagraph 14;

iii. by adding the following after subparagraph 16:

“(17) in the case of an establishment covered prior to the year 2024, other than a newly operational establishment, that is not considered on a sectoral basis for the years 2024 to 2030, using equations 18-1 and 19-1;

(18) in the case of an establishment that is considered on a sectoral basis for the years 2024 to 2030, using equations 18-1 and 20-1;

(19) in the case of a newly operational establishment, that is not considered on a sectoral basis for the years 2024 to 2030 and for which the GHG emissions data for years d to $d+2$ or years $d+1$ to $d+3$, where d is the year in which the establishment became operational, are all available, using equations 18-1 and 21-1;

(20) in the case of a newly operational establishment, that is not considered on a sectoral basis for the years 2024 to 2030 and for which the GHG emissions data for years d to $d+2$ or years $d+1$ to $d+3$, where d is the year in which the establishment became operational, are not all available, using equations 18-1 and 22-1;

(21) in the case of a covered establishment as of 2024 that is not considered on a sectoral basis, for which the GHG emissions data for years $d-2$ to d , are all available and that is not a newly operational establishment, using equations 18-1 and 23-1;

(22) in the case of a covered establishment as of 2024 that is not considered on a sectoral basis, for which the GHG emissions data for years $d-2$ to d are not all available and that is not a newly operational establishment, using equations 18-1 and 24-1;

(23) in the case of a covered establishment as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years d to $d+2$, or $d+1$ to $d+3$ where d is the year in which the establishment became operational, are not all available, using equations 18-1 and 24-7.”;

(b) in the fourth paragraph, by adding the following after subparagraph 6:

“(7) in the case of an establishment covered prior to the year 2024, other than a newly operational establishment that is not considered on a sectoral basis for the years 2024 to 2030, using equations 18-1 and 19-1;

(8) in the case of an establishment that is considered on a sectoral basis for the years 2024 to 2030, using equations 18-1 and 20-1;

(9) in the case of a newly operational establishment, that is not considered on a sectoral basis for the years 2024 to 2030 and for which the GHG emissions data for years $e+1$ to $e+3$ or years $e+2$ to $e+4$, where e is the year in which the establishment became operational, are all available, using equations 18-1 and 21-1;

(10) in the case of a newly operational establishment, that is not considered on a sectoral basis for the years 2024 to 2030 and for which the GHG emissions data for years $e+1$ to $e+3$ or years $e+2$ to $e+4$, where e is the year in which the establishment became operational, are not all available, using equations 18-1 and 22-1;

(11) in the case of a covered establishment as of 2024 that is not considered on a sectoral basis, for which the GHG emissions data for years $e-3$ to $e-1$ are all available and that is not a newly operational establishment, using equations 18-1 and 23-1;

(12) in the case of a covered establishment as of 2024 that is not considered on a sectoral basis, for which the GHG emissions data for years $e-3$ to $e-1$ are not all available and that is not a newly operational establishment, using equations 18-1 and 24-1;

(13) in the case of a covered establishment as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational are not all available, using equations 18-1 and 24-8.”;

(c) in the fifth paragraph, by adding the following subparagraph after subparagraph 8:

“(9) beginning in the year 2023, in the case of an establishment in the pulp and paper sector producing electricity through cogeneration, excluding the emissions data attributable to the production of electricity by cogeneration in metric tonnes CO₂ equivalent calculated using equations 25-1 to 25-6.”;

(d) by inserting the following after the fifth paragraph:

“The total quantity of GHG emission units allocated without charge and paid to an emitter is calculated in accordance with the following methods:

(1) in the case of an establishment covered prior to the year 2024, other than a newly operational establishment, that is not considered on a sectoral basis for the years 2024 to 2030, using equations 18-2 and 19-5;

(2) in the case of an establishment that is considered on a sectoral basis for the years 2024 to 2030, using equations 18-2 and 20-4;

(3) in the case of a newly operational establishment, that is not considered on a sectoral basis for the years 2024 to 2030 and for which the GHG emissions data for years d to $d+2$ or $e+1$ to $e+3$ or years $d+1$ to $d+3$ or $e+2$ to $e+4$, where d or $e+1$ is the year in which the establishment became operational, are all available, using equations 18-2 and 21-3;

(4) in the case of a newly operational establishment, that is not considered on a sectoral basis for the years 2024 to 2030 and for which the GHG emissions data for years d to $d+2$ or $d+1$ to $d+3$, where d is the year in which the establishment became operational, or years $e+1$ to $e+3$ or $e+2$ to $e+4$, where $e+1$ is the year in which the establishment became operational, are not all available, using equations 18-2 and 22-3;

(5) in the case of a covered establishment as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years $d-2$ to d or $e-3$ to $e-1$ are all available, using equations 18-2 and 23-3;

(6) in the case of a covered establishment as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years $d-2$ to d or $e-3$ to $e-1$ are not all available, using equations 18-2 and 24-4;

(7) in the case of a covered establishment as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years d to $d+2$, or $d+1$ to $d+3$ where d is the year in which the establishment became operational, or $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational, are not all available, using equations 18-2 and 24-8.

The total quantity of GHG emission units allocated without charge to be auctioned for an establishment is calculated in accordance with equation 18-3.”;

(e) by replacing the sixth and seventh paragraphs by the following:

“Despite the third and fourth paragraphs,

(1) the quantity of GHG emission units allocated without charge to a covered emitter beginning in the year 2023 is calculated using the methods applicable to the emitter during the last year of its first registration for the system;

(2) the quantity of GHG emission units allocated without charge to an emitter whose registration was interrupted for a period of less than three years is calculated using the methods applicable to the last year during which the emitter was eligible for an allocation free of charge.”;

(f) in equation 6-16,

i. by replacing “equation 8-2” in the definition of the factor “ $I_{C\ stan\ cath}$ ” by “equation 8-4”;

ii. by replacing “copper anode” in the definition of the factor “ $I_{FP\ stan\ cath}$ ” by “copper cathodes”;

iii. by replacing “copper anodes” in the definition of the factor “ $P_{R\ cath,i}$ ” by “copper cathodes”;

(g) by striking out “producing lime or” in the heading of section 8;

(h) by striking out “producing lime or” in the heading of equation 8-1;

(i) by adding the following after the factor “ $AF_{i,j}$ ” in equation 8-1.1:

“ j = Type of activity”;

(j) by inserting the following after factor “ $I_{FP\ stan\ j}$ ” in equation 8-2:

“ j = Type of activity”;

(k) by inserting the following after factor “ $I_{C_{stanj}}$ ” in equation 8-4:

“j = Type of activity”;

(l) by striking out “, using the new GWP values,” in the definition of the factor “R” in equations 8-4.1 and 8-9;

(m) by striking out subdivision 8.3 and its heading;

(n) by inserting “lime,” after “cement,” in the heading of Division 9;

(o) by replacing the heading of equation 9-1 by the following:

“Equation 9-1 Calculation of the number of GHG emission units allocated without charge by type of activity at an establishment producing cement, lime, prebaked anodes or aluminum using a prebaked anode technology other than the side-worked technology, covered prior to 2021 that is considered on a sectoral basis for the years 2021 to 2023”;

(p) by replacing Table 1 in subdivision 9.1 by the following:

“Table 1: Sectoral intensities in the aluminum sector

| Year | Intensity of GHG emissions for liquid aluminum production using a prebaked anode technology other than the side-worked technology (leaving the electrolysis hall) and for aluminum production referred to in paragraphs 5 to 7 of Division C of this Part | Intensity of GHG emissions for the production of baked anodes removed from furnace |
|------|---|--|
| 2021 | 1.813 | 0.3129 |
| 2022 | 1.796 | 0.3102 |
| 2023 | 1.779 | 0.3074 |

“.

(q) by inserting the following after subdivision 9.2:

“9.3 Sectoral intensities in the lime sector

Table 3: Sectoral intensities in the lime sector

| Year | Intensity of GHG emissions for calcic lime production | Intensity of GHG emissions for dolomitic lime production |
|------|---|--|
| 2021 | 1.100 | 1.376 |
| 2022 | 1.091 | 1.364 |
| 2023 | 1.082 | 1.352 |

“.

(r) by replacing the definition of factor “d” in equations 10-1, 10-2, 10-3, 10-4, 11-1, 11-2, 11-3, 11-4, 12-1 and 12-2 by the following:

“d = Year in which the coverage requirement begins”;

(s) by inserting the following after the definition of factor “ a_{oi} ” in equation 11-5:

“ d = Year in which the coverage requirement begins;”;

(t) by replacing Table 7 in section 17 by the following:

“Table 7: Assistance factor and risk level for a reference unit by compliance period

| Sector | Reference unit | Assistance factor 2021-2030 | Risk level |
|--|---|---|------------|
| Agrifood | Hectolitre of beer | 0.90 | Level 1 |
| | Kilolitre of alcohol | 0.90 | Level 1 |
| | Metric tonne of sugar | 1.00 | Level 1 |
| | Metric tonne of processed oilseed | 1.00 | Level 1 |
| | Kilolitre of whole unpasteurized milk | 0.90 | Level 1 |
| | Metric tonne of milk powder with 5% or less moisture content | 0.90 | Level 1 |
| | Metric tonne of cleaned flour | 0.90 | Level 1 |
| | Metric tonne of pork products finished at the slaughterhouse after cutting and boning | 0.90 | Level 1 |
| | Metric tonne of processed products | 0.90 | Level 1 |
| | Aluminum | Metric tonne of baked cathodes removed from furnace | 1.00 |
| Metric tonne of liquid aluminum (leaving potroom) | | 1.00 | Level 5 |
| Metric tonne of baked anodes removed from furnace | | 1.00 | Level 5 |
| Metric tonne of aluminum hydroxide hydrate expressed as Al_2O_3 equivalent calculated at the precipitation stage | | 1.00 | Level 3 |
| Metric tonne of calcinated coke | | 1.00 | Level 5 |
| Metric tonne of remelted aluminum | | 1.00 | Level 1 |

| | | | |
|--|--|--|---------|
| Other | Metric tonne of treated matter | 0.90 | Level 1 |
| | Cubic metre of gypsum panel | 1.00 | Level 3 |
| | Metric tonne of glass | 1.00 | Level 3 |
| | Square metre of silicon substrate associate with deep reactive ion etching | 0.90 | Level 1 |
| | Square metre of silicon substrate associated with an etching process other than deep reactive ion etching | 0.90 | Level 1 |
| | Square metre of silicon substrate associated with plasma enhanced chemical vapour deposition | 0.90 | Level 1 |
| | Metric tonne of carbon dioxide | 1.00 | Level 2 |
| | Number of aircraft delivered | 0.90 | Level 1 |
| | Number of aerospace parts delivered | 0.90 | Level 1 |
| | Number of aircraft with internal fittings manufactured on site | 0.90 | Level 1 |
| | Number of aircraft painted at the paintshop on site | 0.90 | Level 1 |
| | Number of aircraft tested prior to delivery | 0.90 | Level 1 |
| | Number of laminate sheet equivalents leaving press (typical sheet: minimum surface of 4 feet by 8 feet, 0.67 mm thickness) | 0,95 | Level 1 |
| | Square metre of asphalt shingles (membrane base) | 1.00 | Level 2 |
| | Lime | Metric tonne of calcic lime and metric tonne of calcic lime kiln dust sold | 1.00 |
| Metric tonne of dolomitic lime and metric tonne of dolomitic lime kiln dust sold | | 1.00 | Level 7 |

| | | | |
|-------------|--|------|---------|
| Chemical | Kilolitre of ethanol | 1.00 | Level 2 |
| | Metric tonne of tires | 0.90 | Level 1 |
| | Board foot of rigid insulation | 0,95 | Level 1 |
| | Metric tonne of titanium (Ti O ₂) pigment equivalent (raw material) | 1.00 | Level 4 |
| | Metric tonne of LAB | 1.00 | Level 2 |
| | Metric tonne of catalyzer (including additives) | 1.00 | Level 1 |
| | Metric tonne of hydrogen | 1.00 | Level 2 |
| | Metric tonne of PTA | 1.00 | Level 2 |
| | Metric tonne of xylene and toluene | 1.00 | Level 7 |
| | Metric tonne of steam sold to a third person | 1.00 | Level 7 |
| | Metric tonne of sodium silicate | 1.00 | Level 2 |
| | Metric tonne of sulphur | 1.00 | Level 2 |
| | Metric tonne of polyethylene therephthalate (PET) | 0.95 | Level 1 |
| Cement | Metric tonne of clinker and metric tonne of mineral additives (gypsum and limestone) added to the clinker produced | 1.00 | Level 7 |
| Electricity | Megawatt-hour (MWh) | 0.60 | Level 1 |
| | Metric tonne of steam | 0.60 | Level 1 |
| Metallurgy | Metric tonne of steel (slabs, pellets or ingots) | 1.00 | Level 6 |
| | Metric tonne of wrought steel | 1.00 | Level 3 |
| | Metric tonne of rolled steel | 1.00 | Level 1 |
| | Metric tonne of copper anodes | 1.00 | Level 1 |
| | Metric tonne of recycled secondary materials | 1.00 | Level 1 |
| | Metric tonne of reduced iron pellets | 1.00 | Level 6 |
| | Metric tonne of copper cathodes | 1.00 | Level 1 |

| | | | |
|--------------------------|---|------|---------|
| | Metric tonne of ferrosilicon (50% and 75% concentration) | 1.00 | Level 7 |
| | Metric tonne of lead | 1.00 | Level 1 |
| | Metric tonne of saleable iron powder and steel powder | 1.00 | Level 5 |
| | Metric tonne of Ti O2 slag cast at the reduction furnaces | 1.00 | Level 5 |
| | Metric tonne of metallic silicon | 1.00 | Level 7 |
| | Metric tonne of iron load | 0.95 | Level 1 |
| | Metric tonne of cathodic zinc | 0.95 | Level 1 |
| | Metric tonne of steel forging stock | 0.95 | Level 1 |
| | Metric tonne of copper drawing stock | 0.95 | Level 1 |
| | Metric tonne of primary magnesium entering the foundry | 1.00 | Level 1 |
| | Metric tonne of magnesium produced | 1.00 | Level 1 |
| Mining and pelletization | Metric tonne of flux pellets | 1.00 | Level 7 |
| | Metric tonne of standard pellets | 1.00 | Level 1 |
| | Metric tonne of low silica flux pellets | 1.00 | Level 7 |
| | Metric tonne of low silica pellets | 1.00 | Level 7 |
| | Metric tonne of blast furnace pellets | 1.00 | Level 7 |
| | Metric tonne of intermediate pellets | 1.00 | Level 7 |
| | Metric tonne of iron concentrate | 1.00 | Level 1 |
| | Metric tonne of nickel produced | 1.00 | Level 1 |
| | Metric tonne of nickel and copper produced | 1.00 | Level 1 |
| | Metric tonne of kimberlite processed | 0.90 | Level 1 |
| | Metric tonne of auriferous ore processed | 0.90 | Level 1 |

| | | | |
|----------------|---|------|---------|
| Pulp and paper | Metric tonne of various air-dried saleable products | 1.00 | Level 1 |
| | Metric tonne of various saleable air-dried products of each of the establishments common to a steam network | 1.00 | Level 1 |
| | Metric tonne of saleable commercial pulp air-dried to 10% moisture content | 1.00 | Level 1 |
| | Metric tonne of saleable newsprint air-dried to 10% moisture content | 1.00 | Level 1 |
| | Metric tonne of saleable fine paper (from kraft pulp or deinked kraft pulp) air-dried to 10% moisture content | 1.00 | Level 1 |
| | Metric tonne of saleable semi-fine uncoated paper (from mechanical pulp) air-dried to 10% moisture content | 1.00 | Level 1 |
| | Metric tonne of saleable semi-fine coated paper air-dried to 10% moisture content | 1.00 | Level 1 |
| | Metric tonne of saleable sanitary tissue air-dried to 10% moisture content | 1.00 | Level 2 |
| | Metric tonne of saleable uncoated cardboard air-dried to 10% moisture content | 1.00 | Level 1 |
| | Metric tonne of saleable coated cardboard air-dried to 10% moisture content | 1.00 | Level 1 |
| | Metric tonne of saleable corrugated board and linerboard air-dried to 10% moisture content | 1.00 | Level 1 |

| | | | |
|-------------|--|------|---------|
| | Metric tonne of saleable cellulosic filament air-dried to 10% moisture content | 1.00 | Level 1 |
| | Thousand board feet (MFBM) (dry) | 0.90 | Level 1 |
| Refining | Kilolitre of total crude oil refinery load | 1.00 | Level 3 |
| All sectors | Reference unit not determined elsewhere in the table | 0.90 | Level 1 |

