



Standard for greenhouse gas emission offset project developers

Technology Innovation and Emissions Reduction Regulation
Version 3.2

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Summary of Revisions

Version	Date	Summary of Revisions
3.2	April 2023	<p>The revisions since version 3.1 of this Standard include:</p> <ul style="list-style-type: none"> • Changed date for Agricultural Nitrous Oxide Emission Reductions projects to submit offset project plans and aggregated project planning sheets to June 15 for 2023 only.
3.1	January 2023	<p>The revisions since version 3.0 of this Standard include:</p> <ul style="list-style-type: none"> • Outlined aggregated emission offset projects subproject requirements, including subproject transfers. • Set reporting frequency. • Adjusted treatment of electricity grid displacement factor, and added specific criteria for global warming potentials. • Set provisions for converting emission offsets to sequestration credits and capture recognition tonnes. • Changed crediting period to 10 years, and changed extension criteria to financial additionality. • Added emission offset statuses. • Clarified interaction with federal output based pricing system. • Removed Project Expansion section. • Require project boundary file to be submitted with project plan for non-aggregated projects.
3.0	November 2019	<p>The revisions since version 2.0 of this Standard include:</p> <ul style="list-style-type: none"> • Updates to align with Technology Innovation and Emissions Reduction (TIER) Regulation. • Clarified the follow up process for re-verification and second re-verification. • Corrected Part 1 section (9) to clarify that an aggregated project planning sheet or master planning sheet (if applicable) must accompany the project plan for the project plan to be considered complete. • Added clause to clarify that registering a project on the Registry does not constitute approval of that project, the verification, or the third party assurance provider. • Changed the consecutive verification requirements to be consistent with Standard for Validation, Verification, and Audit. • Added a section on priced emissions to outline the process for quantifying projects that have levied fuels or fuels subject to the federal fuel charge. • Clarified the impact to offset projects at facilities that opt in to TIER or become part of an aggregate facility.

		<ul style="list-style-type: none"> Adjusted section describing what constitutes invalid emission offsets.
2.0	July 2018	<ul style="list-style-type: none"> Changed definition of offset start date to 'date project plan submitted' rather than 'date project plan is posted by the Registry'. Corrected numbering in Part 1 section 4. Changed project extensions to align with additionality process. Changed section 8 so that subprojects are eligible to generate offsets on the activity start date as long as the planning sheet is submitted within 30 days. Changed timeline on applying for an extension to 8 months prior to allow projects time to decide on opt-in. Clarify May 1 deadline for agriculture projects. Adjusted language in error correction process for clarity. Removed references to Schedule D and C. Removed reference to Net Emissions Intensity Limit. Added rules regarding moving a subproject from one project to another project.
1.0	December 2017	<ul style="list-style-type: none"> The Carbon Competitiveness Incentive Regulation will be effective January 1, 2018. This Standard is a document referenced in the Regulation. The information in this standard is largely adopted from the Technical Guidance for Offset Project Developers (February 2013).
Draft	February 2017	<ul style="list-style-type: none"> The draft version of this standard was posted for 30 day public comment and was adopted from the Technical Guidance for Offset Project Developers (February (2013)).

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Introduction

Part 1 of the Standard for Greenhouse Gas Emission Offset Project Developers is adopted by the Technology Innovation and Emissions Reduction Regulation (the “Regulation”), under the authority of section 61 of the *Emissions Management and Climate Resilience Act (the “Act”)*. Part 1 of the Standard is enforceable as law.

In addition to the legal requirements in Part 1 of this standard, emission offset project developers must comply with the Act, the Regulation, and all other applicable laws.

Part 2 of the Standard for Greenhouse Gas Emission Offset Project Developers sets out additional requirements for emission offset project developers.

Revisions made to this standard in version 3.2 are effective January 1, 2023.

