



Province of Alberta

CLIMATE CHANGE AND EMISSIONS
MANAGEMENT ACT

**CARBON COMPETITIVENESS
INCENTIVE REGULATION**

Alberta Regulation 255/2017

Extract

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ALBERTA REGULATION 255/2017

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Management Act**

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Part 1 Interpretation and Application

Interpretation

1(1) In this Regulation,

- (a) “Act” means the *Climate Change and Emissions Management Act*;
- (b) “annual forecasting report” means an annual forecasting report under section 14;
- (c) “assigned benchmark” means a benchmark assigned under section 8, 10 or 35(3), expressed in tonnes of CO₂e per benchmark unit;
- (d) “benchmark” means the emissions intensity allocated for a benchmark unit of a product;
- (e) “benchmark unit” means
 - (i) a benchmark unit for a product set out in the Table in Schedule 2, and
 - (ii) the unit of measure of a product of a facility, as approved or determined by the director in assigning an assigned benchmark for the product;
- (f) “biomass CO₂ emissions” means all emissions of carbon dioxide released from sources located at a facility as a result of the decomposition or combustion of biomass;
- (g) “CO₂e” means the 100-year time horizon global warming potential of a specified gas expressed in terms of equivalency to CO₂ as set out in the Standard for Completing Greenhouse Gas Compliance and Forecasting Reports;
- (h) “compliance report” means a compliance report under section 12;
- (i) “department” means the department administered by the Minister;
- (j) “direct emissions” means all specified gases released from sources located at a facility, not including biomass CO₂ emissions, expressed in tonnes on a CO₂e basis;
- (k) “emission offset” means an instrument serialized on the Alberta Emission Offset Registry

- (i) in respect of a reduction in the release of a specified gas or a sequestration of or a capture of carbon dioxide described in section 16, or
- (ii) in respect of a reduction in the release of a specified gas or a sequestration of or a capture of carbon dioxide that occurred before January 1, 2018 described in section 7 of the *Specified Gas Emitters Regulation* (AR 139/2007);
- (l) “emission offset project” means a project undertaken to generate emission offsets;
- (m) “emission offset project developer” in respect of an emission offset project means the person registered as the owner of the emission offset project on the Alberta Emission Offset Registry;
- (n) “emission performance credit” means
 - (i) an emission performance credit issued under section 17, and
 - (ii) an emission performance credit issued under section 9 of the *Specified Gas Emitters Regulation* (AR 139/2007);
- (o) “emissions intensity” means the quantity of specified gases released in the production of a benchmark unit of a product;
- (p) “established benchmark” means a benchmark set out in, or determined in accordance with, the Table in Schedule 2;
- (q) “facility” means
 - (i) a plant, structure or thing where an activity listed in section 2 of the Schedule of Activities to the *Environmental Protection and Enhancement Act* occurs, and
 - (ii) a site or 2 or more contiguous or adjacent sites that are operated and function in an integrated fashion where an activity listed in any of sections 3 to 11 of the Schedule of Activities to the *Environmental Protection and Enhancement Act* occurs,

including all the buildings, equipment, structures, machinery and vehicles that are an integral part of the activity;

- (r) “forecasting facility” means a facility that has total regulated emissions of one megatonne or more in 2016 or a subsequent year;
- (s) “Fund” means the Climate Change and Emissions Management Fund established by the Act;
- (t) “fund credit” means
 - (i) a fund credit obtained under section 18, and
 - (ii) a fund credit obtained under section 8 of the *Specified Gas Emitters Regulation* (AR 139/2007);
- (u) “interim compliance report” means an interim compliance report under section 13;
- (v) “net emissions” means the net emissions for a facility determined in accordance with section 7;
- (w) “net geological sequestration” means the amount of carbon dioxide that is sequestered in a geological formation, less the amount of specified gases, expressed in tonnes on a CO₂e basis, released as a result of the sequestration activity;
- (x) “net sequestration” means the amount of carbon dioxide sequestered in a sink, other than a geological formation, less any specified gases, expressed in tonnes on a CO₂e basis, released as a result of the sequestration activity;
- (y) “opted-in facility” means a facility designated as an opted-in facility under section 4(4);
- (z) “output-based allocation” means the output-based allocation for a facility determined in accordance with section 5;
- (aa) “person responsible” means,
 - (i) where the release of the specified gas occurs at a facility that is the subject of an approval or registration under the *Environmental Protection and Enhancement Act*, the holder of the approval or registration,
 - (ii) where the release of the specified gas occurs at a facility that is not the subject of an approval or registration referred to in subclause (i) but is the subject of an approval or other authorization issued by the Alberta Energy Regulator or the Alberta

Utilities Commission, the holder of that approval or authorization, or

- (iii) where the release of the specified gas occurs at any other facility, the owner of the facility;
- (bb) “product” means
 - (i) an end product or intermediate product produced by a facility, or
 - (ii) an input, output, process or other thing specified in respect of a facility under subsection (2);
- (cc) “production” means the quantity, expressed in the applicable benchmark unit, of
 - (i) an end product or intermediate product produced by a facility, or
 - (ii) an input, output, process or other thing specified under subsection (2);
- (dd) “renewable electricity facility” means a facility that produces electricity from an energy resource that occurs naturally and that can be replenished or renewed within a human lifespan, including, but not limited to,
 - (i) moving water,
 - (ii) wind,
 - (iii) heat from the earth,
 - (iv) sunlight, and
 - (v) sustainable biomass;
- (ee) “reporting period” means reporting period one, two, three or four;
- (ff) “reporting period one” means the period beginning on January 1 and ending on March 31 of a year;
- (gg) “reporting period two” means the period beginning on January 1 and ending on June 30 of a year;
- (hh) “reporting period three” means the period beginning on January 1 and ending on September 30 of a year;
- (ii) “reporting period four” means the period beginning on January 1 and ending on December 31 of a year;

- (jj) “specified gas” means a gas listed in column 1 of Schedule 1;
 - (kk) “Standard for Completing Greenhouse Gas Compliance and Forecasting Reports” means the Standard for Completing Greenhouse Gas Compliance and Forecasting Reports published by the department, as amended or replaced from time to time;
 - (ll) “Standard for Establishing and Assigning Benchmarks” means the Standard for Establishing and Assigning Benchmarks published by the department, as amended or replaced from time to time;
 - (mm) “Standard for Greenhouse Gas Emission Offset Project Developers” means the Standard for Greenhouse Gas Emission Offset Project Developers published by the department, as amended or replaced from time to time;
 - (nn) “Standard for Verification” means the Standard for Verification published by the department, as amended or replaced from time to time;
 - (oo) “third party verifier” means a person who has the qualifications referred to in, and is eligible to be a third party verifier under, section 24;
 - (pp) “total regulated emissions” means the total regulated emissions for a facility determined in accordance with section 7(2);
 - (qq) “true-up obligation” means the amount by which a facility’s total regulated emissions in a reporting period exceeds the facility’s output-based allocation for the reporting period;
 - (rr) “year” means a calendar year unless otherwise specified.
- (2)** The director may specify an input, output, process or other thing as a product of a facility for the purposes of this Regulation.
- (3)** For the purposes of this Regulation, a facility is considered to begin commercial operation on January 1 of the year immediately following the year in which the facility first produces a product.
- (4)** Notwithstanding subsection (3), for the purposes of this Regulation, the director may, if the director considers it appropriate to do so, designate the year of commercial operation that a facility that has undergone an expansion or significant change is in, but the director may only do so once with respect to a particular expansion or significant change.