“,

(u) by adding the following at the end:

“18. Calculation methods for the total quantity of GHG emission units allocated for an establishment for the years 2024-2030

Equation 18-1 Calculation of the total quantity of GHG emission units allocated without charge for an establishment

$$A_{\text{establishment } i} = \sum_{j=1}^m A_{i,j}$$

Where:

$A_{\text{establishment } i}$ = Total quantity of GHG emission units allocated without charge for an establishment for year i for all types of activities j in Table B of Part I of this Appendix at that establishment;

i = Each year included in the period 2024 to 2030;

j = Each type of activity at the establishment;

m = Total number of types of activity at the establishment;

$A_{i,j}$ = Total number of GHG emission units allocated without charge by type of activity j at an establishment for year i , calculated using equations 19-1, 20-1, 21-1, 22-1, 23-1, 24-1 and 24-7.

Equation 18-2 Calculation of the total quantity of GHG emission units allocated without charge to the emitter for an establishment

$$A_{E \text{ establishment } i} = \sum_{j=1}^m A_{E \text{ } i, j}$$

Where:

$A_{E \text{ establishment } i}$ = Total quantity of GHG emission units allocated without charge to the emitter for an establishment for year i for all types of activities j in Table B of Part I of this Appendix at that establishment;

i = Each year included in the period 2024 to 2030;

j = Each type of activity at the establishment;

m = Total number of types of activity at the establishment;

$A_{E \text{ } i, j}$ = Total number of GHG emission units allocated without charge to the emitter by type of activity j at an establishment for year i , calculated using equations 19-5, 20-4, 21-3, 22-3, 23-3, 24-4 and 24-8.

Equation 18-3 Calculation of the total quantity of GHG emission units allocated without charge to be auctioned for an establishment

$$A_{V \text{ establishment } i} = A_{\text{establishment } i} - A_{E \text{ establishment } i}$$

Where:

$A_{V \text{ establishment } i}$ = Total quantity of GHG emission units allocated without charge to be auctioned for an establishment for year i for all types of activities j in Table B of Part I of this Appendix at that establishment;

i = Each year included in the period 2024 to 2030;

j = Each type of activity at the establishment;

$A_{\text{establishment } i}$ = Total quantity of GHG emission units allocated without charge for an establishment for year i for all types of activities j in Table B of Part I of this Appendix at that establishment, calculated using equation 18-1;

$A_{E \text{ establishment } i}$ = Total quantity of GHG emission units allocated without charge and paid to the emitter for an establishment for year i for all types of activities j in Table B of Part I of this Appendix at that establishment, calculated using equation 18-2.

19. Calculation methods for the number of GHG emission units allocated without charge for an establishment covered prior to 2024 that is not considered on a sectoral basis for the years 2024-2030

19.1 Calculation methods for the allocation

Equation 19-1 Calculation of the number of GHG emission units allocated without charge by type of activity for an establishment other than a newly operational establishment, that is not considered on a sectoral basis for the years 2024 to 2030

$$A_{i,j} = P_{R\ i,j} \times I_{i,j} \times (FA_{i,j} - MEE_i)$$

Where:

$A_{i,j}$ = Total number of GHG emission units allocated without charge by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$P_{R\ i,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i ;

$I_{i,j}$ = Target intensity for GHG emissions attributable to type of activity j at the establishment for year i , calculated using equation 19-2, in metric tonnes CO₂ equivalent per reference unit;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

MEE_i = Minimal expected effort for year i , calculated using equation 19-4 or, in the case of a covered establishment as of 2024 that is not a newly operational establishment, a value of 0 for year d or $e+1$;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins.

Equation 19-2 Target intensity by type of activity for an establishment other than a newly operational establishment that is not considered on a sectoral basis for the years 2024 to 2030

$$I_{i,j} = 0.9 \times I_{i-1,j} + 0.1 \times I_{A,j}$$

Where:

$I_{i,j}$ = Target intensity for GHG emissions attributable to type of activity j at the establishment for year i , in metric tonnes CO₂ equivalent per reference unit;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

0.9 = Proportion corresponding to 90% of the target intensity for the previous year;

$I_{i-1,j}$ = Target intensity for GHG emissions attributable to type of activity j at the establishment for year $i-1$, in metric tonnes CO₂ equivalent per reference unit, calculated using equations 19-8 to 19-16 for year 2023 or using equation 19-2 for subsequent years;

0.1 = Proportion corresponding to 10% of the average actual intensity at the establishment;

$I_{A,j}$ = Average actual intensity of GHG emissions attributable to type of activity j at the establishment calculated using equation 19-3 if the data for the period 2017-2019 are all available and if operations did not start during that period, or using equations 19-3.1 and 19-3.2 in other cases, in metric tonnes CO₂ equivalent per reference unit.

Equation 19-3 Calculation of actual intensity by type of activity at an establishment other than a newly operational establishment that is not considered on a sectoral basis, for which the data for the period 2017-2019 are all available and that did not start operations during that period.

$$I_{A,j} = \frac{\sum_{i=2017}^{2019} GHG_{i,j}}{\sum_{i=2017}^{2019} P_{Ri,j}}$$

Where:

$I_{A,j}$ = Average actual intensity of GHG emissions attributable to type of activity j at the establishment for the years 2017-2019, in metric tonnes CO₂ equivalent per reference unit;

j = Type of activity

i = Each year included in the period 2017 to 2019;

$GHG_{i,j}$ = GHG emissions attributable to type of activity j at the establishment for year i , in metric tonnes CO₂ equivalent, using the new GWP values for the calculation;

$P_{Ri,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i .

Equation 19-3.1 Calculation of actual intensity by type of activity for an establishment other than a newly operational establishment, that is not considered on a sectoral basis and for which the data for the years $d-2$ to d or $e-3$ to $e-1$ are all available

$$I_{R dep,j} = \frac{\sum_{i=d-2}^d GHG_{i,j}}{\sum_{i=d-2}^d P_{Ri,j}}$$

Or

$$I_{R dep,j} = \frac{\sum_{i=e-3}^{e-1} GHG_{i,j}}{\sum_{i=e-3}^{e-1} P_{Ri,j}}$$

Where:

$I_{R\ dep,j}$ = Initial average actual intensity of GHG emissions attributable to type of activity j at the establishment for the years 2017 to 2019, in metric tonnes CO₂ equivalent per reference unit;

j = Type of activity

i = Years $d-2$ to d or $e-3$ to $e-1$;

$GHG_{i,j}$ = GHG emissions for type of activity j at the establishment for year i , in metric tonnes CO₂ equivalent, calculated using the new GWP values;

$P_{Ri,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i .

Equation 19-3.2 Calculation of actual intensity by type of activity for an establishment other than a newly operational establishment, that is not considered on a sectoral basis and for which the data for the years $d-2$ to d or $e-3$ to $e-1$ are not all available

$$I_{R\ dep,j} = \frac{\sum_{i=d}^{d+2} GHG_{i,j}}{\sum_{i=d}^{d+2} P_{Ri,j}}$$

Or

$$I_{R\ dep,j} = \frac{\sum_{i=d+1}^{d+3} GHG_{i,j}}{\sum_{i=d+1}^{d+3} P_{Ri,j}}$$

Or

$$I_{R\ dep,j} = \frac{\sum_{i=e-1}^{e+1} GHG_{i,j}}{\sum_{i=e-1}^{e+1} P_{Ri,j}}$$

Or

$$I_{R\ dep,j} = \frac{\sum_{i=e}^{e+2} GHG_{i,j}}{\sum_{i=e}^{e+2} P_{Ri,j}}$$

Where:

$I_{R\ dep,j}$ = Initial average actual intensity of GHG emissions attributable to type of activity j at the establishment for the years 2017 to 2019, in metric tonnes CO₂ equivalent per reference unit;

j = Type of activity

i = Years d to $d+2$ or $d+1$ to $d+3$ where d is the year in which the establishment became operational, or $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational;

$GHG_{i,j}$ = GHG emissions for type of activity j at the establishment for year i , in metric tonnes CO₂ equivalent, calculated using the new GWP values;

$P_{R\ ij}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i .

Equation 19-4 Calculation of the minimal expected effort for the years 2024 to 2030

$$EMA_i = 0.01 \times (i - n)$$

Where:

MEE_i = Minimal expected effort for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

0.01 = Minimal expected effort;

n = Year 2023 or, in the case of a covered establishment as of 2024, year d or $e+1$;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins.

Equation 19-5 Calculation of the number of GHG emission units allocated to the emitter by type of activity for an establishment other than a newly operational establishment that is not considered on a sectoral basis for the years 2024 to 2030

$$A_{E\ ij} = P_{R\ ij} \times \min[I_{i,j} \times (FA_{i,j} - FDP_i - ESA_{i,j} - FMT_i); I_{max\ j} \times FA_{i,j}]$$

Where:

$A_{E\ ij}$ = Total number of GHG emission units paid directly to the emitter by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

min = Minimum value, representing the lesser of the 2 elements calculated;

$P_{R\ ij}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i ;

min = Minimum value, representing the lesser of the 2 elements calculated;

$I_{i,j}$ = Target intensity for GHG emissions attributable to type of activity j at the establishment for year i , in metric tonnes CO₂ equivalent per reference unit, calculated using equation 19-2;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

CDF_i = Cap decline factor for year i , calculated using equation 19-6 or, in the case of a covered establishment as of 2024 that is not a newly operational establishment, a value of 0 for year d or $e+1$;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$EEE_{i,j}$ = Extra effort expected for type of activity j for year i , calculated using equation 19-7 or, in the case of a covered establishment as of 2024 that is not a newly operational establishment, a value of 0 for year d or $e+1$;

TMF_i = Trajectory modulation factor for year i , as defined in Table 9 or, in the case of a covered establishment as of 2024 that is not a newly operational establishment, a value of 0 for year d or $e+1$;

$I_{max,j}$ = Maximal allowance intensity target for type of activity j at the establishment calculated using equations 19-8 to 19-16.

Equation 19-6 Calculation of the cap decline factor for the years 2024 to 2030

$$CDF_i = 0.0234 \times (i - n)$$

Where:

$CDF_{i,j}$ = Cap decline factor for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

0.0234 = Value corresponding to the annual decrease in emission unit caps during the period 2024-2030;

n = Year 2023 or, in the case of a covered establishment as of 2024, year d or $e+1$;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins.

Equation 19-7 Calculation of the extra effort expected by type of activity for the years 2024 to 2030

$$EEE_{i,j} = EEE_{i-1,j} + \text{Additional reduction}_{i,j} - PFF_{i,j}$$

Where:

$EEE_{i,j}$ = Extra effort expected for type of activity j for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$EEE_{i-1,j}$ = Extra effort expected for type of activity j for year $i-1$, or, for year 2024 in the case of an establishment covered prior to the year 2024 that is not a newly operational establishment, a value of 0;

$\text{Additional reduction}_{i,j}$ = Additional reduction for type of activity j for year i , as defined in Table 8 and according to the risk level defined;

$PFF_{i,j}$ = Proportion factor of fixed process emissions for type of activity j for year i , a value of 0.00272 if the fixed process emissions in the emissions report for year i for activity j represent 50% or more of emissions, or 0 in other cases.

19.2 Calculation methods for the maximal allowance intensity target

The maximal allowance intensity target is calculated in accordance with the following methods:

- (1) in the case of an establishment covered prior to the year 2021 that is not considered on a sectoral basis or an establishment that produces liquid aluminum using a side-worked prebaked anode technology, using equation 19-8
- (2) in the case of a covered establishment as of 2021 that is not considered on a sectoral basis and that possesses all the GHG emissions data for years $d-2$ to d , using equation 19-9;
- (3) in the case of a covered establishment as of 2021 that is not considered on a sectoral basis and that does not possess all the GHG emissions data for the years $d-2$ to d , using equation 19-10;
- (4) in the case of a covered establishment referred to in section 2.1 that is not considered on a sectoral basis and for which the GHG emissions data for the years $e-3$ to $e-1$ are all available, using equation 19-11;
- (5) in the case of a covered establishment referred to in section 2.1 that is not considered on a sectoral basis and for which the GHG emissions data for the years $e-3$ to $e-1$ are not all available, using equation 19-12;
- (6) in the case of an establishment that produces cathodic zinc using hydrogen as a fuel to supply its furnaces, using equation 19-13;
- (7) in the case of a copper foundry, using equation 19-14;
- (8) in the case of an establishment that produces steel (slabs, pellets or ingots), metallic silicon, ferrosilicon, reduced iron pellets or titanium dioxide (TiO₂), using equation 19-15;
- (9) in the case of a copper refinery, using equation 19-16.