Part 1 – Regulatory Details

Division 1

Interpretation and Application

Definitions

- 1(1) Terms that are defined in the Act and Regulation are incorporated into and become part of this standard.
- (2) In this standard,
- (a) “Act” means the *Emissions Management and Climate Resilience Act*;
 - (b) “activity start date” means the first day on which the action that is the subject of an emission offset project, or of an emission offset subproject, starts;
 - (c) “aggregated emission offset project” means an aggregated emission offset project described in section 7;
 - (d) “emission offset subproject” means an emission offset project that an emission offset project developer groups with one or more emission offset projects and submits to the Registry as a single aggregated emission offset project;
 - (e) “extension period” means an extension period described in section 12;
 - (f) “flagged protocol” means a quantification protocol identified by the department for potential withdrawal or replacement;
 - (g) “flexibility mechanism” means an alternate or additional methodology, or part of a methodology, or alternative requirement within a quantification protocol;
 - (h) “Introduction” means the portion of this standard identified by the subtitle “Introduction”;
 - (i) “offset crediting period” means an offset crediting period described in section 11;
 - (j) “offset start date” means the first day on which an emission offset project is eligible to generate emission offsets, as determined in accordance with section 10;
 - (k) “Part 1” means the portion of this standard identified by the subtitle “Part 1 – Regulatory Details”;
 - (l) “Part 2” means the portion of this standard identified by the subtitle “Part 2 – Requirements for Greenhouse Gas Emission Offset Project Developers”;
 - (m) “project plan” means a project plan described in section 9;
 - (n) “project report” means a project report described in section 14;
 - (o) “quantification protocol” means an emission offset quantification protocol approved and published by the department, as amended or replaced from time to time;
 - (p) “Quantification Protocol for Agricultural Nitrous Oxide Emissions Reductions” means Quantification Protocol for Agricultural Nitrous Oxide Emissions Reductions published by the department, as amended or replaced from time to time;
 - (q) “Quantification Protocol for Conservation Cropping” means the Quantification Protocol for Conservation Cropping, as published by the department, as amended or replaced from time to time;
 - (r) “Registry” means the Alberta Emission Offset Registry;
 - (s) “Regulation” means the Technology Innovation and Emissions Reduction Regulation, as amended;
 - (t) “reporting period” means the period of time covered by a project report;
 - (u) “this standard” means the Standard for Greenhouse Gas Emission Offset Project Developers and includes the Introduction, Part 1, Part 2, and Appendices A and B.

Aggregated emission offset projects

- 2 All references to an emission offset project in Part 1 include an aggregated emission offset project unless otherwise provided.

In the event of a conflict

- 3(1) If there is any conflict between this standard and the Act or the Regulation, the Act or the Regulation prevails over this standard.

- (2) If there is any conflict between Part 1 and Part 2 of this standard, Part 1 prevails.

Division 2

Quantification Protocols and Aggregated Emission Offset Projects

Quantification protocol

- 4(1) Subject to subsection (2), for each emission offset project an emission offset project developer must:
- (a) comply with the requirements of the applicable quantification protocol, and
 - (b) initiate and implement the emission offset project in accordance with the most current version of the applicable quantification protocol in place on the date that the emission offset project developer submits the project plan to the Registry in accordance with section 9, unless otherwise authorized in writing by the director.
- (2) The emission offset project developer may, prior to submitting a project plan under section 9 or project report to the Registry under section 13, apply in writing to the director for a deviation from one or more of the requirements of a quantification protocol.
- (3) The director may grant or refuse to grant a deviation in subsection (2).
- (4) Where the director grants a deviation in subsection (3), the director may impose on the emission offset project developer any terms and conditions that the director considers appropriate with respect to the deviation.
- (5) The emission offset project developer must comply with each term and condition imposed by the director under subsection (4).
- (6) The emission offset project developer must not initiate or implement an emission offset project using a flagged protocol without prior written authorization from the director.
- (7) The director may grant or refuse to grant written authorization to initiate or implement an emission offset project using a flagged protocol.
- (8) Where the director grants an emission offset project developer written authorization to use a flagged protocol, the director may impose on the emission offset project developer any terms and conditions that the director considers appropriate with respect to the authorization.
- (9) The emission offset project developer must comply with each term and condition imposed by the director under subsection (8).