(5) In determining whether it is appropriate to make a designation in respect of a facility under subsection (4), the director must consider

- (a) the nature and extent of the expansion or significant change undergone by the facility and the technologies employed in the expansion or significant change that affect specified gas emissions, and
- (b) any other matter that in the director's opinion is relevant to determining whether it is fair and reasonable to make the designation considering the objective of reducing specified gas emissions.

(6) For the purposes of this Regulation, the person responsible for a facility with respect to a reporting period is the person who is the person responsible for the facility on the last day of the reporting period.

Incorporation of standards

2 Pursuant to section 61 of the Act, the following standards published by the department, as amended or replaced from time to time, are incorporated into and form part of this Regulation:

- (a) Standard for Establishing and Assigning Benchmarks;
- (b) Standard for Completing Greenhouse Gas Compliance and Forecasting Reports;
- (c) Standard for Greenhouse Gas Emission Offset Project Developers;
- (d) Standard for Verification.

Application

3(1) This Regulation applies to the following facilities:

- (a) a facility that has total regulated emissions of 100 000 tonnes or more in 2003 or a subsequent year;
- (b) an opted-in facility.

(2) Notwithstanding subsection (1)(a), if a facility other than an opted-in facility first has total regulated emissions of 100 000 tonnes or more in 2018 or a subsequent year, this Regulation does not begin to apply to the facility until the year after the year in which the facility first has total regulated emissions of 100 000 tonnes or more.

Opted-in facilities

4(1) In this section,

- (a) “competitively impacted facility” means a facility other than a facility described in section 3(1)(a) that competes directly with a facility described in section 3(1)(a);
- (b) “emissions-intensive trade-exposed sector” means a sector
 - (i) that has an emissions intensiveness that equals or exceeds 3% and a trade exposure that equals or exceeds 20%,
 - (ii) that has an emissions intensiveness that equals or exceeds 15% and a trade exposure that equals or exceeds 10% but is less than 20%, or
 - (iii) that has an emissions intensiveness that equals or exceeds 30% and a trade exposure that equals or exceeds 0% but is less than 10%;
- (c) “emissions intensiveness” in respect of a sector means the full carbon pricing costs of the sector divided by the gross value added for the sector;
- (d) “full carbon pricing costs” means full carbon pricing costs as established in accordance with the Standard for Establishing and Assigning Benchmarks;
- (e) “sector” means the part of the economy consisting of entities that produce goods or services that are the same or substantially the same;
- (f) “trade exposure” means the ratio of A to B

where

A is the total value in dollars of all products produced by the sector in Alberta that are exported from Alberta plus the total value in dollars of all products produced by the sector that are imported into Alberta;

B is the total value in dollars of all products produced by the sector in Alberta plus the total value in dollars of all products produced by the sector that are imported into Alberta.

(2) Subject to subsection (11), a person responsible for a facility may apply to the director for the facility to be designated as an opted-in facility.

- (3) An application under subsection (2) must
- (a) be submitted in the form and manner prescribed by the director,
 - (b) include the information required by the director, and
 - (c) be received by the director on or before June 1 of the year preceding the year in which the designation is intended to be effective.
- (4) The director may designate a facility as an opted-in facility if
- (a) the application meets the requirements under subsection (3),
 - (b) the director is satisfied that
 - (i) the facility is a competitively impacted facility, or
 - (ii) the facility is in an emissions-intensive trade-exposed sector and that the facility
 - (A) had total regulated emissions of 50 000 tonnes or more in 2013 or a subsequent year, or
 - (B) is likely to have total regulated emissions of 50 000 tonnes or more in its second year of commercial operation,
- and
- (c) the director is satisfied that no benefit is being, or has been, provided in respect of the facility under an initiative of the Government of Alberta, or an agency of the Government of Alberta, that will substantially alleviate the cost of the carbon levy under the *Climate Leadership Act* in respect of the facility.
- (5) The director shall notify the person responsible for a facility in writing of the director's decision as to whether to designate the facility as an opted-in facility.
- (6) A person responsible for a facility may apply to the director for the designation of the facility as an opted-in facility under subsection (4) to be revoked.
- (7) An application under subsection (6) must
- (a) be submitted in the form and manner prescribed by the director,

- (b) contain the information required by the director, and
 - (c) be received by the director on or before June 1 of the year preceding the year in which the revocation is intended to be effective.
- (8)** The director may revoke the designation of a facility as an opted-in facility on the application of the person responsible if
- (a) the application meets the requirements under subsection (7), and
 - (b) in the opinion of the director, it is appropriate for the designation to be revoked taking into consideration the objective of reducing specified gas emissions.
- (9)** The director shall notify the person responsible for a facility in writing of the director's decision as to whether to revoke the designation of the facility as an opted-in facility.
- (10)** The person responsible for a facility that has been notified that the designation of the facility as an opted-in facility has been revoked shall submit the compliance report for the last year that the facility was an opted-in facility on or before March 31 of the following year.
- (11)** A person responsible for a facility is not eligible to apply for the facility to be designated as an opted-in facility if
- (a) the exemption under section 15(1)(d) of the *Climate Leadership Act* applies in respect of fuel used at the facility, or
 - (b) the facility is a renewable electricity facility
 - (i) that has a total nominal capacity of less than 5 megawatts,
 - (ii) that is part of a renewable electricity program in respect of which a participant has entered into a renewable electricity support agreement under section 7(4) of the *Renewable Electricity Act*, or
 - (iii) in respect of which, in the opinion of the director, an economic benefit is being provided under a program or other scheme that is attributable to the electricity produced at the facility having been produced from an energy resource referred to in section 1(1)(dd).