Equation 19-8 Intensity of the maximum allocation by type of activity for an establishment covered prior to 2021 that is not considered on a sectoral basis or an establishment that produces liquid aluminum using a side-worked prebaked anode technology for the years 2024 to 2030

$$I_{max j} = I_{FP ref j} \times a_{FP,2023} + I_{C ref j} \times a_{C,2023} + I_{O ref j} \times a_{A,2023}$$

Where:

$I_{max j}$ = Maximal allowance intensity target for type of activity j ;

j = Type of activity;

$I_{FP ref j}$ = Reference intensity for fixed process emissions attributable to type of activity j at the establishment for the years 2021 to 2023, calculated using equations 8-2, 8-8 and 8-11, in metric tonnes CO₂ equivalent per reference unit;

$a_{FP, 2023}$ = Allocation reduction factor for fixed process emissions for year 2023, as defined in Table 5 of this Appendix;

$I_{C\ ref\ j}$ = Reference intensity for combustion emissions attributable to type of activity j at the establishment for the years 2021 to 2023, calculated using equations 8-4, 8-9 and 8-13 or, in the case of an establishment producing alumina from bauxite, a value of 0.4, in metric tonnes CO₂ equivalent per reference unit;

$a_{C, 2023}$ = Allocation reduction factor for combustion emissions for year 2023, as defined in Table 5 of this Appendix;

$I_{O\ ref\ j}$ = Reference intensity for other emissions attributable to type of activity j at the establishment for the years 2021 to 2023, calculated using equations 8-6, 8-10 and 8-17, in metric tonnes CO₂ equivalent per reference unit;

$a_{O, 2023}$ = Allocation reduction factor for other emissions for year 2023, as defined in Table 5 of this Appendix.

Equation 19-9 Intensity of the maximum allocation by type of activity for a covered establishment as of 2021 that is not considered on a sectoral basis and that possesses all the GHG emissions data for years $d-2$ to d for the years 2024 to 2030

$$I_{max\ j} = I_{FP\ dep\ j} \times a_{FP, 2023} + I_{C\ dep\ j} \times a_{C, 2023} + I_{O\ dep\ j} \times a_{O, 2023}$$

Where:

$I_{max\ j}$ = Maximal allowance intensity target for type of activity j ;

j = Type of activity;

$I_{FP\ dep}$ = Average intensity of fixed process emissions attributable to type of activity j at the establishment for the years $d-2$ to d , calculated using equation 10-2, in metric tonnes CO₂ equivalent per reference unit;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

$a_{FP, 2023}$ = Allocation reduction factor for fixed process emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-d$;

$I_{C\ dep}$ = Average intensity of combustion emissions attributable to type of activity j at the establishment for the years $d-2$ to d , calculated using equation 10-3, in metric tonnes CO₂ equivalent per reference unit;

$a_{C, 2023}$ = Allocation reduction factor for combustion emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-d$;

$I_{O\ dep}$ = Average intensity of other emissions attributable to type of activity j at the establishment for the years $d-2$ to d , calculated using equation 10-4, in metric tonnes CO₂ equivalent per reference unit;

$a_{O, 2023}$ = Allocation reduction factor for other emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-d$.

Equation 19-10 Intensity of the maximum allocation by type of activity for a covered establishment as of 2021 that is not considered on a sectoral basis and that does not possess all the GHG emissions data for the years $d-2$ to d for the years 2024 to 2030

$$I_{\max j} = I_{FP \text{ dep } j} \times a_{FP,2023} + I_{C \text{ dep } j} \times a_{C,2023} + I_{O \text{ dep } j} \times a_{O,2023}$$

Where:

$I_{\max j}$ = Maximal allowance intensity target for type of activity j ;

j = Type of activity;

$I_{FP \text{ dep}}$ = Average intensity of fixed process emissions attributable to type of activity j at the establishment for the years d to $d+2$ or $d+1$ to $d+3$ where d is the year in which the establishment became operational, calculated using equation 11-2, in metric tonnes CO₂ equivalent per reference unit;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

$a_{FP,2023}$ = Allocation reduction factor for fixed process emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-d$;

$I_{C \text{ dep}}$ = Average intensity of combustion emissions attributable to type of activity j at the establishment for the years d to $d+2$ or $d+1$ to $d+3$ where d is the year in which the establishment became operational, calculated using equation 11-3, in metric tonnes CO₂ equivalent per reference unit;

$a_{C,2023}$ = Allocation reduction factor for combustion emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-d$;

$I_{O \text{ dep}}$ = Average intensity of other emissions attributable to type of activity j at the establishment for the years d to $d+2$ or $d+1$ to $d+3$ where d is the year in which the establishment became operational, calculated using equation 11-4, in metric tonnes CO₂ equivalent per reference unit;

$a_{O,2023}$ = Allocation reduction factor for other emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-d$.

Equation 19-11 Intensity of the maximum allocation by type of activity for an establishment referred to in section 2.1 covered as of 2021 that is not considered on a sectoral basis and for which the GHG emissions data for the years $e-3$ to $e-1$ are all available for the years 2024 to 2030

$$I_{\max j} = I_{FP \text{ dep } j} \times a_{FP,2023} + I_{C \text{ dep } j} \times a_{C,2023} + I_{O \text{ dep } j} \times a_{O,2023}$$

Where:

$I_{\max j}$ = Maximal allowance intensity target for type of activity j ;

j = Type of activity;

$I_{FP\ dep}$ = Average intensity of fixed process emissions attributable to type of activity j at the establishment for the years $e-3$ to $e-1$, calculated using equation 13-2, in metric tonnes CO₂ equivalent per reference unit;

e = Year preceding the year in which the coverage requirement begins;

$a_{FP,2023}$ = Allocation reduction factor for fixed process emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-(e+1)$;

$I_{C\ dep}$ = Average intensity of combustion emissions attributable to type of activity j at the establishment for the years $e-3$ to $e-1$, calculated using equation 13-3, in metric tonnes CO₂ equivalent per reference unit;

$a_{C,2023}$ = Allocation reduction factor for combustion emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-(e+1)$;

$I_{O\ dep}$ = Average intensity of other emissions attributable to type of activity j at the establishment for the years $e-3$ to $e+1$, calculated using equation 13-4, in metric tonnes CO₂ equivalent per reference unit;

$a_{O,2023}$ = Allocation reduction factor for other emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-(e+1)$.

Equation 19-12 Intensity of the maximum allocation by type of activity for an establishment referred to in section 2.1 covered as of 2021 that is not considered on a sectoral basis and for which the GHG emissions data for the years $e-3$ to $e-1$ are not all available for the years 2024 to 2030

$$I_{\max j} = I_{FP\ dep j} \times a_{FP,2023} + I_{C\ dep j} \times a_{C,2023} + I_{O\ dep j} \times a_{O,2023}$$

Where:

$I_{\max j}$ = Maximal allowance intensity target for type of activity j ;

j = Type of activity;

$I_{FP\ dep}$ = Average intensity of fixed process emissions attributable to type of activity j at the establishment for the years $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational, calculated using equation 11-2, in metric tonnes CO₂ equivalent per reference unit;

e = Year preceding the year in which the coverage requirement begins;

$a_{FP,2023}$ = Allocation reduction factor for fixed process emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-(e+1)$;

$I_{C\ dep}$ = Average intensity of combustion emissions attributable to type of activity j at the establishment for the years $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational, calculated using equation 11-3, in metric tonnes CO₂ equivalent per reference unit;

$a_{C,2023}$ = Allocation reduction factor for combustion emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-(e+1)$;

$I_{O\ dep}$ = Average intensity of other emissions attributable to type of activity j at the establishment for the years $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational, calculated using equation 11-4, in metric tonnes CO₂ equivalent per reference unit;

$a_{O,2023}$ = Allocation reduction factor for other emissions for year 2023 for establishments covered between 2021 and 2023, as defined in Table 6 of this Appendix, where $n=2023-(e+1)$.

Equation 19-13 Intensity of the maximum allocation of an establishment that produces cathodic zinc using hydrogen as a fuel to supply its furnaces

$$I_{max\ j} = I_{C\ ref\ j} \times a_{C,2023} + I_{O\ ref\ j} \times a_{O,2023} + F_{H\ 2023} + \max\left(\frac{GHG_{FP\ 2023,j}}{P_{R\ 2023,j}}; I_{FP\ ref,j}\right) \times a_{FP,2023}$$

Where:

$I_{max\ j}$ = Maximal allowance intensity target for type of activity j ;

j = Type of activity;

$I_{C\ ref\ j}$ = Reference intensity for combustion emissions attributable to cathodic zinc production at the establishment for year 2023, calculated using equation 8-4, in metric tonnes CO₂ equivalent per reference unit;

$a_{C, 2023}$ = Allocation reduction factor for combustion emissions for year 2023, as defined in Table 5 of this Appendix;

$I_{O\ ref\ j}$ = Reference intensity for other emissions attributable to cathodic zinc production at the establishment for year 2023, calculated using equation 8-6, in metric tonnes CO₂ equivalent per reference unit;

$a_{O, 2023}$ = Allocation reduction factor for other emissions for year 2023, as defined in Table 5 of this Appendix;

$F_{H\ 2023}$ = Adjustment factor for the partial or total loss of hydrogen supply for year 2023, calculated using equation 6-10.2;

\max = Maximum value, representing the greater of $GHG_{FP\ 2023,j} / \times P_{R\ 2023,j}$ and $I_{FP\ ref,j}$;

$GHG_{FP\ 2023, j}$ = Fixed process emissions attributable to type of activity j at the establishment for year 2023, in metric tonnes CO₂ equivalent;

$P_{R\ 2023, j}$ = Total quantity of cathodic zinc produced by the establishment for year 2023, in metric tonnes of cathodic zinc;

$I_{FP\ ref, j}$ = Reference intensity for fixed process emissions attributable to cathodic zinc production at the establishment for year 2023, calculated using equation 8-26, in metric tonnes CO₂ equivalent per reference unit;

$a_{FP, 2023}$ = Allocation reduction factor for fixed process emissions for year 2023, as defined in Table 5 of this Appendix.

Equation 19-14 Intensity of the maximum allocation of a copper foundry

$$I_{max} = I_{C\ ref\ cu} \times a_{c,2023} + \max\left(\frac{GHG_{FO\ cu,2023}}{P_{R\ cu,2023}}; I_{FP\ ref\ cu}\right) \times a_{FP,2023} + I_{C\ ref\ RSM} \times a_{c,2023} + \frac{A_{recycl,2023}}{P_{R\ RSM,2023}}$$

Where:

I_{max} = Maximal allowance intensity target for the production of copper anodes at the establishment;

$I_{C\ ref\ cu}$ = Reference intensity for combustion emissions attributable to copper anode production at the establishment for year 2023, calculated using equation 8-4, in metric tonnes CO₂ equivalent per reference unit;

$a_{c,2023}$ = Allocation reduction factor for combustion emissions for year 2023, as defined in Table 5 of this Appendix;

\max = Maximum value, representing the greater of $GHG_{FP\ cu,2023} / P_{R\ cu,2023}$ and $I_{FP\ ref\ cu}$;

$GHG_{FP\ cu,2023}$ = Fixed process emissions attributable to anode production at the establishment for year 2023, in metric tonnes CO₂ equivalent;

$P_{R\ cu,2023}$ = Total quantity of copper anodes produced by the establishment for year 2023, in metric tonnes of copper;

$I_{FP\ ref\ cu}$ = Reference intensity for fixed process emissions attributable to copper anode production at the establishment for year 2023, calculated using equation 8-2, in metric tonnes CO₂ equivalent per metric tonne of copper anodes;

$a_{FP,2023}$ = Allocation reduction factor for fixed process emissions for year 2023, as defined in Table 5 of this Appendix;

$I_{C\ ref\ RSM}$ = Reference intensity for combustion emissions attributable to the treatment of gas from the recycling of secondary materials at the establishment for year 2023, calculated using equation 8-4, in metric tonnes CO₂ equivalent per metric tonne of recycled secondary materials;

$A_{recycl,2023}$ = GHG emissions attributable to the carbon content of recycled secondary materials introduced into the process for year 2023, in metric tonnes CO₂ equivalent;

$P_{R\ RSM,2023}$ = Total quantity of secondary materials recycled at the establishment for year 2023, in metric tonnes of recycled secondary materials.

For the application of equation 19-14, recycled secondary materials used in a process at a copper foundry are deemed to be all materials used in the process other than fuel, ore, reducing agents, materials used for slag purification, carbonated reactants and carbon electrodes.

Equation 19-15 Intensity of the maximum allocation for the production of steel (slabs, pellets or ingots), metallic silicon, ferrosilicon, reduced iron pellets or titanium dioxide (TiO₂)

$$I_{max,j} = I_{C\ ref\ j} \times a_{C,2023} + I_{O\ ref\ j} \times a_{O,2023} + \max\left(\frac{GHG_{FP\ 2023,j}}{P_{R\ 2023,j}}; I_{FP\ ref\ j}\right) \times a_{FP,2023}$$

Where:

$I_{max,j}$ = Maximal allowance intensity target for type of activity j ;

j = Type of activity;

$I_{C\ ref\ j}$ = Reference intensity for combustion emissions attributable to type of activity j at the establishment for year 2023, calculated using equation 8-4, in metric tonnes CO₂ equivalent per reference unit;

$a_{C,2023}$ = Allocation reduction factor for combustion emissions for year 2023, as defined in Table 5 of this Appendix;

$I_{O\ ref\ j}$ = Reference intensity for other emissions attributable to type of activity j at the establishment for year 2023, calculated using equation 8-6, in metric tonnes CO₂ equivalent per reference unit;

$a_{O,2023}$ = Allocation reduction factor for other emissions for year 2023, as defined in Table 5 of this Appendix;

\max = Maximum value, representing the greater of $GHG_{FP2023,j} / P_{R\ 2023,j}$ and $I_{FP\ ref\ 2023}$;

$GHG_{FP\ 2023,j}$ = Fixed process emissions attributable to type of activity j at the establishment for year 2023, in metric tonnes CO₂ equivalent;

$P_{R\ 2023,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year 2023;

$I_{FP\ ref\ j}$ = Reference intensity for fixed process emissions attributable to type of activity j at the establishment for year 2023, calculated using equation 8-2, in metric tonnes CO₂ equivalent per reference unit;

$a_{FP,2023}$ = Allocation reduction factor for fixed process emissions for year 2023, as defined in Table 5 of this Appendix.