Using more than one quantification protocol

- 5(1) Subject to subsection (2), an emission offset project developer must not use more than one quantification protocol in initiating and implementing an emission offset project, unless otherwise authorized in writing by the director.
- (2) The emission offset project developer may apply in writing to the director for written authorization to initiate and implement an emission offset project using two or more applicable approved quantification protocols.
- (3) The director may grant or refuse to grant written authorization in subsection (2).
- (4) Where the director grants written authorization in subsection (3), the director may impose on the emission offset project developer any terms and conditions that the director considers appropriate with respect to the authorization.
- (5) The emission offset project developer must comply with each term and condition imposed by the director under subsection (4).

Quantification Protocols withdrawn

- 6(1) The director may, at any time,
- (a) withdraw a quantification protocol, and
 - (b) determine that no further emission offset projects may be initiated under that withdrawn quantification protocol.
- (2) Where the director withdraws a quantification protocol, the director will prescribe the duration of
- (a) the offset crediting period,

(b) the extension period

of any emission offset project that was initiated under that quantification protocol prior to its withdrawal.

- (3) Subject to subsection (4), where the director replaces a withdrawn quantification protocol with a new quantification protocol, the emission offset project developer of an emission offset project initiated under the withdrawn quantification protocol may continue generating emission offsets using
- (a) the withdrawn quantification protocol until
 - (i) the last day of the crediting period, or
 - (ii) the last day of the extension period,whichever is applicable, or
 - (b) the new quantification protocol for emission offsets generated after the date the new quantification protocol is published.
- (4) The director may require the emission offset project developer of an emission offset project initiated under a withdrawn quantification protocol to apply a new quantification protocol to the emission offset project as of the date specified by the director.
- (5) When applying a new quantification protocol to an emission offset project initiated under a withdrawn quantification protocol, the emission offset project developer must
- (a) update the project plan,
 - (b) update the description of the baseline condition,
 - (c) update the description of the emission offset project condition, and
 - (d) use all applicable emission factors
- in accordance with the new quantification protocol.
- (6) Notwithstanding subsections (1) to (5), if the specified gas emission reduction or sequestration from an emission offset project or a portion of an emission offset project becomes required by law, that emission offset project or that portion of an emission offset project will not be eligible to generate emission offsets on or after the date the specified gas emission reduction or sequestration becomes required by law.

Aggregated emission offset projects

- 7(1) An emission offset project developer may submit two or more emission offset subprojects to the Registry as an aggregated emission offset project.
- (2) Subject to section 5, each emission offset subproject that an emission offset project developer submits to the Registry as part of an aggregated emission offset project must be initiated and implemented according to the same quantification protocol.

Subprojects

- 8(1) No emission offset subproject is eligible to generate emission offsets prior to the later of
- (a) the activity start date of that emission offset subproject, or
 - (b) the offset start date of the aggregated emission offset project that includes the emission offset subproject.
- (2) Where an emission offset project developer transfers an emission offset subproject from one aggregated emission offset project to another aggregated emission offset project, the emission offset subproject is not eligible to generate emission offsets
- (a) prior to the aggregated emission offset project start date, or
 - (b) after the last day of the offset crediting period,
- of either aggregated emission offset project.
- (3) An emission offset project developer may not add any new emission offset subprojects to an aggregated emission offset project after the date on which the project plan was submitted to the Registry unless the emission offset project

developer first submits an updated aggregated project planning sheet that includes the new emission offset subprojects to the Registry.

- (4) Where an emission offset project developer adds a new emission offset subproject to an aggregated emission offset project after the date on which the emission offset project developer submits the project plan to the Registry, the emission offset subproject is not eligible to generate emission offsets more than 30 days prior to the date the emission offset project developer submits an updated aggregated project planning sheet to the Registry.
- (5) An emission offset subproject initiated on or after January 1, 2024 under the the Quantification Protocol for Agricultural Nitrous Oxide Emissions Reductions that is added to an aggregated emission offset project by submitting an updated aggregated project planning sheet to the Registry after May 1 in a year is not eligible to generate emission offsets in that year.
- (6) An emission offset subproject initiated in 2023 under the the Quantification Protocol for Agricultural Nitrous Oxide Emissions Reductions that is added to an aggregated emission offset project by submitting an updated aggregated project planning sheet to the Registry after June 15, 2023 is not eligible to generate emission offsets in 2023.