Part 2 Output-based Allocation

Output-based Allocation

Determination of the output-based allocation for a facility

5(1) Subject to subsection (2), the output-based allocation for a facility for a reporting period is determined in accordance with the following formula:

$$\text{OBA} = \sum_i (\text{BE}_{i,Y} \times P_i) + \sum_j (\text{BA}_{j,Y} \times P_j) - ((\text{BE}_{E,Y} \times I_E) + (\text{BE}_{\text{Hy},Y} \times I_{\text{Hy}}) + (\text{BE}_{\text{He},Y} \times I_{\text{He}}))$$

where

OBA is the output-based allocation for the facility for the reporting period;

$\text{BE}_{i,Y}$ is the established benchmark for year Y for each product i;

i is each product of the facility that has an established benchmark;

Y is the year in which the reporting period occurs;

P_i is the production for each product i for the facility during the reporting period;

$\text{BA}_{j,Y}$ is the assigned benchmark for year Y for each product j;

j is each product of the facility that has an assigned benchmark;

P_j is the production for each product j for the facility during the reporting period;

$\text{BE}_{E,Y}$ is the established benchmark for year Y for electricity;

I_E is the electricity imported by the facility during the reporting period, expressed in megawatt hours;

$\text{BE}_{\text{Hy},Y}$ is the established benchmark for year Y for hydrogen;

I_{Hy}

- (a) in the case of a facility producing a product with a benchmark unit of “Alberta complexity weighted barrel” is zero, and
- (b) in the case of any other facility, is the hydrogen imported by the facility during the reporting period, expressed in tonnes;

BE_{IHe-Y} is the established benchmark for year Y for industrial heat;

I_{He} is the heat imported by the facility during the reporting period, expressed in gigajoules.

(2) If the amount determined under subsection (1) for a reporting period is less than zero, the output-based allocation for the facility for the reporting period is zero.

Duty to not exceed output-based allocation

6(1) The person responsible for a facility that is in its 2nd or a subsequent year of commercial operation shall comply with the requirement that the net emissions for the facility for reporting period four of the year shall not exceed the output-based allocation for the facility for reporting period four.

(2) In addition to complying with subsection (1), the person responsible for a forecasting facility that is in its 2nd or a subsequent year of commercial operation shall comply with the following requirements:

- (a) the net emissions for the forecasting facility for reporting period one of the year shall not exceed the output-based allocation for the facility for reporting period one;
- (b) the net emissions for the forecasting facility for reporting period two of the year shall not exceed the output-based allocation for the facility for reporting period two;
- (c) the net emissions for the forecasting facility for reporting period three of the year shall not exceed the output-based allocation for the facility for reporting period three.

(3) Notwithstanding subsection (1), the person responsible for a renewable electricity facility shall comply with the requirement that the net emissions for the facility for reporting period four of each year the facility is designated as an opted-in facility shall not exceed the output-based allocation for the facility for reporting period four.

Determination of net emissions

7(1) For the purposes of section 6, the net emissions for a facility for a reporting period is determined in accordance with the following formula:

$$NE = TRE - (EO + EPC + FC)$$

where

NE is the net emissions for the facility for the reporting period;

TRE is the total regulated emissions for the facility for the reporting period;

EO is the quantity of specified gases, expressed in tonnes on a CO₂e basis, represented by the emission offsets used by the person responsible for the facility for the reporting period;

EPC is the quantity of specified gases, expressed in tonnes on a CO₂e basis, represented by the emission performance credits used by the person responsible for the facility for the reporting period;

FC is the quantity of specified gases, expressed in tonnes on a CO₂e basis, represented by the fund credits used by the person responsible for the facility for the reporting period.

(2) For the purposes of subsection (1), the total regulated emissions for a facility for a reporting period is determined in accordance with the following formula:

$$TRE = DE - ICO_2 + ECO_2 + UCO_2$$

where

TRE is the total regulated emissions for the facility for the reporting period, expressed in tonnes on a CO₂e basis;

DE is the direct emissions for the facility for the reporting period;

ICO₂ is the amount of carbon dioxide expressed in tonnes imported on site during the reporting period from a different facility to which this Regulation applies;

ECO₂ is the amount of carbon dioxide expressed in tonnes exported from the facility during the reporting period;

UCO₂ is the amount of carbon dioxide expressed in tonnes used by the facility as feedstock for the production of urea during the reporting period.

(3) For the purposes of determining the net emissions for a forecasting facility under subsection (1), the person responsible for the forecasting facility shall use the same ratio of fund credits to the sum of emission offsets and emission performance credits that was included under section 14(3)(b)(iv) in the latest annual forecasting report submitted for the facility for that year.

(4) The person responsible for a facility shall comply with each of the rules set out in section 19(1), (2), (3) and (4) in determining the net emissions for a facility.

(5) The person responsible for a facility in respect of a reporting period shall determine the net emissions for the reporting period on or before the date on which the compliance report or interim compliance report for the reporting period is required to be submitted.

Assigned Benchmarks

Assignment of assigned benchmark

8(1) If a product of a facility does not have an established benchmark, the director may, if the director considers it appropriate to do so, assign an assigned benchmark for the product and specify the year for which the assigned benchmark is applicable

- (a) on the director's own initiative, or
- (b) on the application of the person responsible for the facility under section 9.

(2) The director shall give the person responsible for a facility written notice of the assigned benchmarks for the products of the facility that are assigned under this section.

Application for assigned benchmark

9(1) If a product of a facility does not have an established benchmark and an assigned benchmark has not been assigned for the product under section 8(1)(a), the person responsible for the facility may apply to the director for the assignment of an assigned benchmark for the product on or before June 1 of the year in which the person responsible first wants an assigned benchmark for the product to be used in determining the facility's output-based allocation.

(2) An application under subsection (1) must

- (a) be submitted in the form and manner prescribed by the director,
- (b) include the information required by the director, and
- (c) be verified by a third party verifier as required by the director.

(3) The person responsible for a facility shall comply with the rules and other requirements set out in Part 1 of the Standard for Establishing and Assigning Benchmarks in preparing and submitting an application for the assignment of an assigned benchmark.

(4) A third party verifier shall comply with the rules and other requirements set out in Part 1 of the Standard for Verification in providing a verification referred to in subsection (2)(c).

Review of and assignment of new assigned benchmark

10 The director may at any time review an assigned benchmark for a product of a facility and may assign a new assigned benchmark for the product if the director is of the opinion that

- (a) the assigned benchmark is inaccurate, or
- (b) the product or production process has significantly changed.

Determination of assigned benchmark

11 Each assigned benchmark for a product of a facility must be determined in accordance with the Standard for Establishing and Assigning Benchmarks.

Reports

Compliance report

12(1) The person responsible for a facility that is in its 2nd or a subsequent year of commercial operation in a year shall submit to the director a compliance report for the facility for reporting period four of the year by March 31 of the following year.

(2) Notwithstanding subsection (1), the person responsible for a renewable electricity facility shall submit to the director a compliance report for the facility for reporting period four of each year the facility is designated as an opted-in facility by March 31 of the following year.

(3) The compliance report must

- (a) be submitted in the form and manner prescribed by the director,
- (b) include the information required by the director,
- (c) confirm that the net emissions for the facility for reporting period four does not exceed the output-based allocation for the facility for reporting period four,
- (d) be certified by the person responsible in the manner required by the director, and
- (e) be verified by a third party verifier.