Equation 19-16 Intensity of the maximum allocation of a copper refinery

$$I_{max} = I_{C\ ref\ cath} \times a_{c,2023} + I_{FP\ ref\ cath} \times a_{FP,2023} + \frac{GHG_{C,2023\ RSM}}{P_{R,RSM,2023}} \times a_{c,2023}$$

Where:

I_{max} = Maximal allowance intensity target for the production of copper cathodes at the establishment;

$I_{C\ ref\ cath}$ = Reference intensity for combustion emissions attributable copper cathode production at the establishment for year 2023, calculated using equation 8-4, in metric tonnes CO₂ equivalent per reference unit;

$a_{c, 2023}$ = Allocation reduction factor for combustion emissions for year 2023, as defined in Table 5 of this Appendix;

$I_{FP\ ref\ cath}$ = Reference intensity for fixed process emissions attributable to copper cathode production at the establishment for year 2023, calculated using equation 8-2, in metric tonnes CO₂ equivalent per metric tonne of copper anodes;

$a_{FP,2023}$ = Allocation reduction factor for fixed process emissions for year 2023, as defined in Table 5 of this Appendix;

$GHG_{C,2023\ RSM}$ = GHG combustion emissions attributable to the treatment of recycled secondary materials for year 2023, in metric tonnes CO₂ equivalent;

$P_{R, RSM, 2023}$ = Total quantity of secondary materials recycled at the establishment for year 2023, in metric tonnes of recycled secondary materials.

20. Calculation methods for the total quantity of GHG emission units allocated without charge for an establishment that is considered on a sectoral basis for the years 2024-2030**Equation 20-1 Calculation of the number of GHG emission units allocated without charge by type of activity at an establishment that is considered on a sectoral basis for the years 2024 to 2030**

$$A_{i,j} = P_{R\ i,j} \times I_{S\ i,j} \times (AF_{i,j} - MEE_i)$$

Where:

$A_{i,j}$ = Total number of GHG emission units allocated without charge by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$P_{R\ i,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i ;

$I_{S\ i,j}$ = Target intensity for GHG emissions attributable to type of activity j in the sector for year i , calculated using equation 20-2, in metric tonnes CO₂ equivalent per reference unit;

AF_{ij} = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

MEE_i = Minimal expected effort for year i , calculated using equation 19-4 or, for the year d or $e+1$, a value of 0.

Equation 20-2 Target intensity by type of activity at an establishment producing cement, prebaked anodes or aluminum by using a prebaked anode technology other than the side-worked technology for the years 2024 to 2030

$$I_{S_{i,j}} = 0.9 \times I_{S_{i-1,j}} + 0.1 \times I_{RS,j}$$

Where:

$I_{S_{i,j}}$ = Target intensity for GHG emissions attributable to type of activity j in the sector for year i , in metric tonnes CO₂ equivalent per reference unit;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

0.9 = Proportion corresponding to 90% of the target intensity for the previous year;

$I_{S_{i-1,j}}$ = Target intensity for GHG emissions attributable to type of activity j at the establishment for year $i-1$, in metric tonnes CO₂ equivalent per reference unit determined using Tables 1, 2 and 3 in subdivisions 9.1, 9.2 and 9.3 of this Part for year 2023;

0.1 = Proportion corresponding to 10% of the average actual intensity in the sector;

$I_{RS_{i-4,j}}$ = Average actual intensity of GHG emissions attributable to type of activity j in the sector for the period 2017-2019, in metric tonnes CO₂ equivalent per reference unit, calculated using equation 20-3.

Equation 20-3 Calculation of the average intensity of GHG emissions attributable to type of activity j in the sector

$$I_{RS_j} = \frac{\sum_{i=2017}^{2019} \sum_{k=1}^l GHG_{i,j,k}}{\sum_{i=2017}^{2019} \sum_{k=1}^l P_{R_{i,j,k}}}$$

Where:

$I_{RS_{i,j}}$ = Average actual intensity of GHG emissions attributable to type of activity j in the sector for the period 2017-2019, in metric tonnes CO₂ equivalent per reference unit;

i = Each year in the period 2017-2019;

j = Type of activity;

k = Establishment in the sector required to cover GHG emissions during year 2021 i ;

l = Number of covered establishments during year i in the sector;

$GHG_{i,j,k}$ = GHG emissions attributable to type of activity j at establishment k for year i , in metric tonnes CO₂ equivalent, calculated using the new GWP values and excluding emissions for the year in which the establishment became operational;

$P_{Ri,j,k}$ = Total quantity of reference units produced or used by establishment k for type of activity j during year i , excluding reference units produced or used by the establishment during the year in which the establishment became operational;

Equation 20-4 Calculation of the number of GHG emission units allocated and paid to the emitter by type of activity at an establishment that is considered on a sectoral basis for the years 2024 to 2030

$$A_{Ei,j} = P_{Ri,j} \times \min[I_{S_{i,j}} \times (AF_{i,j} - CDF_i - EEE_{i,j} - TMF_i); I_{S_{2023,j}} \times AF_{i,j}]$$

Where:

$A_{Ei,j}$ = Total number of GHG emission units paid directly to the emitter by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$P_{Ri,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i ;

min = Minimum value, representing the lesser of the 2 elements calculated;

$I_{S_{i,j}}$ = Target intensity for GHG emissions attributable to type of activity j in the sector for year i , in metric tonnes CO₂ equivalent per reference unit, calculated using equation 20-2;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

CDF_i = Cap decline factor for year i , calculated using equation 19-6 or, for the year d or $e+1$, a value of 0;

$EEE_{i,j}$ = Extra effort expected for type of activity j for year i , calculated using equation 19-7 or, for the year d or $e+1$, a value of 0;

TMF_i = Trajectory modulation factor for year i , as defined in Table 9 or, for the year d or $e+1$, a value of 0;

$I_{S_{2023,j}}$ = Intensity of GHG emissions attributable to type of activity j in the sector for year 2023, determined using Tables 1, 2 and 3 of this Appendix, in metric tonnes CO₂ equivalent per reference unit.

21. Calculation methods for the total number of GHG emission units allocated without charge for a newly operational establishment that is not considered on a sectoral basis, for the years 2024 to 2030, and for which the GHG emissions data for years d to $d+2$ or $e+1$ to $e+3$ or years $d+1$ to $d+3$ or $e+2$ to $e+4$, where d or e is the year in which the establishment became operational, are all available

Equation 21-1 Calculation of the total number of GHG emission units allocated without charge by type of activity at an establishment that is not considered on a sectoral basis for the years 2024 to 2030

$$A_{i,j} = P_{R_{i,j}} \times I_{dep,j} \times (AF_{i,j} - MEE_i)$$

Where:

$A_{i,j}$ = Total number of GHG emission units allocated without charge by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$P_{R_{i,j}}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i ;

$I_{dep,j}$ = Initial average intensity for GHG emissions attributable to type of activity j at the establishment for year i , calculated using equation 21-2, in metric tonnes CO₂ equivalent per reference unit;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix or, for the years d to $d+4$ or $e+1$ to $e+5$, a value of 1;

MEE_i = Minimal expected effort for year i , calculated using equation 19-4 or, for the years d to $d+4$ or $e+1$ to $e+5$, a value of 0.

Equation 21-2 Initial average intensity by type of activity at an establishment that is not considered on a sectoral basis for year $d+2$ or $e+3$ or year $d+3$ or $e+4$, where year d or $e+1$ is the year in which the establishment became operational

$$I_{dep,j} = \frac{\sum_{i=d}^{d+2} GHG_{i,j}}{\sum_{i=d}^{d+2} PR_{i,j}}$$

Or

$$I_{dep,j} = \frac{\sum_{i=d+1}^{d+3} GHG_{i,j}}{\sum_{i=d+1}^{d+3} PR_{i,j}}$$

Or

$$I_{dep,j} = \frac{\sum_{i=e+1}^{e+3} GHG_{i,j}}{\sum_{i=e+1}^{e+3} PR_{i,j}}$$

Or

$$I_{dep,j} = \frac{\sum_{i=e+2}^{e+4} GHG_{i,j}}{\sum_{i=e+2}^{e+4} PR_{i,j}}$$

Where:

$I_{dep,j}$ = Initial average intensity of GHG emissions attributable to type of activity j at the establishment, in metric tonnes CO₂ equivalent per reference unit;

i = Years d to $d+2$, or $e+1$ to $e+3$, or years $d+1$ to $d+3$, or $e+2$ to $e+4$ where year d or $e+1$ is the year in which the establishment became operational;

j = Type of activity;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$GHG_{i,j}$ = Total emissions attributable to type of activity j at the establishment for year i , in metric tonnes CO₂ equivalent;

$PR_{i,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i .

Equation 21-3 Calculation of the number of allocated GHG emission units paid to the emitter by type of activity at an establishment that is not considered on a sectoral basis for the years 2024 to 2030

$$A_{E\ i,j} = P_{R\ i,j} \times I_{dep,j} \times (AF_{i,j} - CDF_i - EEE_{i,j} - TMF_i)$$

Where:

$A_{E\ i,j}$ = Total number of GHG emission units paid directly to the emitter by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$P_{R\ i,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i ;

$I_{dep,j}$ = Initial average intensity for GHG emissions attributable to type of activity j at the establishment, calculated using equation 21-2, in metric tonnes CO₂ equivalent per reference unit;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

CDF_i = Cap decline factor for year i , calculated using equation 19-6 or, for the years d to $d+1$ or $e+1$ to $e+2$, a value of 0;

$EEE_{i,j}$ = Extra effort expected for type of activity j for year i , calculated using equation 19-7 or, for the years d to $d+1$ or $e+1$ to $e+2$, a value of 0;

TMF_i = Trajectory modulation factor for year i , as defined in Table 9 or, for the years d to $d+1$ or $e+1$ to $e+2$, a value of 0.

22. Calculation methods for the total number of GHG emission units allocated without charge for a newly operational establishment that is not considered on a sectoral basis for the years 2024 to 2030 and for which the GHG emissions data for years d to $d+2$ or $e+1$ to $e+3$ or years $d+1$ to $d+3$ or $e+2$ to $e+4$, where d or e is the year in which the establishment became operational, are not all available

Equation 22-1 Calculation of the number of GHG emission units allocated without charge by type of activity at an establishment that is not considered on a sectoral basis for the years 2024 to 2030

$$A_{i,j} = (EC_{TOTAL\ i,j} \times EF + GHG_{FP\ i,j} + GHG_{O\ i,j}) \times (AF_{i,j} - MEE_i)$$

Where:

$A_{i,j}$ = Total number of GHG emission units allocated without charge by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$EC_{TOTAL\ i,j}$ = Energy consumption for type of activity j for year i , in GJ, calculated using equation 11-6 or equation 14-6;

EF = Emission factor for natural gas in metric tonnes CO₂ equivalent/GJ, or in the case of an establishment not connected to the electrical grid, the emission factor for diesel in metric tonnes CO₂ equivalent/GJ, calculated using equation 22-1.1.

$GHG_{FP\ i,j}$ = Fixed process emissions at the establishment for type of activity j for year i , in metric tonnes CO₂ equivalent;

$GHG_{O\ i,j}$ = Other emissions at the establishment for type of activity j for year i , in metric tonnes CO₂ equivalent;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix or, for the years d to $d+4$ or $e+1$ to $e+5$, a value of 1;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

MEE_i = Minimal expected effort for year i , calculated using equation 22-2 or, for the years d to $d+4$ or $e+1$ to $e+5$, a value of 0.

Equation 22-1.1 Calculation of the emission factor for natural gas or diesel

$$EF = ((EF_{CO_2} \times 1000) + (EF_{CH_4} \times GWP_{CH_4}) + (EF_{N_2O} \times GWP_{N_2O})) \times 0.000001$$

Where:

EF = Emission factor for natural gas in metric tonnes CO₂ equivalent/GJ, or in the case of an establishment not connected to the electrical grid, the emission factor for diesel in metric tonnes CO₂ equivalent/GJ;

EF_{CO₂} = CO₂ emission factor for natural gas or diesel taken respectively from Table 1-4 or Table 1-3 in QC.1.7 of protocol QC.1 in Schedule A.2 to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15), in kilograms of CO₂ per GJ;

1000 = Conversion factor, kilograms to grams;

EF_{CH₄} = CH₄ emission factor for natural gas, for industrial uses, or for diesel, taken respectively from Table 1-7 or Table 1-3 in QC.1.7 of protocol QC.1 in Schedule A.2 to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere, in grams of CH₄ per GJ;

GWP_{CH₄} = Global warming potential of CH₄, taken from Schedule A.1 of the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere;

EF_{N₂O} = N₂O emission factor for natural gas, for industrial uses, or for diesel, taken respectively from Table 1-7 or Table 1-3 in QC.1.7 of protocol QC.1 in Schedule A.2 to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere, in grams of N₂O per GJ;

GWP_{N₂O} = Global warming potential for N₂O, taken from Schedule A.1 of the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere;

0.000001 = Conversion factor, grams to metric tonnes.

Equation 22-2 Calculation of the minimal expected effort for the years 2024 to 2030

$$MEE_i = 0.01 \times (i - n)$$

Where:

MEE_{*i*} = Minimal expected effort for year *i*;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

0.01 = Minimal expected effort;

n = Year *d*+1 or *e*+2;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins.

Equation 22-3 Calculation of the number of allocated GHG emission units paid to the emitter by type of activity at an establishment that is not considered on a sectoral basis for the years 2024 to 2030

$$A_{E\ i,j} = (EC_{TOTAL\ i,j} \times EF + GHG_{PF\ i,j} + GHG_{O\ i,j}) \times (AF_{i,j} - CDF_i - EEE_{i,j} - TMF_i)$$

Where:

$A_{E\ i,j}$ = Total number of GHG emission units paid directly to the emitter by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$EC_{TOTAL\ i,j}$ = Energy consumption for type of activity j for year i , in GJ, calculated using equation 11-6 or equation 14-6;

EF = Emission factor for natural gas in metric tonnes CO₂ equivalent/GJ, or in the case of an establishment not connected to the electrical grid, the emission factor for diesel in metric tonnes CO₂ equivalent/GJ, calculated using equation 22-1.1;

$GHG_{FP\ i,j}$ = Fixed process emissions at the establishment for type of activity j for year i , in metric tonnes CO₂ equivalent;

$GHG_{O\ i,j}$ = Other emissions at the establishment for type of activity j for year i , in metric tonnes CO₂ equivalent;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

CDF_i = Cap decline factor for year i , calculated using equation 22-4 or, for the years d to $d+1$ or $e+1$ to $e+2$, a value of 0;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$EEE_{i,j}$ = Extra effort expected for type of activity j for year i , calculated using equation 22-5 or, for the years d to $d+1$ or $e+1$ to $e+2$, a value of 0;

TMF_i = Trajectory modulation factor for year i , as defined in Table 9 or, for the years d to $d+1$ or $e+1$ to $e+2$, a value of 0.

Equation 22-4 Calculation of the cap decline factor for the years 2024 to 2030

$$CDF_i = 0.0234 \times (i - n)$$

Where:

$CDF_{i,j}$ = Cap decline factor for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

0.0234 = Value corresponding to the annual decrease in emission unit caps during the period 2024-2030;

n = Year d or $e+1$;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins.

Equation 22-5 Calculation of the extra effort expected by type of activity for the years 2024 to 2030

$$EEE_{i,j} = EEE_{i-1,j} + \text{Additional reduction}_{i,j} - PFF_{i,j}$$

Where:

$EEE_{i,j}$ = Extra effort expected for type of activity j for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$EEE_{i-1,j}$ = Extra effort expected for type of activity j for year $i-1$;

Additional reduction $_{i,j}$ = Additional reduction for type of activity j for year i , as defined in Table 8 and according to the risk level defined;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$PFF_{i,j}$ = Proportion factor of fixed process emissions for type of activity j for year i , a value of 0.00272 if the fixed process emissions in the verified emissions report for year i for activity j represent 50% or more of emissions, or a value of 0 in other cases.

23. Establishment referred to in section 2 or section 2.1, covered as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years $d-2$ to d or $e-3$ to $e-1$ are all available

Equation 23-1 Calculation of the number of GHG emission units allocated without charge by type of activity at an establishment referred to in section 2 or section 2.1, covered as of 2024 that is not considered on a sectoral basis for the years 2024 to 2030

$$A_{i,j} = P_{R\ i,j} \times I_{dep,j} \times (AF_{i,j} - MEE_i)$$

Where:

$A_{i,j}$ = Total number of GHG emission units allocated without charge by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$PR_{i,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i ;

$I_{dep,j}$ = Initial average intensity for GHG emissions attributable to type of activity j at the establishment for year i , calculated using equation 23-2, in metric tonnes CO₂ equivalent per reference unit;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

MEE_i = Minimal expected effort for year i , calculated using equation 19-4 or, for the years d or $e+1$, a value of 0.

Equation 23-2 Initial intensity by type of activity at an establishment referred to in section 2 or section 2.1, covered as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years $d-2$ to d or $e-3$ to $e-1$ are all available

$$I_{dep,j} = \frac{\sum_{i=d-2}^d GHG_{i,j}}{\sum_{i=d-2}^d PR_{i,j}}$$

Or

$$I_{dep,j} = \frac{\sum_{i=e-3}^{e-1} GHG_{i,j}}{\sum_{i=e-3}^{e-1} PR_{i,j}}$$

Where:

$I_{dep,j}$ = Initial intensity of GHG emissions attributable to type of activity j at the establishment, in metric tonnes CO₂ equivalent per reference unit;

j = Type of activity;

i = Years $d-2$ to d , or $e-3$ to $e-1$;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$GHG_{i,j}$ = Total emissions attributable to type of activity j at the establishment for year i , in metric tonnes CO₂ equivalent;

$PR_{i,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i .

Equation 23-3 Calculation of the number of allocated GHG emission units paid to the emitter by type of activity at an establishment referred to in section 2 or section 2.1, covered as of 2024 that is not considered on a sectoral basis for the years 2024 to 2030

$$A_{E\ i,j} = P_{R\ i,j} \times I_{dep,j} \times (AF_{i,j} - CDF_i - EEE_{i,j} - TMF_i)$$

Where:

$A_{E\ i,j}$ = Total number of GHG emission units paid directly to the emitter by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$P_{R\ i,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i ;

$I_{dep,j}$ = Initial average intensity for GHG emissions attributable to type of activity j calculated using equation 23-2, in metric tonnes CO₂ equivalent per reference unit;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

CDF_i = Cap decline factor for year i , calculated using equation 19-6 or, for year d or $e+1$, a value of 0;

$EEE_{i,j}$ = Extra effort expected for type of activity j for year i , calculated using equation 19-7 or, for year d or $e+1$, a value of 0;

TMF_i = Trajectory modulation factor for year i , as defined in Table 9 or, for year d or $e+1$, a value of 0;

$I_{max\ j}$ = Maximal allowance intensity target for type of activity j at the establishment calculated using equation 23-2.

24. Establishment referred to in section 2 or section 2.1, covered as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years $d-2$ to d or $e-3$ to $e-1$ are not all available

The total number of GHG emission units allocated without charge and paid to an emitter is calculated in accordance with the following methods:

(1) in the case of an establishment for which GHG emissions data for the years d to $d+2$, or $d+1$ to $d+3$ where d is the year in which the establishment became operational, or $e-1$ to $e+1$ or e to $e+2$, where $e-1$ is the year in which the establishment became operational, are all available, using equation 24-1;

(2) in the case of an establishment for which GHG emissions data for the years d to $d+2$, or $d+1$ to $d+3$ where d is the year in which the establishment became operational, or $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational, are not all available, using equation 24-7.

The total number of GHG emission units allocated without charge and paid to an emitter is calculated in accordance with the following methods:

(1) in the case of an establishment for which GHG emissions data for the years d to $d+2$, or $d+1$ to $d+3$ where d is the year in which the establishment became operational, or $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational, are all available, using equation 24-4;

(2) in the case of an establishment for which GHG emissions data for the years d to $d+2$, or $d+1$ to $d+3$ where d is the year in which the establishment became operational, or $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational, are not all available, using equation 24-8.

Equation 24-1 Calculation of the number of GHG emission units allocated without charge by type of activity at an establishment referred to in section 2 or section 2.1, covered as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years $d-2$ to d or $e-3$ to $e-1$ are not all available

$$A_{i,j} = P_{R i,j} \times I_{dep,j} \times (AF_{i,j} - MEE_i)$$

Where:

$A_{i,j}$ = Total number of GHG emission units allocated without charge by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$P_{R i,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i ;

$I_{dep,j}$ = Initial average intensity for GHG emissions attributable to type of activity j at the establishment, calculated using equation 24-2, in metric tonnes CO₂ equivalent per reference unit;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

MEE_i = Minimal expected effort for year i , calculated using equation 24-3 or, in the case of a covered establishment as of 2024 that is not a newly operational establishment, a value of 0 for year d or $d+1$ where d is the year in which the establishment became operational, or $e-1$ or e where $e-1$ is the year in which the establishment became operational.

Equation 24-2 Initial average intensity by type of activity at an establishment referred to in section 2 or section 2.1, covered as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years $d-2$ to d or $e-3$ to $e-1$ are not all available

$$I_{dep,j} = \frac{\sum_{i=d}^{d+2} GHG_{i,j}}{\sum_{i=d}^{d+2} PR_{i,j}}$$

Or

$$I_{dep,j} = \frac{\sum_{i=d+1}^{d+3} GHG_{i,j}}{\sum_{i=d+1}^{d+3} PR_{i,j}}$$

Or

$$I_{dep,j} = \frac{\sum_{i=e-1}^{e+1} GHG_{i,j}}{\sum_{i=e-1}^{e+1} PR_{i,j}}$$

Or

$$I_{dep,j} = \frac{\sum_{i=e}^{e+2} GHG_{i,j}}{\sum_{i=e}^{e+2} PR_{i,j}}$$

Where:

$I_{dep, j}$ = Initial average intensity of GHG emissions attributable to type of activity j at the establishment, in metric tonnes CO₂ equivalent per reference unit;

j = Type of activity;

i = Years d to $d+2$, or $d+1$ to $d+3$ where d is the year in which the establishment became operational, or $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$GHG_{i,j}$ = Total emissions attributable to type of activity j at the establishment for year i , in metric tonnes CO₂ equivalent;

$PR_{i,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i .

Equation 24-3 Calculation of the minimal expected effort for the years 2024 to 2030

$$MEE_i = 0.01 \times (i - n)$$

Where:

MEE_i = Minimal expected effort for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

0.01 = Minimal expected effort;

n = Year d or $d+1$ where d is the year in which the establishment became operational, or $e-1$ or e where $e-1$ is the year in which the establishment became operational;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins.

Equation 24-4 Calculation of the number of allocated GHG emission units paid to the emitter by type of activity at an establishment referred to in section 2 or section 2.1, covered as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years $d-2$ to d or $e-3$ to $e-1$ are not all available

$$A_{E\ i,j} = P_{R\ i,j} \times I_{dép,j} \times (AF_{i,j} - CDF_i - EEE_{i,j} - TMF_i)$$

Where:

$A_{E\ i,j}$ = Total number of GHG emission units paid directly to the emitter by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$P_{R\ i,j}$ = Total quantity of reference units produced or used by the establishment for type of activity j during year i ;

\min = Minimum value, representing the lesser of the 2 elements calculated;

$I_{dép,j}$ = Target intensity for GHG emissions attributable to type of activity j at the establishment for year i , calculated using equation 24-2, in metric tonnes CO₂ equivalent per reference unit;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

CDF_i = Cap decline factor for year i , calculated using equation 24-5 or, for year d or $d+1$ where d is the year in which the establishment became operational, or $e-1$ or e where $e-1$ is the year in which the establishment became operational, a value of 0;

$EEE_{i,j}$ = Extra effort expected for type of activity j for year i , calculated using equation 24-6 or, for the year d or $e-1$, a value of 0;

TMF_i = Trajectory modulation factor for year i , as defined in Table 9 or, for year d or $d+1$ where d is the year in which the establishment became operational, or $e-1$ or e where $e-1$ is the year in which the establishment became operational, a value of 0;

$I_{max\ j}$ = Maximal allowance intensity target for type of activity j at the establishment calculated using equation 24-2.

Equation 24-5 Calculation of the cap decline factor for the years 2024 to 2030

$$CDF_i = 0.0234 \times (i - n)$$

Where:

$CDF_{i,j}$ = Cap decline factor for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

0.0234 = Value corresponding to the annual decrease in emission unit caps during the period 2024-2030;

n = Year d or $d+1$ where d is the year in which the establishment became operational, or $e-1$ or e where $e-1$ is the year in which the establishment became operational;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins.

Equation 24-6 Calculation of the extra effort expected by type of activity for the years 2024 to 2030

$$EEE_{i,j} = EEE_{i-1,j} + \text{Additional reduction}_{i,j} - PFF_{i,j}$$

Where:

$EEE_{i,j}$ = Extra effort expected for type of activity j for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$EEE_{i-1,j}$ = Extra effort expected for type of activity j for year $i-1$;

$\text{Additional reduction}_{i,j}$ = Additional reduction for type of activity j for year i , as defined in Table 8 and according to the risk level defined;

$PFF_{i,j}$ = Proportion factor of fixed process emissions for type of activity j for year i , a value of 0.00272 if the fixed process emissions in the emissions report for year i for activity j represent 50% or more of emissions, or a value of 0 in other cases.

Equation 24-7 Calculation of the number of GHG emission units allocated without charge by type of activity at an establishment referred to in section 2 or section 2.1, covered as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years d to $d+2$, or $d+1$ to $d+3$ where d is the year in which the establishment became operational, or $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational are not all available

$$A_{i,j} = (EC_{TOTAL\ i,j} \times EF + GHG_{PF\ i,j} + GHG_{A\ i,j}) \times (AF_{i,j} - MEE_i)$$

Where:

$A_{i,j}$ = Total number of GHG emission units allocated without charge by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$EC_{TOTAL\ i,j}$ = Energy consumption for type of activity j for year i , in GJ, calculated using equation 11-6 or equation 14-6;

EF = Emission factor for natural gas in metric tonnes CO₂ equivalent/GJ, or in the case of an establishment not connected to the electrical grid, the emission factor for diesel in metric tonnes CO₂ equivalent/GJ, calculated using equation 22-1.1.

$GHG_{FP\ i,j}$ = Fixed process emissions at the establishment for type of activity j for year i , in metric tonnes CO₂ equivalent;

$GHG_{O\ i,j}$ = Other emissions at the establishment for type of activity j for year i , in metric tonnes CO₂ equivalent;

$AF_{i,j}$ = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

MEE_i = Minimal expected effort for year i , calculated using equation 24-3 or, for year d or $d+1$ where d is the year in which the establishment became operational, or $e-1$ or e where $e-1$ is the year in which the establishment became operational, a value of 0.

Equation 24-8 Calculation of the number of allocated GHG emission units paid to the emitter by type of activity at an establishment referred to in section 2 or section 2.1, covered as of 2024 that is not considered on a sectoral basis and for which the GHG emissions data for years d to $d+2$, or $d+1$ to $d+3$ where d is the year in which the establishment became operational, or $e-1$ to $e+1$ or e to $e+2$ where $e-1$ is the year in which the establishment became operational are not all available

$$A_{E\ i,j} = (EC_{TOTAL\ i,j} \times EF + GHG_{PF\ i,j} + GHG_{O\ i,j}) \times (AF_{i,j} - CDF_i - EEE_{i,j} - TMF_i)$$

Where:

$AE_{i,j}$ = Total number of GHG emission units paid directly to the emitter by type of activity j at an establishment for year i ;

i = Each year of the period 2024-2030 for which the emitter is required to cover GHG emissions;

j = Type of activity;

$EC_{TOTAL\ i,j}$ = Energy consumption for type of activity j for year i , in GJ, calculated using equation 11-6 or equation 14-6;

EF = Emission factor for natural gas in metric tonnes CO₂ equivalent/GJ, or in the case of an establishment not connected to the electrical grid, the emission factor for diesel in metric tonnes CO₂ equivalent/GJ, calculated using equation 22-1.1;

$GHG_{FP\ i,j}$ = Fixed process emissions at the establishment for type of activity j for year i , in metric tonnes CO₂ equivalent;

$GHG_{O_{i,j}}$ = Other emissions at the establishment for type of activity j for year i , in metric tonnes CO₂ equivalent;

AF_{ij} = Assistance factor for type of activity j for year i , as defined in Table 7 of this Appendix;

CDF_i = Cap decline factor for year i , calculated using equation 24-5 or, for year d or $d+1$ where d is the year in which the establishment became operational, or $e-1$ or e where $e-1$ is the year in which the establishment became operational, a value of 0;

d = First year for which the GHG emissions of the establishment are equal to or exceed the emissions threshold;

e = Year preceding the year in which the coverage requirement begins;

$EEE_{i,j}$ = Extra effort expected for type of activity j for year i , calculated using equation 24-6 or, for year d or $d+1$ where d is the year in which the establishment became operational, or $e-1$ or e where $e-1$ is the year in which the establishment became operational, a value of 0;

TMF_i = Trajectory modulation factor for year i , as defined in Table 9 or, for year d or $d+1$ where d is the year in which the establishment became operational, or $e-1$ or e where $e-1$ is the year in which the establishment became operational, a value of 0.