(4) The person responsible for a facility shall comply with the rules and other requirements set out in Part 1 of the Standard for Completing Greenhouse Gas Compliance and Forecasting Reports in preparing and submitting a compliance report for the facility under this section.

(5) A third party verifier shall comply with the rules and other requirements set out in Part 1 of the Standard for Verification in providing a verification referred to in subsection (3)(e).

Interim compliance report for forecasting facility

13(1) The person responsible for a forecasting facility that is in its 2nd or a subsequent year of commercial operation shall submit to the director an interim compliance report for the facility

- (a) for reporting period one of the year on or before May 15 of that year,
- (b) for reporting period two of the year on or before August 15 of that year, and
- (c) for reporting period three of the year on or before November 15 of that year.

(2) A person responsible for a forecasting facility is not required to submit an interim compliance report for the forecasting facility under subsection (1) for any of the reporting periods in

- (a) the first year in which the forecasting facility has total regulated emissions of one megatonne or more,
- (b) the year following the first year in which the forecasting facility has total regulated emissions of one megatonne or more, or

- (c) the 2nd year following a year in which the forecasting facility has total regulated emissions of less than one megatonne.

(3) The interim compliance report must

- (a) be submitted in the form and manner prescribed by the director,
- (b) include the information required by the director,
- (c) confirm that the net emissions for the facility for the reporting period does not exceed the output-based allocation for the facility for the reporting period,
- (d) be certified by the person responsible in the manner required by the director, and
- (e) be verified by a third party verifier as required by the director.

(4) The person responsible for a facility shall comply with the rules and other requirements set out in Part 1 of the Standard for Completing Greenhouse Gas Compliance and Forecasting Reports in preparing and submitting an interim compliance report for the facility under this section.

(5) A third party verifier shall comply with the rules and other requirements set out in Part 1 of the Standard for Verification in providing a verification referred to in subsection (3)(e).

Annual forecasting report

14(1) Subject to subsection (2), if a forecasting facility is in its first or a subsequent year of commercial operation in a year, the person responsible for the forecasting facility on September 30 of the year shall, on or before November 30, submit to the director an annual forecasting report with respect to the facility for the following year.

(2) A person responsible for a forecasting facility is not required to submit an annual forecasting report with respect to the forecasting facility under subsection (1) for

- (a) the year following the first year in which the forecasting facility has total regulated emissions of one megatonne or more, or
- (b) the 2nd year following a year in which the forecasting facility has total regulated emissions of less than one megatonne.

- (3)** The annual forecasting report must
- (a) be submitted in the form and manner prescribed by the director,
 - (b) include
 - (i) a forecast of the forecasting facility's total regulated emissions for each reporting period for the following year,
 - (ii) a forecast of the forecasting facility's production of each product that has an established benchmark or an assigned benchmark for each reporting period for the following year,
 - (iii) a forecast of the true-up obligation for the forecasting facility for each reporting period for the following year,
 - (iv) the ratio of fund credits to the sum of emission performance credits plus emission offsets that the person responsible will use to meet the facility's true-up obligation for all reporting periods for the following year, and
 - (v) any other information required by the director
- and
- (c) be certified by the person responsible in the manner required by the director.
- (4)** The person responsible for a forecasting facility may, in accordance with this section, submit a revised annual forecasting report for the remaining reporting periods in a year at the time the person responsible submits an interim compliance report for a reporting period in the year.
- (5)** The person responsible for a facility shall comply with the rules and other requirements set out in Part 1 of the Standard for Completing Greenhouse Gas Compliance and Forecasting Reports in preparing and submitting an annual forecasting report for the facility under this section.

Part 3

Emission Offsets, Emission Performance Credits and Fund Credits

Emission offset projects

15(1) An emission offset project developer shall comply with the rules and other requirements set out in Part 1 of the Standard for Greenhouse Gas Emission Offset Project Developers

- (a) in initiating and implementing an emission offset project, and
- (b) in serializing emission offsets.

(2) An emission offset must be verified by a third party verifier.

(3) A third party verifier shall comply with the rules and other requirements set out in Part 1 of the Standard for Verification in verifying an emission offset.

Emission offsets

16(1) A reduction in specified gas emissions or a sequestration of carbon dioxide, other than a geological sequestration, must meet the following requirements for the reduction or sequestration to constitute one or more emission offsets:

- (a) the reduction or sequestration must occur in Alberta;
- (b) the reduction or sequestration must result from an action taken that is not otherwise required by law at the time the action is taken;
- (c) the reduction or sequestration must
 - (i) result from an action taken on or after January 1, 2002, and
 - (ii) occur on or after January 1, 2002;
- (d) the reduction or sequestration must be real and demonstrable;
- (e) the reduction or sequestration must be quantifiable and measurable, directly or by accurate estimation using replicable techniques.

(2) A geological sequestration of carbon dioxide must meet the following requirements for the geological sequestration to constitute one or more emission offsets:

- (a) the carbon dioxide that is geologically sequestered must be captured through a dedicated process from sources located at a facility in Alberta;
- (b) the carbon dioxide must be stored in a geological formation that is located wholly or partly in Alberta;
- (c) the geological sequestration of the carbon dioxide must not be required by law at the time the carbon dioxide is geologically sequestered;
- (d) the construction of the infrastructure used to geologically sequester the carbon dioxide must have been initiated on or after January 1, 2002;
- (e) the geological sequestration of the carbon dioxide must occur after January 1, 2002;
- (f) the quantity of carbon dioxide that is geologically sequestered must be quantifiable and measurable, directly or by accurate estimation using replicable techniques.

(3) A capture of carbon dioxide must meet the following requirements for the capture to constitute one or more emission offsets:

- (a) the carbon dioxide must be captured through a dedicated process from sources located at a facility upgrading or refining bitumen in Alberta;
- (b) the capture of the carbon dioxide must not be required by law at the time the carbon dioxide is captured;
- (c) the construction of the infrastructure used to capture the carbon dioxide must have been initiated on or after January 1, 2012 and the infrastructure must have been used to capture carbon dioxide before December 31, 2015;
- (d) the carbon dioxide must be
 - (i) captured by infrastructure capable of capturing, and
 - (ii) stored in geological formations capable of storing 1 000 000 tonnes of carbon dioxide per year;
- (e) at least 51% of the volume of carbon dioxide captured through the dedicated process from sources located at a facility upgrading or refining bitumen in Alberta in a year must be sequestered in a geological formation in respect of which a pore space tenure agreement has been entered

into with the Government of Alberta on or after January 1, 2011;

- (f) the quantity of carbon dioxide that is captured must be quantifiable and measurable, directly or by accurate estimation using replicable techniques;
- (g) the captured carbon dioxide must be geologically sequestered in accordance with subsection (2) on or before August 22, 2025;
- (h) the amount established under section 18(2) must be less than \$80 at the time the captured carbon dioxide is geologically sequestered.

(4) A one-tonne reduction in specified gas emissions, expressed on a CO₂e basis, or a one-tonne net sequestration of carbon dioxide that meets the requirements of subsection (1), constitutes one emission offset.

(5) A net geological sequestration of one tonne of carbon dioxide that meets the requirements of subsection (2) constitutes one emission offset.

(6) The number of emission offsets constituted by a capture of carbon dioxide that meets the requirements of subsection (3) is determined as follows:

- (a) if the amount established under section 18(2) is equal to or less than \$40 at the time that the captured carbon dioxide is geologically sequestered, the number of emission offsets constituted is calculated in accordance with the following formula:

$$A \times 1$$

where

A equals the emission offsets constituted by the net geological sequestration of the captured carbon dioxide that meets the requirements of subsection (2);

- (b) if the amount established under section 18(2) is more than \$40 but less than \$80 at the time that the captured carbon dioxide is geologically sequestered, the number of emission offsets constituted is calculated in accordance with the following formula:

$$A \times (80-B)/40$$

where

- A equals the emission offsets constituted by the net geological sequestration of the captured carbon dioxide that meets the requirements of subsection (2);
- B equals the amount established under section 18(2).

(7) An emission offset represents one tonne of specified gas emissions, expressed on a CO₂e basis.

Emission performance credits

17(1) If the total regulated emissions of a facility in reporting period four is less than the output-based allocation for the facility for reporting period four, the director shall issue one or more emission performance credits to the person responsible for the facility.

(2) An emission performance credit represents one tonne of specified gas emissions, expressed on a CO₂e basis.

(3) The number of emission performance credits the director shall issue to the person responsible for the facility for the year must be determined in accordance with the following formula:

$$\text{EPC} = \text{OBA} - \text{TRE}$$

where

EPC is the number of emission performance credits, expressed in tonnes on a CO₂e basis, the director shall issue to the person responsible;

OBA is the output-based allocation for the facility for reporting period four;

TRE is the total regulated emissions for the facility for reporting period four.

Fund credits

18(1) A person responsible may obtain fund credits by contributing money to the Fund.

- (2) The Minister may, by order, establish the amount of money that a person responsible must contribute to the Fund to obtain one fund credit.
- (3) A fund credit represents one tonne of specified gas emissions, expressed on a CO₂e basis.

Use of emission offsets, emission performance credits and fund credits

- 19(1)** The following rules apply to the use of emission offsets in determining the net emissions for a facility under section 7:
- (a) an emission offset must be held by the person responsible using it;
 - (b) an emission offset may only be used once;
 - (c) an emission offset may only be used if it has been verified as required by section 15(2);
 - (d) an emission offset serialized in respect of a reduction of specified gas, or net sequestration, net geological sequestration or capture of carbon dioxide, that occurred in 2014 or a previous year may only be used for a reporting period in 2020 or a previous year;
 - (e) an emission offset serialized in respect of a reduction of specified gas, or net sequestration, net geological sequestration or capture of carbon dioxide, that occurred in 2015 or 2016 may only be used for a reporting period in 2021 or a previous year;
 - (f) an emission offset serialized in respect of a reduction of specified gas, or net sequestration, net geological sequestration or capture of carbon dioxide, that occurs in 2017 or a subsequent year may only be used for a reporting period in a year within the 8-year period after the year in which the reduction, net sequestration, net geological sequestration or capture occurs.
- (2) The following rules apply to the use of emission performance credits in determining the net emissions for a facility under section 7:
- (a) an emission performance credit created in a year may only be used for a reporting period in a subsequent year;
 - (b) an emission performance credit must be held by the person responsible using it;

- (c) an emission performance credit may only be used once;
 - (d) an emission performance credit issued in respect of 2014 or a previous year may only be used for a reporting period in 2020 or a previous year;
 - (e) an emission performance credit issued in respect of 2015 or 2016 may only be used for a reporting period in 2021 or a previous year;
 - (f) an emission performance credit issued in respect of 2017 or a subsequent year may only be used for a reporting period in a year within the 8-year period after the year in respect of which the emission performance credit is issued.
- (3)** The following rules apply to the use of fund credits in determining the net emissions for a facility under section 7:
- (a) a fund credit may only be used once;
 - (b) a fund credit obtained on or before March 31 in a year may only be used for a reporting period in the previous year;
 - (c) a fund credit obtained after March 31 in a year may only be used for a reporting period in that year.
- (4)** An emission offset, emission performance credit or fund credit may only be used by a person responsible for a facility in determining the net emissions for a facility under section 7 if the emission offset or emission performance credit is held, or the fund credit is obtained, by the person responsible on or before
- (a) the date the compliance report or interim compliance report with respect to the reporting period is submitted, or
 - (b) the date by which the compliance report or interim compliance report is required to be submitted, in the event that the compliance report or interim compliance report is not submitted on or before that date.
- (5)** For the purposes of determining the net emissions for a facility for a reporting period under section 7, subject to subsection (6), the person responsible for a facility shall not use
- (a) emission offsets, and
 - (b) emission performance credits
- for more than a combined maximum of

- (c) 50% of the true-up obligation for the facility for a reporting period in 2018,
 - (d) 55% of the true-up obligation for the facility for a reporting period in 2019, and
 - (e) 60% of the true-up obligation for the facility for a reporting period in 2020 or a subsequent year.
- (6) For the purposes of determining the net emissions for a facility for a reporting period under section 7, the person responsible for a facility shall not use
- (a) emission offsets serialized in respect of a reduction of specified gas or net sequestration, net geological sequestration or capture of carbon dioxide that occurred in a year before 2017, and
 - (b) emission performance credits issued in respect of a year before 2017

for more than a combined maximum of 40% of the true-up obligation for the facility for the reporting period.

**No right to emission offsets, fund credits
and emission performance credits**

20(1) For greater certainty, emission offsets, emission performance credits and fund credits are revocable licences authorizing persons responsible, subject to this Part, to use the emission offsets, emission performance credits and fund credits in determining the net emissions for a facility under section 7.

(2) Nothing in this Regulation ensures or guarantees the availability of emission offsets or emission performance credits.

Part 4 General

Application for exemption

21 The director may, on application, exempt the person responsible for a facility from one or more of the duties imposed on persons responsible under Part 2 or section 19(5) or (6), subject to any terms or conditions the director considers appropriate, for a period not exceeding one year if the director is of the opinion that

- (a) for a prolonged period the facility was operated under unusual conditions or was shut down, and

- (b) the unusual conditions or shutdown caused a material reduction in the specified gas emissions of the facility during the period.

Director's powers on reviewing applications, etc.