25. Calculation methods for GHG emissions attributable to the production of electricity by cogeneration in the pulp and paper sector beginning in the year 2023

Equation 25-1 Calculation of GHG emissions attributable to the production of electricity by cogeneration

$$GHG_{PEC\ i} = GHG_{QC.16\ i} - GHG_{PPP\ i}$$

Where:

$GHG_{PEC\ i}$ = GHG emissions attributable to the production of electricity by cogeneration, in metric tonnes CO₂ equivalent;

i = Each year, beginning in 2023, for which the emitter is required to cover GHG emissions;

$GHG_{QC.16\ i}$ = GHG emissions reported in accordance with protocol QC.16 in Schedule A.2 to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15), in metric tonnes CO₂ equivalent;

$GHG_{PPP\ i}$ = GHG emissions attributable pulp and paper manufacturing process, in metric tonnes CO₂ equivalent, calculated using equation 25-2, in metric tonnes CO₂ equivalent.

If the total quantity of reference units attributable to the pulp and paper manufacturing process at the establishment is zero, all the GHG emissions reported in accordance with protocol QC.16 in Schedule A.2 to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere must be considered, for the purposes of equation 25-1, to be attributable to the production of electricity by cogeneration.

Equation 25-2 Calculation of GHG emissions attributable to the pulp and paper manufacturing process

$$GHG_{PPP\ i} = \left\{ \frac{Q_{PPP\ i}}{(Q_{PPP\ i} + Q_{PEC\ i})} \right\} \times GES_{QC.16\ i}$$

Where:

$GHG_{PPP\ i}$ = GHG emissions attributable pulp and paper manufacturing process, in metric tonnes CO₂ equivalent;

i = Each year, beginning in 2023, for which the emitter is required to cover GHG emissions;

$Q_{PPP\ i}$ = Energy attributable to the pulp and paper manufacturing process, in GJ, calculated using equation 25-5;

$Q_{PEC\ i}$ = Energy attributable to the production of electricity by cogeneration, in GJ, calculated using equation 25-3;

$GHG_{QC.16\ i}$ = GHG emissions reported in accordance with protocol QC.16 in Schedule A.2 to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15), in metric tonnes CO₂ equivalent.

Equation 25-3 Calculation of the energy attributable to the production of electricity by cogeneration

$$Q_{PEC\ i} = P_{electricity\ i} \times R_{eff} \times 3.6$$

Where:

$Q_{PEC\ i}$ = Energy attributable to the production of electricity by cogeneration, in GJ;

i = Each year, beginning in 2023, for which the emitter is required to cover GHG emissions;

$P_{electricity\ i}$ = Annual electricity production reported in accordance with subparagraph 6 of the first paragraph of QC 16.2 of protocol QC.16 in Schedule A.2 to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15), in MWh;

R_{eff} = Ratio between the efficiency of heat production and the efficiency of electricity production, calculated using equation 25-4;

3.6 = Conversion factor, MWh to GJ.

Equation 25-4 Calculation of the ratio between the efficiency of heat production and the efficiency of electricity production

$$R_{eff} = \frac{e_c}{e_p}$$

Where:

R_{eff} = Ratio between the efficiency of heat production and the efficiency of electricity production;

e_c = Efficiency of heat production of 0.8;

e_p = Efficiency of electricity production of 0.35.

Equation 25-5 Calculation of the energy attributable to the pulp and paper manufacturing process

$$Q_{PPP\ i} = Q_{QC.16\ (produced)\ i} - Q_{PEC\ i}$$

Where:

$Q_{PPP\ i}$ = Energy attributable to the pulp and paper manufacturing process, in GJ;

i = Each year, beginning in 2023, for which the emitter is required to cover GHG emissions;

$Q_{QC.16\ (produced)\ i}$ = Energy produced on the basis of energy consumed as reported in accordance with QC 16.2 of protocol QC.16 in Schedule A.2 to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15), in GJ, calculated using equation 25-6, in GJ;

$Q_{PEC\ i}$ = Energy attributable to the production of electricity by cogeneration, in GJ, calculated using equation 25-3.

Equation 25-6 Calculation of energy produced on the basis of energy consumed as reported in QC 16.2 of protocol QC.16 of the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere

$$Q_{QC.16\ (produced)\ i} = Q_{QC.16\ (consumed)\ i} \times e_c$$

Where:

$Q_{QC.16\ (produced)\ i}$ = Energy produced on the basis of energy consumed as reported in accordance with QC 16.2 of protocol QC.16 in Schedule A.2 to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15), in GJ;

i = Each year, beginning in 2023, for which the emitter is required to cover GHG emissions;

$Q_{QC.16\ (consumed)\ i}$ = Total energy consumed reported in accordance with QC 16.2 of protocol QC.16 in Schedule A.2 to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15), in GJ;

e_c = Efficiency of heat production of 0.8.

26. Additional reduction

Table 8: Additional reduction

| Risk level | Additional reduction |
|------------|----------------------|
| Level 7 | -0.00272 |
| Level 6 | 0 |
| Level 5 | 0.00272 |
| Level 4 | 0.00544 |
| Level 3 | 0.00816 |
| Level 2 | 0.01088 |
| Level 1 | 0.0136 |

27. Trajectory modulation

Table 9: Trajectory modulation.

| Year | Trajectory modulation |
|-------------|------------------------------|
| 2024 | -0.005 |
| 2025 | -0.01 |
| 2026 | -0.0125 |
| 2027 | -0.0125 |
| 2028 | -0.01 |
| 2029 | -0.005 |
| 2030 | 0 |

”.

52. Appendix C is amended by adding the following at the end:

“Part III

Greenhouse gas reduction projects and greenhouse gas research and development projects

1. Object

This Part sets out the terms and conditions applicable to eligible projects, specifically the greenhouse gas reduction projects and greenhouse gas research and development projects referred to in subdivisions 3.1, 4.1 and 5.1 of this Part, for which an emitter may use the sums determined and reserved in the emitter’s name pursuant to section 54.1 of this Regulation. It also sets out the terms and conditions governing the payment of such sums, which must be recorded in an agreement entered into by the emitter and the Minister in accordance with section 46.8.1 of the Environment Quality Act (chapter Q-2).

This Part also sets out the eligible expenses for which the sums may be used and the terms and condition for reporting on eligible projects.

2. Definitions

In this Part, unless otherwise indicated by context,

“administration costs” means costs for the administrative support of project implementation, including office and accounting costs, payroll management costs, office rental costs, stationery purchase costs, postal costs and telephone costs;

“bioenergy from residual biomass” means one of the following fuels produced by pyrolysis from residual biomass:

- (1) pyrolitic oil;
- (2) biochar;
- (3) biogas or renewable natural gas, if produced in conjunction with a fuel in paragraph 1 or 2;

“classic equipment” means equipment whose efficiency is equivalent to that prescribed by industry or generally recognized standards. The GHG emission levels are equivalent to current best practices and to the efficiency of the types of new equipment available in the marketplace;

“external consultant” means a person or group of persons, not employed by the emitter and not forming part of the same group within the meaning of section 9 of this Regulation;

“first-generation renewable natural gas” means natural gas from an engineered landfill or agricultural and urban biomethanization site;

“generally accepted accounting principles” means all the general principles and conventions of general application as well as the rules and procedures that determine recognized accounting practices at a given point in time. The principles define the rules for accounting and information presentation that apply to financial statements, as well as explanations and indications about most of the operations and events that occur in an entity. Financial statements must convey relevant, reliable, comparable, understandable and clearly presented information in a way that facilitates its use;

“GHG emissions verification” means an evaluation of the impact of a project implementation on the GHG emissions reduction reported by an emitter, performed after the project is implemented and based on ISO 14064-3;

“green hydrogen” means hydrogen produced by the electrolysis of water using renewable electricity;

“renewable electricity” means electricity produced from a wind, solar, geothermal, wave, tidal or hydro-electric source;

“residual biomass” means organic material of plant or animal origin mainly sourced from the forest, agricultural, industrial or urban sector in Québec that belongs to one of the following categories:

(1) forest-sourced biomass from harvesting or primary or secondary processing activities as well as sludge, pulp and paper liquor, granules and compressed wood logs. Forest-sourced biomass includes uncontaminated additive-free wood from the construction sector, when the wood is not covered by a measure targeting reduction at source, reuse, recycling or reclamation, and excludes standing timber;

(2) agriculture-sourced biomass resulting from livestock-raising activities and the harvesting of various crops, comprising residue from the processing of plants and energy crops harvested on land that is not suitable for the production of food crops for human or animal use;

(3) residual biomass from industrial or urban sources that can be reclaimed using the hierarchy of reclamation models defined in the residual materials management policy;

“site” means a physical or geographic location where the emitter’s activities take place. A site includes all buildings and accessory immovable equipment;

“technology testing” means the use of an existing product or process in an actual application for a period sufficiently long and representative of various operating conditions to objectively establish the performance of the technology;

“third party qualified to quantify GHG emissions” means a third party that can show that it has qualifications for quantifying GHG emissions, that is impartial within the meaning of ISO 14064:2019 and that, at minimum,

- (1) has completed training on one of the three parts of ISO 14064 on GHG emissions, has performed quantifications as part of its duties and can provide evidence of that fact;
- (2) holds accreditation under ISO 14065, a requirement for organizations that provide GHG emission validations and verifications for accreditation or other forms of recognition, has performed quantifications as part of its duties and can provide evidence of that fact;

“third party” means a person or group of persons that are not participants in, are not employed by and are not part of the same controlling group as those who helped prepare the elements to be validated or verified;

“validation of GHG emissions reduction” means an evaluation of the probability that the implementation of a project will generate the GHG emissions reduction reported by an emitter, based on ISO 14064-3.

3. Production or updating of a study of the technical and economic potential for GHG emissions reduction

3.1 Description

An eligible project within the meaning of this Part is a study of the technical and economic potential for GHG emissions reduction that

- (1) involves the production or updating of a study of the technical and economic potential for GHG emissions reduction at each industrial establishment subject to the Regulation that performs mineral extraction or manufacturing and is operated by an emitter;
- (2) identifies and estimates all potential emissions reduction projects in each such establishment using current technologies, along with their implementation costs;
- (3) evaluates the potential for GHG emissions reduction in each of the following categories:
 - (a) improved energy efficiency;
 - (b) energy conversion;
 - (c) a reduction in fixed process emissions and other emissions within the meaning of Division B of Part II of Appendix C;
- (4) is drafted by the emitter or an external consultant;
- (5) is revised by an external consultant who is a member of the Ordre des Ingénieurs du Québec who must certify, with a reasonable level of assurance, that
 - (a) the elements presented in the study are credible;

- (b) a process has been undertaken to identify projects for GHG emissions reduction that are technically viable;
- (c) all categories of GHG emissions reduction projects have been evaluated;
- (d) the GHG reductions were estimated using the principles of ISO 14064-2.

The GHG emissions reduction projects referred to in subparagraph 2 of the first paragraph must target a reduction in GHG emissions compared to the baseline scenarios in a manner consistent with the principles of ISO 14064-2.

If the emitter uses the sums to finance technological innovation projects referred to in Division 5 of this Part, the study must also evaluate the possibilities for GHG emissions reductions using emerging technologies within a 10-year timeframe.

3.2 Submission of a project

Before the Minister pays the sums in accordance with the terms and conditions of Division 11 of this Part to allow the emitter to complete a study of technical and economic potential for GHG emissions reduction, the emitter must send the Minister a project submission form signed and dated by a duly authorized person. All applications must be submitted before 31 December 2030.

After receiving the project submission form, the Minister confirms in writing that the emitter may begin the production or updating of its study of the technical and economic potential for GHG emissions reduction and that expenses may be incurred.

3.3 Reporting requirements

The payment of the sums in accordance with the terms and conditions of Division 11 is conditional on the receipt of the documents and information referred to in subdivisions 3.3.1 and 3.3.2, depending on whether the project is being implemented or has been completed.

3.3.1 Annual report

If the production or updating of the study of the technical and economic potential for GHG emissions reduction has not been completed by the end of a year, the emitter must submit to the Minister between 31 January and 1 March each year, for expenses paid up to the preceding 31 December, an annual report including the following documents and information:

- (1) a financial report compliant with Division 6 of this Part;
- (2) the budget forecasts for the project for the period from 1 January to 31 March of the current year;
- (3) the annual budget forecasts for the subsequent years;
- (4) an updated timeline for the project;
- (5) a progress report for the study, including in particular a description of the project, the progress made and the estimated completion date of the study.

The Minister may ask the emitter for an update of the financial plan for the project in November and July of each year. The update must be sent to the Minister not later than one month after the Minister asks the emitter for the update.

3.3.2 Final report

Once the production or updating of the study of the technical and economic potential for GHG emissions reduction has been completed, the emitter must file with the Minister, within 60 days of the end of the project and not later than 5 years after the date of filing of the project submission form referred to in subdivision 3.2, a final report including the following documents and information:

- (1) a financial report compliant with Division 6 of this Part;
- (2) a completed study of technical and economic potential including, for each establishment,
 - (a) a description of the enterprise;
 - (b) a diagram of the general process and main equipment;
 - (c) the inputs and outputs;
 - (d) the identification and quantification of sources of GHG emissions and types of emissions within the meaning of Division B of Part II, in the form of representative averages;
 - (e) the identification, quantification and costs of fuel consumption points, by type, quantity used and emission factor, in the form of representative averages;
 - (f) optionally, electricity consumption and associated costs;
 - (g) the potential GHG emissions reduction projects and, where applicable, the technological innovation projects identified in the study;
 - (h) the certification of the external consultant;
- (3) for each potential project identified in the study of technical and economic potential:
 - (a) the baseline scenario used;
 - (b) a description of the planned project;
 - (c) an annual estimate of the GHG emissions reductions planned compared to the baseline scenarios;
 - (d) energy consumption before and after the project;
 - (e) the technology readiness level and duration of the technological innovation project, if applicable;
 - (f) the supply source for alternative fuel in the case of an energy conversion;
 - (g) the estimated economic parameters for the project identified, showing separately

- i.* the cost of the investment needed to implement the project;
- ii.* annual operating costs before and after the project, including the carbon cost;
- iii.* if known, existing subsidy programs for the type of project concerned;
- iv.* the return on investment period;
- v.* the pricing hypotheses used for the carbon cost estimate.

4. Implementation of a GHG emissions reduction project

4.1 Description

An eligible project within the meaning of this Part is a GHG emissions reduction project that

- (1) was identified in a study of the technical and economic potential for GHG emissions reduction in compliance with the requirements of subdivision 3.3.2 of this Part that was completed or updated not later than five years before the submission of the project;
- (2) targets a GHG emissions reduction compared to the baseline scenario;
- (3) is completed in an establishment belonging to the emitter, or off site if the project allows GHG emissions to be reduced at a covered establishment in accordance with section 19 of this Regulation;
- (4) has a return on investment period of more than one year;
- (5) targets, if it includes an energy conversion project, a replacement energy source from the following list:
 - (a) a fossil fuel producing fewer GHG emissions than the baseline scenario;
 - (b) renewable electricity;
 - (c) green hydrogen, excluding projects where direct electrification is possible;
 - (d) first-generation renewable natural gas;
 - (e) residual biomass, from supplies in Québec only;
 - (f) bioenergy produced by pyrolysis from residual forest biomass.

Despite subparagraph 1 of the first paragraph, a project implemented by an emitter in a newly operational establishment within the meaning of section 2 of this Regulation is also eligible within the meaning of this Part if it begins not later than 5 years after the start of operations.

4.2 Submission of a project

Before the Minister pays the sums in accordance with the terms and conditions of Division 11 to allow the emitter to complete a GHG emissions reduction project, the emitter must send the Minister a project submission form signed and dated by a duly authorized person. All applications must be submitted before 31 December 2030.

The following information and documents must be submitted with the form referred to in the first paragraph:

- (1) a project plan and surveillance plan drawn up by the emitter or an external consultant, including a quantification of the reductions in GHG emissions resulting from the project on the site at the establishment, validated by a third party qualified to quantify GHG emissions who is a member of the Ordre des ingénieurs du Québec and who certifies that the reduction in GHG emissions and the baseline scenario were quantified in accordance with ISO 14064-2. A document showing the validation must be included;
- (2) a financial plan for the project;
- (3) in the case of an energy conversion project, a demonstration of the emitter's intention to maintain the emissions reduction for 10 years, in the form of a supply contract, agreement with a supplier, proof of investment by the emitter or supplier, or another equivalent document;
- (4) in the case of a renewable energy conversion project, all the measures taken to optimize its energy efficiency;
- (5) a project timeline;
- (6) any other information considered necessary by the emitter.

After receiving the project submission form, the Minister confirms in writing that the emitter may begin the implementation of its GHG emissions reduction project and that expenses may be incurred.

4.3 Reporting requirements for a project with capital investment

The payment of the sums in accordance with the terms and conditions of Division 11 is conditional on the receipt of the documents and information referred to in subdivisions 4.3.1 and 4.3.2, depending on whether the project is being implemented or has been completed.

4.3.1 Annual report

If the project has not been completed by the end of a year, the emitter must file with the Minister between 31 January and 1 March each year, for expenses paid up to the preceding 31 December, an annual report including the following information and documents:

- (1) a financial report compliant with Division 6 of this Part;
- (2) the forecasts for project expenses for the period from 1 January to 31 March of the current year;
- (3) the annual budget forecasts for the subsequent years;

- (4) an updated timeline for the project;
- (5) a progress report, including in particular a description of the project, the progress made and the activities scheduled up to the end of the project;
- (6) an updated surveillance plan, if changes have been made since the filing of the last annual report;
- (7) any other information considered necessary by the emitter.

The Minister may ask the emitter for an update of the financial plan for the project in November and July of each year. The update must be sent to the Minister not later than one month after the Minister asks the emitter for the update.

4.3.2 Final report and continuation of reduction measures

Once the project has been completed, the emitter must file with the Minister, within 12 months of the end of the project and not later than 5 years after the date of filing of the project submission form referred to in subdivision 4.2, a final report including the following documents and information:

- (1) a financial report compliant with Division 6 of this Part;
- (2) the following information:
 - (a) a description of the project;
 - (b) a description of the baseline scenario;
 - (c) the method used to quantify GHG emissions and implement the surveillance plan;
 - (d) a quantification of the representative GHG emissions reductions for the year following the implementation of the project, presented in the form of a GHG emissions report consistent with ISO 14064-2 verified by a third party qualified to quantify GHG emissions.

Once the project has been completed, the emitter must undertake to maintain the GHG emissions reduction measures for a period of 10 years. During this period, the emitter must file with the Minister, on 1 March each year, a written attestation signed by one of its representatives confirming that the project equipment is functioning adequately.

4.4 Reporting requirements for an energy conversion project involving supplementary operating costs

Before the Minister pays the sums in accordance with the terms and conditions of Division 11 for the implementation by the emitter of a project, involving supplementary operating costs, to convert to renewable electricity, green hydrogen, first-generation renewable natural gas, residual biomass or bioenergy from pyrolysis using residual forest biomass, the emitter must file with the Minister between 31 January and 1 March each year, for expenses paid up to the preceding 31 December, an annual report including the following information and document:

- (1) a financial report compliant with Division 6 of this Part;

- (2) a forecast of expenses for the period from 1 January to 31 March of the year during which the annual report is sent;
- (3) a forecast of annual expenses for the following years;
- (4) a GHG emissions reduction report, including in particular:
 - (a) a quantification of GHG emissions reductions during the year, presented in the form of a GHG emissions report consistent with ISO 14064-2 with respect to the conversion;
 - (b) the supplementary operating costs, detailing
 - i. the rate for the replaced energy and for the replacement energy;
 - ii. the carbon cost for the replaced energy and for the replacement energy;
 - iii. the quantity of replaced energy and replacement energy;
 - iv. the calculation method for the replacement energy rate;
 - (c) any other information considered necessary by the emitter.

The Minister may request that the emitter provide an update of the financial plan for the project in November and July each year. The update must be sent to the Minister not later than one month after the Minister's request.

5. Implementation of a technological innovation project for the reduction of GHG emissions

5.1 Description

An eligible project within the meaning of this Part is a technological innovation project for GHG emissions reduction that

- (1) was identified in a study of the technical and economic potential for GHG emissions reduction in compliance with the requirement of subdivision 3.3.2 of this Part that was completed or updated not later than five years before the submission of the project;
- (2) targets
 - (a) a technological innovation in the field of GHG emissions reduction whose technology readiness level is 4 to 8 within the meaning of Table 1 of this Part; or
 - (b) the field testing of technology for GHG emissions reduction which, to the emitter's best knowledge, has not been used in establishments subject to this Regulation or is used only marginally;
- (3) has potential for GHG emissions reduction on the site of a covered establishment operated by the emitter that performs mineral extraction or manufacturing activities;
- (4) is implemented in Québec.

5.2 Submission of a project

Before the Minister pays the sums in accordance with the terms and conditions of Division 11 for the implementation by the emitter of a technological innovation project in the field of GHG emissions reduction, the emitter must send the Minister a project submission form signed and dated by a duly authorized person. All applications must be submitted before 31 December 2030.

The following information and documents must be submitted with the form referred to in the first paragraph:

- (1) a financial plan for the project;
- (2) a project plan and surveillance plan drawn up by the emitter or an external consultant, including a quantification of the reductions in GHG emissions resulting from the project on the site at the establishment, validated by a third party qualified to quantify GHG emissions who is a member of the *Ordre des ingénieurs du Québec* and who certifies that the reduction in GHG emissions and the baseline scenario were quantified in accordance with ISO 14064-2. The project plan and surveillance plan must include, in particular,
 - (a) a project description;
 - (b) a testing protocol;
 - (c) the methods to be used to collect data to quantify GHG emissions reductions;
 - (d) the place in Québec where the technological innovation will be implemented;
 - (e) the address of the covered establishment that could benefit from the GHG emissions reductions from the project;
 - (f) the commercial advantages or techniques that the implementation of the project could create compared to existing solutions available in the marketplace for the sector of activity;
 - (g) the technology readiness level, from 4 to 8, in the area of GHG emissions reductions, within the meaning of Table 1 of this Part;
- (3) any other information considered necessary by the emitter.

After receiving the project submission form, the Minister confirms in writing that the emitter may begin the implementation of the project and that expenses may be incurred.

5.3 Reporting requirements

The payment of the sums in accordance with the terms and conditions of Division 11 is conditional on the receipt of the documents and information referred to in subdivisions 5.3.1 and 5.3.2, depending on whether the project is being implemented or has been completed.

5.3.1 Annual report

If the project has not been completed by end of a year, the emitter must file with the Minister between 31 January and 1 March each year, for expenses paid up to the preceding 31 December, an annual report including the following information and documents:

- (1) a financial report compliant with Division 6;
- (2) the forecasts for project expenses for the period from 1 January to 31 March of the current year;
- (3) the annual budget forecasts for the subsequent years;
- (4) an updated timeline for the project;
- (5) a progress report, including in particular a description of the project and the progress made;
- (6) any other information considered necessary by the emitter.

The Minister may ask the emitter for an update of the financial plan for the project in November and July of each year. The update must be sent to the Minister not later than one month after the Minister asks the emitter for the update.

5.3.2 Final report

Once the project has been completed, the emitter must file with the Minister, within 60 days from the end of the project and not later than 5 years after the date of filing of the project submission form referred to in subdivision 5.2, a final report including the following information and documents:

- (1) a financial report compliant with Division 6;
- (2) the following information:
 - (a) a description of the project;
 - (b) a description of the results obtained the prospects for implementation;
 - (c) a validation by a third party qualified to quantify GHG emissions who is a member of the Ordre des ingénieurs du Québec and who certifies that the reduction in GHG emissions and the baseline scenario were quantified in accordance with ISO 14064-2;
 - (d) any other information considered necessary by the emitter.

6. Financial report

Every financial report submitted pursuant to this Part must contain the following information:

- (1) an indication of all financial assistance obtained directly or indirectly from public bodies within the meaning of the Act respecting access to documents held by public bodies and the protection of personal information (chapter A-2.1) or mandataries of the state;

- (2) the expenses paid since the last annual report or since the filing of the project submission form, if the financial report is the first submitted for the project. The expenses must be broken down in accordance with the specifications of the template available on the website of the Ministère du Développement durable, de l'Environnement et des Parcs, and in particular into eligible expenses and non-eligible expenses;
- (3) all the expenses for the project, including those that are not eligible, pursuant to Division 9 of this Part;
- (4) a justification for variation between the information in the financial plan filed with the project submission form and the project as implemented;
- (5) any other element of a financial nature;
- (6) an audit report, in the cases provided for in Division 7 of this Part.

7. Audit

As part of the reporting requirement specified in subdivision 3.3, 4.3, 4.4 or 5.3, as the case may be, every financial report must be submitted with an audit report in compliance with this Division when the eligible expenses for the project amount to \$100,000 or more.

In addition, the Minister may request that the emitter provide an audit report for a financial report showing eligible expenses of less than \$100,000. The report must be submitted to the Minister within 90 days.

The emitter is responsible for making the necessary requests to the auditor and managing the audit for the project. All audits must be conducted by external, independent auditors in accordance with the audit standards in force in Canada.

The audit report must certify that

- (1) the project under way or completed complies with this Part and the template for the financial forecasts filed with the project submission form;
- (2) the project has been implemented. If applicable, the auditor must certify the cost and nature of the work completed for the project that began and was completed after confirmation was received from the Minister pursuant to subdivision 3.2, 4.2 or 5.2, as the case may be;
- (3) the work carried out for the project was not completed in conjunction with other work for which financial assistance was received. In such a case, the auditor must ensure that no financial assistance was received for eligible expenses for which a request for reimbursement has been made pursuant to Division 11 of this Part .

8. Verification

Payments of the sums to which this Part applies may be verified by the Minister or by any other person or body as part of their duties or under a mandate from the Minister.

9. Eligible expenses and non-eligible expenses

9.1 Eligible expenses

To be eligible, an expense must

- (1) have been incurred after written confirmation was received from the Minister pursuant to subdivision 3.2, 4.2 or 5.2, as the case may be;
- (2) have been incurred for the implementation of a project to which this Part applies;
- (3) be necessary, justifiable and directly attributable to the implementation of the project. An eligible expense does not necessarily need to be incurred on the site of one of the emitter's industrial establishments provided it is directly and reasonably connected with the project.

The following expenses, in particular, are eligible expenses:

- (1) supplementary costs for the purchase of electrified, off-road rolling stock for use on site, compared to the cost of the same equipment powered by fossil fuels;
- (2) fees for professional service provided for the implementation of the project, calculated in accordance with the methods set out in the Tarif d'honoraires pour services professionnels fournis au gouvernement par des ingénieurs (chapter C-65.1, r. 12);
- (3) wages and benefits, with no surcharge, for employees of the emitter working directly on the eligible project. Proof of such expenses may be requested by the Minister, including copies of pay stubs;
- (4) fees for specialized services;
- (5) services performed as subcontracts;
- (6) equipment rental costs for a time period not exceeding the duration of the project;
- (7) expenses for the purchase and installation of equipment;
- (8) project management costs;
- (9) travel and accommodation costs connected with the implementation of the project, based on the standards in force as set out in the Directive concernant les frais de déplacement des personnes engagées à honoraires par des organismes publics made by the Conseil du Trésor on 26 March 2013, as amended;
- (10) expenses incurred to prepare a strategy for the protection of intellectual property, to obtain protection for intellectual property, and to acquire rights or licences for intellectual property, including the costs relating to applications for patents such as patent agent's fees;
- (11) the cost of quantifying, validating and verifying GHG emissions reductions;
- (12) transportation costs for equipment and materials;
- (13) the expenses associated with the accounting audits requested by the Minister pursuant to Division 6 of this Part;

(14) supplementary costs, for operating expenses, for an energy conversion to bioenergy produced from residual forest biomass, residual biomass, renewable electricity, first-generation renewable natural gas or green hydrogen, calculated using the following equation:

Equation 1

$$\text{Supplementary cost}_i = [R2_i + CC2_i - (R1_i + CC_i \times CF)] \times Q2_i$$

Where:

Supplementary cost_i = Supplementary operating cost for year *i*;

i = Each year in the period 2024-2030 for which the emitter has a supplementary cost;

R2_i = Replacement energy rate for year *i*, in Canadian dollars;

CC2_i = Carbon cost of replacement energy for year *i*;

R1_i = Replaced energy rate for year *i*, using either the actual invoiced cost, the last invoiced cost, indexed, or a representative published cost;

CC1_i = Carbon cost of replaced energy for year *i*;

CF = Conversion factor for energy, calculated using equation 2;

Q2_i = Quantity of replacement energy consumed for the project in year *i*;

Equation 2

$$CF = \frac{Q1}{Q2}$$

Where:

CF = Conversion factor for energy;

Q1 = Quantity of replaced energy using the baseline scenario;

Q2 = Quantity of replacement energy under the project scenario, adjusted to match actual efficiency once the project is implemented;

(15) administration costs incurred in Québec that are directly connected to the implementation of the project, up to a maximum of 10% of the sums paid.