22(1) On reviewing an application, report or information submitted under this Regulation, or on considering emission offsets submitted for serialization by an emission offset project developer pursuant to the Standard for Greenhouse Gas Emission Offset Project Developers, the director may do one or more of the following:

- (a) require the person responsible or emission offset project developer to provide additional information;
- (b) require verification or further verification by a third party verifier of any information;
- (c) collect any additional information or conduct any review that the director considers necessary;
- (d) direct the person responsible, or emission offset project developer, to resubmit the application, report, emission offsets or information in accordance with any directions that the director considers necessary.

(2) A third party verifier shall comply with the rules and other requirements set out in Part 1 of the Standard for Verification in providing a verification referred to in subsection (1)(b).

(3) If the director requests or requires information to be provided by a person under subsection (1), the person shall provide to the director the information requested or required.

Additional measurements, metering and monitoring

23 The director may from time to time require a person responsible for a facility to implement new or additional measurements, metering or monitoring for the purpose of determining the output-based allocation for a facility under section 5 or the net emissions for a facility under section 7.

Qualifications and eligibility of third party verifiers

24(1) A person is eligible to be a third party verifier under this Regulation if

- (a) the person
 - (i) is registered as

- (A) a professional engineer under the *Engineering and Geoscience Professions Act*, or
 - (B) a chartered professional accountant under the *Chartered Professional Accountants Act*,
- or
- (ii) is a member of a profession
 - (A) in another province or territory of Canada that has substantially similar competence and practice requirements as a profession referred to in subclause (i), or
 - (B) in a jurisdiction outside of Canada that has substantially similar competence and practice requirements as a profession referred to in subclause (i) that has been approved by the director,
 - (b) the person has technical knowledge of
 - (i) specified gas emission quantification methodologies,
 - (ii) audit practices, and
 - (iii) any other matters considered relevant by the director,and
 - (c) the person has any other qualifications that the director considers necessary.
- (2)** A person is not eligible to be a third party verifier for a facility if the person
- (a) is the person responsible for the facility or is a director, officer or employee of the person responsible for the facility or of an affiliate, within the meaning of section 2 of the *Business Corporations Act*, of the person responsible, or
 - (b) is an employee or agent of the Government.
- (3)** The director may request evidence of a person's qualifications and eligibility as a third party verifier and may determine that the person is not eligible to perform the functions of a third party verifier if the director is not satisfied that the person possesses the necessary qualifications or is eligible.

Records and Forms

Request for confidentiality

25(1) A person responsible for a facility may, in respect of an application under section 4, 9 or 21, a compliance report, interim compliance report, annual forecasting report, any information provided under section 22 or a verification, submit a written request that certain information be kept confidential for a period of 5 years after the date it is submitted or provided on the basis that the information is commercial, financial, scientific or technical information that would reveal proprietary business, competitive or trade secret information about a specific facility, technology or corporate initiative.

(2) The director shall have regard to the following when making a decision on a request for confidentiality made under subsection (1):

- (a) whether disclosure of the information could reasonably be expected to harm significantly the competitive position of the person responsible;
- (b) whether disclosure of the information could reasonably be expected to interfere significantly with the negotiating position of the person responsible;
- (c) whether disclosure of the information could reasonably be expected to result in undue financial loss or gain to any person or organization;
- (d) the availability of the information or the means to obtain the information from other public sources;
- (e) whether there are any other competing interests that would suggest that disclosure of the information is warranted.

(3) The director may require a person responsible to provide additional reasons, in writing, in support of the request for confidentiality under subsection (1).

(4) The director shall

- (a) if the director considers that the request for confidentiality is well founded, approve the request and order that some or all of the information to which the request relates be kept confidential and not be disclosed for 5 years after the date it was submitted or provided, or
- (b) refuse the request if the director considers that the request for confidentiality is not well founded.

- (5) The director shall, in writing, notify the person responsible of the director's decision under subsection (4) within 150 days after receiving the request for confidentiality.
- (6) Where the director is considering a request for confidentiality under this section, the information to which the request relates is prescribed as a class of prescribed information for the purposes of section 59 of the Act until a decision is made.
- (7) Where the director makes an order under subsection (4)(a), the information that is the subject of the order is prescribed as a class of prescribed information for the purposes of section 59 of the Act.

Annual report to Information and Privacy Commissioner

26 The director shall provide annually to the Information and Privacy Commissioner, in the form and manner the director considers appropriate, a report setting out the following:

- (a) the number of requests received by the director under section 25(1) in the year;
- (b) the number of requests approved by the director under section 25(4)(a) in the year.

Access to applications and reports

27(1) Subject to subsections (2) and (3), within a reasonable time after receiving a request in writing for a copy of an application for the assignment of an assigned benchmark, a compliance report or an interim compliance report, the director shall provide a copy of the application or report free of charge to the person requesting it.

(2) The director is not required to provide a copy of an application or report under subsection (1) unless the director is satisfied that the person making the request has first made a request to obtain a copy of the application or report from the appropriate person responsible and that the request was refused or was not satisfied within 30 days after the date of the request.

(3) Subsection (1) does not apply with respect to

- (a) prescribed information as defined in section 59 of the Act, or
- (b) information pertaining to a matter that is the subject of enforcement proceedings under the Act or this Regulation.

Publication

28 Subject to section 59 of the Act, the director may, in any form and manner the director considers appropriate, publish

- (a) an application for the assignment of an assigned benchmark,
- (b) a compliance report or an interim compliance report, or
- (c) information in an application or report referred to in clause (a) or (b).

Retention of records

29(1) The person responsible for a facility shall retain

- (a) all records and information respecting the direct emissions and production of the facility for at least 7 years after the date on which the records or information are created,
- (b) a copy of an application for the assignment of an assigned benchmark for the facility together with the records and information on which the application was based for at least 7 years after the year in which the assigned benchmark that was assigned on the basis of the application ceases to be an assigned benchmark for the facility,
- (c) a copy of a compliance report submitted in respect of the facility together with the records and information on which the compliance report was based for at least 7 years after the year in which the compliance report was submitted, and
- (d) a copy of any information provided under section 22 for at least 7 years after the year in which the information was provided.

(2) In addition to complying with subsection (1), the person responsible for a forecasting facility shall retain

- (a) a copy of an interim compliance report submitted in respect of the facility together with the records and information on which the interim compliance report was based for 7 years after the year in which the interim compliance report was submitted, and
- (b) a copy of an annual forecasting report submitted in respect of the facility together with the records and information on which the annual forecasting report was based for 7

years after the year in which the annual forecasting report was submitted.

- (3)** In addition to complying with subsection (1), the person responsible for an opted-in facility shall retain
- (a) a copy of the application for the facility to be designated as an opted-in facility together with the records and information on which the application was based for at least 7 years after the year in which the application was made, and
 - (b) a copy of any application for the designation of the facility as an opted-in facility to be revoked, together with the records and information on which the application was based for at least 7 years after the year in which the application was made.
- (4)** An emission offset project developer shall retain all records and information associated with an emission offset until the later of
- (a) 7 years after the day on which the emission offset is used by a person responsible for a facility to meet an output-based allocation,
 - (b) 8 years after the day on which the emission offset is serialized in accordance with the Standard for Greenhouse Gas Emission Offset Project Developers, and
 - (c) the day on which the emission offset may no longer be used under section 19.
- (5)** Applications, records, reports and information required to be retained under this section must be retained
- (a) at the head or principal office, in Alberta, of the person responsible or emission offset project developer, as the case may be, or
 - (b) at the facility or the location of the emission offset project to which they relate.

Forms

- 30** The director may prescribe forms for the purposes of this Regulation.

Enforcement

Audits

31 An inspector or investigator may undertake an audit of a person responsible, a facility, an emission offset project developer, an emission offset project or a third party verifier to verify the accuracy of information required to be provided by the Act or this regulation.

Offences

32 A person who

- (a) contravenes section 6,
- (b) contravenes section 7(3) or (4), 9(2), (3) or (4), 12(1), (2), (3), (4) or (5), 13(1), (3), (4) or (5), 14(1), (3) or (5), 15(1), (2) or (3), 19(5) or (6), 22(2) or 29(1), (2), (3), (4) or (5),
- (c) performs the functions of a third party verifier and does not have the qualifications referred to in, or is not eligible to be a third party verifier under, section 24, or
- (d) retains a person as a third party verifier who does not have the qualifications referred to in, or is not eligible to be a third party verifier under, section 24.

is guilty of an offence.

Penalties

33(1) A person who is guilty of an offence under section 32(a) is liable to a fine of not more than \$200 for every tonne of specified gas expressed on a CO₂e basis by which the net emissions for the facility exceeds the output-based allocation for the facility.

(2) A person who is guilty of an offence under section 32(b), (c) or (d) is liable,

- (a) in the case of an individual, to a fine of not more than \$50 000, or
- (b) in the case of a corporation, to a fine of not more than \$500 000.

Due diligence

34 No person shall be convicted of an offence under this Regulation if that person establishes on a balance of probabilities that the person took all reasonable steps to prevent its commission.

Part 5

Transitional, Consequential Amendments, Review and Coming into Force

Transitional

35(1) Notwithstanding section 4(3)(c), in the case of an application under section 4(2) for a facility to be designated as an opted-in facility for 2018, the application must be received by the director on or before June 1, 2018.

(2) Notwithstanding section 9(1), if a product of a facility does not have an established benchmark and an assigned benchmark has not been assigned for the product under section 8(1)(a), the person responsible for the facility may, on or before September 1, 2018, apply to the director in accordance with section 9 for the assignment of an assigned benchmark for the product for 2018.

(3) Notwithstanding section 10, the director may at any time review an assigned benchmark for a product of a facility for 2018 or 2019 and may assign a new assigned benchmark for the product if the director is of the opinion that a new assigned benchmark is appropriate.

(4) Notwithstanding section 14(1), in the case of a forecasting facility that is in its 2nd or subsequent year of commercial operation in 2018, the person responsible for the facility on January 15, 2018, shall submit the annual forecasting report with respect to the facility for 2018 on or before January 15, 2018.

(5) The designation of a facility as an opted-in facility under the *Specified Gas Emitters Regulation* (AR 139/2007) is not a designation of the facility as an opted-in facility for the purposes of this Regulation.

(6) For greater certainty, the person responsible for a facility to which the *Specified Gas Emitters Regulation* (AR 139/2007) applies shall submit the compliance report required for 2017 under that regulation on or before March 31, 2018.

Transition allocation benchmark

36(1) The Director may assign a transition allocation benchmark for 2018 or 2019 for any product of a facility that has an established benchmark or an assigned benchmark, other than electricity or industrial heat.

(2) Each transition allocation benchmark for a product of a facility must be determined in accordance with the Standard for Establishing and Assigning Benchmarks.

(3) If the Director has assigned a transition allocation benchmark for a product of a facility for 2018 or 2019, then, for the purposes of this Regulation, the formula in section 5(1) shall be read as follows with respect to a reporting period in the year for which the transition allocation benchmark is assigned:

$$\text{OBA} = \sum_i (\text{BE}_{i-Y} \times P_i) + \sum_j (\text{BA}_{j-Y} \times P_j) - ((\text{BE}_{E-Y} \times I_E) + (\text{BE}_{H_Y-Y} \times I_{H_Y}) + (\text{BE}_{I_{Hc-Y}} \times I_{Hc})) + \sum_k (\text{BTA}_{k-Y} \times P_k)$$

where

each term that is given a meaning in section 5 has that meaning;

- BTA_{k-Y} is the transition allocation benchmark for year Y for each product k;
- k is each product of the facility that has a transition allocation benchmark assigned under subsection (1);
- P_k is the production for each product k for the facility during the reporting period.

Consequential amendments

37 The *Administrative Penalty Regulation* (AR 140/2007) is amended in the Schedule

(a) by adding the following before section 2:

1.1 *Carbon Competitiveness Incentive Regulation*

- sections 6, 7(3) and (4), 9(2), (3) and (4), 12(1), (2), (3), (4) and (5), 13(1), (3), (4) and (5), 14(1), (3) and (5), 15(1), (2) and (3), 19(5) and (6), 22(2) and 29(1), (2), (3), (4) and (5),

(b) in section 3 by adding “(AR 251/2004)” after “*Specified Gas Reporting Regulation*”.

38 The *Climate Leadership Regulation* (AR 175/2016) is amended

(a) in section 1(1)

- (i) in clause (gg) by striking out “*Specified Gas Emitters Regulation*” wherever it occurs and substituting “*Carbon Competitiveness Incentive Regulation*”;

- (ii) **by repealing clause (hh);**
- (b) **by repealing section 11(1) and substituting the following:**

Exemptions from the carbon levy

11(1) Subject to subsection (4), a consumer is exempt from paying the carbon levy on fuel used in the operation of a specified gas emitter if the emissions from the fuel are included in the determination of the total regulated emissions for the specified gas emitter under section 7(2) of the *Carbon Competitiveness Incentive Regulation*.