Where a project includes the replacement of obsolete equipment or the addition of space for a new construction, a new factory section, a new operating site, a new establishment or an enlargement, only the supplementary costs compared to the baseline scenario may be considered as eligible expenses.

For the purposes of the third paragraph, equipment is considered to be obsolete if it cannot function without repairs for the entire 10-year period for which a commitment is made to maintain GHG emissions reductions pursuant to this Part, or if the cost of the major repairs required to allow the equipment to function optimally for that period exceeds the cost of classic equipment for that period.

Eligible expenses must be booked by the emitter in accordance with generally accepted accounting principles.

9.2 Non-eligible expenses

The following expenses are non-eligible expenses:

- (1) expenses incurred before the emitter receives written confirmation from the Minister pursuant to subdivision 3.2, 4.2 or 5.2, as the case may be, including an expense for which the organization has made a contractual commitment, debt service, the reimbursement of future borrowing, a capital loss or replacement of capital, a payment or an outlay of capital;
- (2) expenses relating to production losses, waste or other losses caused by the activities required to implement the project;
- (3) operating expense for routine activities such as the wages paid to officers or managers;
- (4) the cost of acquiring or laying out land;
- (5) sales tax applicable in Québec;
- (6) marketing expenses;
- (7) the expenses for maintaining intellectual property;
- (8) upgrading to comply with standards, laws or regulations;
- (9) supplementary costs for operating expenses in connection with the use of fossil energy.

9.3 Cumulative financial assistance

Sums paid pursuant to this Part may be used to finance up to 100% of the expenses of an eligible project.

The sums paid may be used to finance the project even if it receives other governmental financial assistance, provided that the cumulative total of the sums paid and the other governmental financial assistance does not exceed 100% of eligible expenses. If the total exceeds 100% of eligible expenses, the total of the sums paid pursuant to this Part must be reduced to comply with that limit.

The total of the sums paid pursuant to this Part must not be considered in calculating the cumulative total of financial assistance from public bodies within the meaning of the Act respecting access to documents held by public bodies and the protection of personal information (chapter A-2.1) or from mandataries of the state, obtained under an agreement between the emitter and, as the case may be, the public body or mandatary, when the cumulative total is limited by the agreement.

The second and third paragraphs apply despite any other clause in an agreement, signed before or after the coming into force of those paragraphs, between the emitter and the government or one of its ministers or a public body or state mandatary.

10. Obligations of the emitter

Every emitter implementing an eligible project must

- (1) report to the Minister all financial assistance applied for or received for the project, in writing and as soon as possible;
- (2) reimburse any sum paid for the implementation of a GHG emissions reduction project referred to in Division 4 of this Part for which the GHG emissions reduction measures are not maintained for a 10-year period in proportion to the number of years for which the emitter fails to maintain the measures;
- (3) ensure that all the information and documents provided pursuant to this Part are complete and accurate and that all the estimates and forecasts they contain are prepared to the best of the emitter's abilities and judgment and in good faith;
- (4) allow the Minister, with a 48-hour prior notice sent by the Minister, to examine, verify, make copies of and have access to any document or information and the site where the project is implemented allowing the Minister to verify that the project complies with the terms and conditions of this Part, for a period extending to 24 months after the end date of the project or, in the case of a GHG emissions reduction project referred to in Division 4 of this Part, for the entire 10-year period during which the emitter has undertaken to maintain the GHG emissions reduction measures;
- (5) preserve all documents and information relating to financial assistance during a 10-year period following the end of the eligible project and providing the Minister, on request, with a copy of such documents and information within the time specified by the Minister;
- (6) inform the Minister of any substantial change to the project and provide the Minister with all available information concerning the effects of the change on the implementation costs and concerning any other major impact on the project and its financing.

11. Terms and conditions for the payment of the sums

When an emitter meets the requirements of this Part, the sums determined pursuant to section 54.1 are paid in accordance with the agreement between the Minister and the emitter and the following terms and conditions:

- (1) the sums are paid as an annual reimbursement to the emitter once the Minister has received the annual report referred to in subdivision 3.3, 4.3, 4.4 or 5.3, as the case may be;
- (2) the reimbursement referred to in subparagraph 1 is an amount equal to, at minimum, 85% of the eligible project expenses detailed in the financial report contained in the annual report or 85% of the sums determined for the emitter pursuant to section 54.1 and reserved, in the emitter's name, pursuant to that section;
- (3) an amount equal to the remainder of the eligible project expenses detailed in the financial reports contained in the annual reports filed by the emitter since the start of the project is paid to the emitter after the Minister receives the final report referred to in subdivision 3.3, 4.3 or 5.3, as the case may be, up to the sums determined for the emitter pursuant to section 54.1 and reserved, in the emitter's name, pursuant to that section.

Despite subparagraphs 2 and 3 of the first paragraph, the reimbursement referred to in subparagraph 1 of that paragraph is equal to 100% of the eligible project expenses when they are expenses resulting from eligible supplementary operating costs relating to an energy conversion, up to the sums determined for the emitter pursuant to section 54.1 and reserved, in the emitter's name, pursuant to that section.

The agreement referred to in the first paragraph may, despite subparagraph 1 of that paragraph, provide for the reimbursement of any eligible expense, except an eligible expense connected to a supplementary operating cost, detailed in a financial report filed up to 5 years before the reimbursement.

12. Use of sums

An emitter may use the sums paid under this Part to implement several eligible projects, up to the sums determined for that emitter and reserved in the emitter's name pursuant to section 54.1.

The emitter may transfer some or all of the sums paid to it pursuant to Division 11 of this Part and pursuant to an agreement entered into with the Minister in accordance with section 46.8.1 of the Environment Quality Act (chapter Q-2) to a partner emitter that is part of the same group within the meaning of subparagraph 3 of the second paragraph of section 9 ("partner emitter") and that implements an eligible project at one of its covered industrial establishment, on the following conditions:

- (1) the emitter and the partner emitter have disclosed their corporate structure and business relationship in accordance with sections 7, 9 and 14.1 and the disclosure has been certified by one of their respective account representatives;
- (2) before each transfer of some or all of the sums paid pursuant to Division 11 of this Part, the emitter's account representative and the partner emitter's account representative have certified that the updated information concerning their corporate structure and business relationship has been communicated to the Minister in accordance with section 14.1 and is up to date;
- (3) the emitter and the partner emitter are part of the same group within the meaning of subparagraph 3 of the second paragraph of section 9;
- (4) an emitter that transfers, to a partner emitter, some or all of the sums paid pursuant to Division 11 of this Part must, before each request for payment made to the Minister, certify that it agrees to transfer some or all of the sums;
- (5) an agreement has been signed by the partner emitter and the Minister in accordance with section 46.8.1 of the Environment Quality Act;
- (6) the emitter has entered into and submitted to the Minister an agreement with the partner emitter containing the following information at minimum:
 - (a) the names of the parties to the agreement;
 - (b) the amount of the sums transferred;

- (c) the title and an outline description of the eligible project that the partner emitter intends to implement;
- (d) the obligations of the emitter pursuant to this Part, including the reporting requirement, which are transferred to the partner emitter with respect to the sums transferred.

If the partner emitter fails to perform its obligations in accordance with the agreement filed with the Minister pursuant to subparagraph 6 of the second paragraph of this Division, the Minister may require the transferring emitter to perform an obligation under the agreement with respect to the amount of the sums transferred.

13. Quantification and verification of GHG emissions

All data filed by the emitter pursuant to this Part must be expressed in units of the International System of Units, in which the unit for quantifying GHG emissions is the metric tonne CO₂ equivalent (tCO₂e).

The GHG emissions reduction for each project included in a study of technical and economic potential must be estimated in accordance with ISO 14064.

The GHG emissions reductions for GHG emissions reduction projects must be estimated in accordance with ISO 14064.

For the purposes of this Part, the baseline scenario is the scenario presenting the fewest constraints at implementation, whether the constraints are functional, environmental, economic, social, legal or other. The baseline is a situation in which problems of upgrading to meet standards, compliance with established rules, and action to correct obsolescence or deficient maintenance have been dealt with. In addition, the baseline scenario may result from a detailed energy use simulation or a representative history.

Where data on a GHG emissions reduction have been filed with Minister pursuant to this Part, the data must meet the following requirements:

- (1) the GHG emissions reduction for each measure in a project must exceed an emissions baseline based on a market standard or established trade practice or a rule that is mandatory pursuant to a law, regulation or standard. The measure must also have an impact beyond a natural seasonal variation, a standard process variation or a historical variation compared to the baseline scenario;
- (2) the GHG emissions reduction must be evident and identifiable and result directly from the implementation of the project;
- (3) the GHG emissions reduction must be measurable and quantifiable compared to the emissions baseline and must go beyond the normal variation in the baseline scenario. The emissions must be quantified in accordance with ISO 14064-2;

(4) the GHG emissions reduction must have been verified using a precise, transparent and reproducible methodology, and the raw data needed to verify the calculation must be available.

A reduction in the GHG emissions attributable to a project must be quantified in accordance with the requirements of the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15).

GHG emissions reductions must target verified GHG emissions, with the exception of electrified off-road rolling stock for use on the site, compared to emissions from the same equipment operated using fossil energy.

GHG emissions reductions must be evaluated compared to an emissions baseline using one of the two following methods:

(1) the use of a procedure specific to the project, when there is a lack of comparable data in the sector concerned or when the data is difficult to obtain. The baseline scenario must be identified through a structured analysis of project activities and possible options;

(2) in all other cases, the use of standardized performance when comparable data in the sector concerned are available, either in the form of statistical data from the sector, standardized performance data for equipment, established trade practice or standards imposed by a law or regulation.

14. Public nature of documents and information

The Minister may publish, on the website of the Minister's department, the following documents and information:

(1) a list of the emitters that have signed an agreement pursuant to section 46.8.1 of the Environment Quality Act (chapter Q-2);

(2) a list of the emitters implementing projects under this Part and the cost of such projects, the sums determined pursuant to section 54.1 for the implementation of such projects, and an outline description of the projects with, where applicable, a quantification of the GHG emissions reductions that are attributable to the projects;

(3) all documents and information communicated pursuant to this Part.

Table 1 - Technology readiness levels

| Technology readiness levels (TRL) | Description |
|--|--|
| TRL 1 – Basic principles of concept are observed and reported (conceptual articulation) | Lowest level of technology readiness. Scientific research begins to be translated into applied research and development (R&D). |
| TRL 2 – Technology concept and/or application formulated (technology and applications described) | Invention begins. Once basic principles are observed, practical applications can be invented. Applications are speculative, and there may be no proof or detailed analysis to support the assumptions. |
| TRL 3 – Analytical and experimental critical function and/or characteristic proof of concept (laboratory studies and analytical studies) | Active R&D is initiated. This includes analytical studies and laboratory studies to physically validate that the analytical predictions of separate elements of the technology. |
| TRL 4 – Component and/or breadboard validation in laboratory environment (validation of a limited-capacity prototype in the laboratory [pre-alpha version]) | Basic technological components are integrated to establish that they will work together. This is relatively "low fidelity" compared with the eventual system. |
| TRL 5 – Component and/or breadboard validation in relevant environment (validation of the prototype to maximum capacity in the laboratory [alpha version]) | Fidelity of breadboard technology increases significantly. The basic technological components are integrated with reasonably realistic supporting elements so they can be tested in a simulated environment. |
| TRL 6 – System/subsystem model or prototype demonstration in a relevant environment (validation of the prototype in a relevant environment [pre-beta version]) | Representative model or prototype system, which is well beyond that of TRL 5, is tested in a relevant environment. Represents a major step up in a technology's demonstrated readiness. |
| TRL 7 – System prototype demonstration in an operational environment (validation of system in an operational environment [beta version]) | Prototype near or at planned operational system. Represents a major step up from TRL 6 by requiring demonstration of an actual system prototype in an operational environment. |
| TRL 8 – Actual system completed and qualified through test and demonstration (initial production and deployment) | Technology has been proven to work in its final form and under expected conditions. In almost all cases, this TRL represents the end of true system development. |
| TRL 9 – Actual system proven through successful mission operations (full production mode) | Actual application of the technology in its final form and under mission conditions, such as those encountered in operational test and evaluation (OT&E). |

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53. Every emitter or participant registered for the cap-and-trade system for greenhouse gas emission allowances on the day before (*insert here the date of coming into force of this Regulation*) must send to the Minister, within 30 days of that date,

- (1) when it has no domicile of establishment in Québec, the name and contact information of its attorney designated pursuant to section 26 of the Act respecting the legal publicity of enterprises (chapter P-44.1);
- (2) when it is a person that has retained the services of an advisor for the purposes of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1), the nature of the services provided by the advisor;
- (3) when it is a person that advises another person for the purposes of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances, the nature of its advisory services;
- (4) when it has withdrawn emission allowances from its general account from the cap-and-trade system for greenhouse gas emission allowances, pursuant to section 27 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances, the reason for that withdrawal of emission allowances;
- (5) in the case of a participant, the principal reason for which it registered for the system.

54. Every emitter or participant registered for the cap-and-trade system for greenhouse gas emission allowances on the day before (*insert here the date of coming into force of this Regulation*) must disclose to the Minister, within 30 days of that date, any business relationship it has with an emitter or participant registered for or targeted by the system, including those registered with a partner entity, by submitting the information listed in section 9 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1) or by updating such information if it was disclosed at the time of registration.

55. No application made under section 10 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1) since 1 June 2021 is receivable if the information and documents referred to in that section have not been sent to the Minister within three months from (*insert here the date of coming into force of this Regulation*).

56. Any change in the information provided pursuant to section 10 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1) that has not been communicated to the Minister within the time prescribed in section 14.1 of that Regulation on (*insert here the date of coming into force of this Regulation*) must be communicated within three months of that date.

The Minister may suspend access to the electronic system obtained pursuant to section 10 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances after observing that a change referred to in the first paragraph has not been communicated in accordance with that paragraph.

57. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.