39 The Specified Gas Reporting Regulation (AR 251/2004) is amended

- (a) **in section 3**
 - (i) **by adding the following after subsection (1):**

(1.1) Where the *Carbon Competitiveness Incentive Regulation* applies to a facility but the person responsible for the facility is not required to submit a specified gas report under subsection (1), the person responsible for the facility shall submit a specified gas report in respect of the release of a specified gas into the environment at the facility.
 - (ii) **in subsection (2)**
 - (A) **by adding the following after clause (a):**
 - (a.1) must include any other information required by the Director,
 - (B) **by repealing clause (b) and substituting the following:**
 - (b) must disclose
 - (i) the information referred to in clause (a) in the form and manner required under the Standard, and
 - (ii) the information referred to in clause (a.1) in the form and manner required by the Director;
- (b) **in section 9(a) by striking out “3(1)” and substituting “3(1) or (1.1)”.**

Review

40 This Regulation must be reviewed

- (a) on or before January 1, 2021, and
- (b) on or before January 1 of 2023 and of every 5th year after 2023.

Coming into force

41 This Regulation comes into force on January 1, 2018.

Schedule 1**Specified Gases**

Specified Gas	Chemical Formula
Carbon dioxide	CO ₂
Methane	CH ₄
Nitrous oxide	N ₂ O
HFC-23	CHF ₃
HFC-32	CH ₂ F ₂
HFC-41	CH ₃ F
HFC-43-10mcc	C ₃ H ₂ F ₁₀
HFC-125	C ₂ HF ₅
HFC-134	C ₂ H ₂ F ₄
HFC-134a	CH ₂ FCF ₃
HFC-143	C ₂ H ₃ F ₃
HFC-143a	C ₂ H ₃ F ₃
HFC-152	CH ₂ FCH ₂ F
HFC-152a	C ₂ H ₄ F ₂
HFC-161	CH ₃ CH ₂ F
HFC-236cb	CH ₂ FCF ₂ CF ₃
HFC-236ea	CHF ₂ CHFCF ₃
HFC-227ea	C ₃ HF ₇
HFC-236fa	C ₃ H ₂ F ₆
HFC-245ca	C ₃ H ₃ F ₅
HFC-245fa	CHF ₂ CH ₂ CF ₃
HFC-365mfc	CH ₃ CF ₂ CH ₂ CF ₃
Sulphur hexafluoride	SF ₆
Perfluoromethane	CF ₄
Perfluoroethane	C ₂ F ₆
Perfluorocyclopropane	c-C ₃ F ₆
Perfluoropropane	C ₃ F ₈
Perfluorobutane	C ₄ F ₁₀
Perfluorocyclobutane	c-C ₄ F ₈
Perfluoropentane	C ₅ F ₁₂
Perfluorohexane	C ₆ F ₁₄
Perfluorodecalin	C ₁₀ F ₁₈
Nitrogen trifluoride	NF ₃

Schedule 2**Established Benchmarks for Products****Definitions**

1(1) Subject to subsection (2), in this Schedule,

- (a) “bituminous coal” means coal that is recovered or obtained from a coal mine located in the Foothills Natural Region or the Rocky Mountain Natural Region as defined in the Natural Regions and Sub-regions of Alberta

published by the department, as amended or replaced from time to time;

- (b) “electricity” means electricity that is exported from a facility;
- (c) “hardwood kraft pulp” means wood pulp processed from hardwood species by a sulphate chemical process using cooking liquor;
- (d) “industrial heat” means thermal energy that is exported from a facility to
 - (i) a different facility to which this Regulation applies, or
 - (ii) a facility at which the exemption under section 15(1)(d) of the *Climate Leadership Act* applies in respect of fuel used at the facility

where the thermal energy is used for an industrial purpose;

- (e) “oil sands in situ bitumen” means bitumen recovered from an in situ operation site as defined in the *Oil Sands Conservation Act*, using
 - (i) steam assisted gravity drainage or cyclic steam stimulation, or
 - (ii) another recovery technology that, in the opinion of the director, is reasonably comparable to steam assisted gravity drainage or cyclic steam stimulation;
- (f) “oil sands mining bitumen” means bitumen that is recovered from a mine site as defined in the *Oil Sands Conservation Act*;
- (g) “refining” means any manufacturing or industrial process that occurs at a refinery at which crude oil or bitumen is processed or refined into a transportation fuel;
- (h) “softwood kraft pulp” means wood pulp processed from softwood species by a sulphate chemical process using cooking liquor.

(2) If Part 1 of the Standard for Establishing and Assigning Benchmarks includes a definition of a product that is not defined in subsection (1), or includes a further definition of a product that is defined in subsection (1), then the definition or further definition applies to this Schedule unless a contrary intention appears in the Standard.

Table
Established Benchmarks for Products

Product	Established benchmark for 2018 (tonnes of CO ₂ e per benchmark unit)	Established benchmark for 2019 (tonnes of CO ₂ e per benchmark unit)	Established benchmark for 2020 (tonnes of CO ₂ e per benchmark unit)	Established benchmark for 2021 (tonnes of CO ₂ e per benchmark unit)	Established benchmark for 2022 (tonnes of CO ₂ e per benchmark unit)	Established benchmark for 2023 and subsequent years (tonnes of CO ₂ e per benchmark unit) is determined as follows:	Benchmark unit
Ammonia	1.942	1.942	1.935	1.928	1.921	*BE = **BE _{v,t} - ***0.007	Tonne
Ammonium nitrate	0.3260	0.3260	0.3250	0.3240	0.3230	BE = BE _{v,t} - 0.0010	Tonne
Bituminous coal	0.07053	0.07053	0.06982	0.06911	0.06840	BE = BE _{v,t} - 0.00071	Tonne
Cement	0.7853	0.7853	0.7823	0.7793	0.7763	BE = BE _{v,t} - 0.0030	Tonne
Electricity	0.3700	0.3700	0.3663	0.3626	0.3589	BE = BE _{v,t} - 0.0037	Megawatt hour
Hardwood kraft pulp	0.1768	0.1768	0.1751	0.1734	0.1717	BE = BE _{v,t} - 0.0017	Air dry metric tonne
Hydrogen	7.970	7.970	7.890	7.810	7.730	BE = BE _{v,t} - 0.080	Tonne
Industrial heat	0.06299	0.06299	0.06236	0.06173	0.06110	BE = BE _{v,t} - 0.00063	Gigajoule
Oil sands in situ bitumen	0.3504	0.3504	0.3469	0.3434	0.3399	BE = BE _{v,t} - 0.0035	m3 of bitumen
Oil sands mining bitumen	0.1954	0.1954	0.1934	0.1914	0.1894	BE = BE _{v,t} - 0.0020	m3 of bitumen
Refining	3.831	3.831	3.793	3.755	3.717	BE = BE _{v,t} - 0.038	Alberta complexity weighted barrel (in thousands)
Softwood kraft pulp	0.2416	0.2416	0.2392	0.2368	0.2344	BE = BE _{v,t} - 0.0024	Air dry metric tonne

Note: The values in the columns for 2020, 2021 and 2022 reflect the application of an annual 1% tightening rate.

*BE is the established benchmark for the year.

**BE_{v,t} is the established benchmark for the previous year.

*** is the tightening rate.



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