Division 3

Project Plan and Offset Crediting Period

Project plan

- 9(1) An emission offset project developer must submit to the Registry
 - (a) a completed project plan for an emission offset project in the form and including all of the information prescribed in the Project Plan Form, as amended or replaced from time to time;and
 - (b) in the case of an aggregated emission offset project, the completed aggregated project planning sheet including the information and data required by the director for each emission offset subproject within the aggregated emission offset project.
 - (c) in the case of an emission offset project that is not an aggregated emission offset project, a file describing the physical boundary of the emission offset project.
- (2) The emission offset project developer must sign the completed project plan prior to submitting it to the Registry.
- (3) An emission offset project developer must not initiate a new emission offset project for an action that is the subject of a prior emission offset project after the last day of the prior emission offset project's offset crediting period,
- (4) An emission offset project will only be posted on the Registry after the emission offset project developer submits
 - (a) a completed project plan, and
 - (b) the aggregated project planning sheet, if applicable.
 - (c) a project boundary file, if applicable.

Offset start date

- 10(1) Subject to (2), (3), and (4), the offset start date for an emission offset project is the first day on which the completed project plan and, if applicable, the aggregated project planning sheet for the emission offset project is submitted to the Registry.
- (2) The offset start date for an aggregated emission offset project initiated or implemented on or after January 1, 2023 but prior to January 1, 2024 using the Quantification Protocol for Agricultural Nitrous Oxide Emissions Reductions is
 - (a) the first day on which the completed project plan for the emission offset project is submitted to the Registry, if the completed project plan is submitted on or before June 15, 2023, or
 - (b) January 1, 2024 if the completed project plan is submitted to the Registry, if the project plan is submitted after June 15, 2023.
- (3) The offset start date for an aggregated emission offset project initiated or implemented on or after January 1, 2024 using the Quantification Protocol for Agricultural Nitrous Oxide Emissions Reductions is
 - (a) the first day on which the completed project plan for the emission offset project is submitted to the Registry, if the project plan is submitted on or before May 1 of a year, or
 - (b) January 1 of the year following the year the completed project plan is submitted to the Registry, if the project plan is submitted after May 1 of a year.

- (4) The offset start date for an emission offset project that is not an aggregated emission offset project must be on or after the activity start date of that emission offset project.
- (5) An emission offset project is not eligible to generate emission offsets prior to the offset start date of that emission offset project.

Offset crediting period

11(1) The offset crediting period for an emission offset project begins on the offset start date of that emission offset project.

- (2) Subject to section 6, the offset crediting period for an emission offset project initiated
 - (a) before January 1, 2023 is eight consecutive years,
 - (b) on or after January 1, 2023 is ten consecutive years,unless otherwise specified in the applicable quantification protocol, in which case the offset crediting period is that period set out in the applicable quantification protocol.
- (3) An emission offset project is not eligible to generate emission offsets after the last day of the offset crediting period for that emission offset project, unless the director grants an extension period for the emission offset project under section 12.

Extension period

12(1) If an emission offset project developer applies to the director for an extension period, the emission offset project developer must apply no more than sixteen months and no less than thirty days before the last day of the offset crediting period or an existing extension period, whichever is applicable, of an emission offset project.

- (2) The director may grant or refuse to grant an extension period.
- (3) Where the director grants an extension period in subsection (2), the director may impose on the emission offset project developer any terms and conditions that the director considers appropriate with respect to the extension period.
- (4) The emission offset project developer must comply with each term and condition imposed by the director under subsection (3).
- (5) The director will not grant an extension period for an emission offset project initiated under a quantification protocol that has been subsequently withdrawn by the director under section 6 unless the withdrawn quantification protocol has been replaced by a new quantification protocol.
- (6) An extension period granted for an emission offset project under this section must
 - (a) begin on the day immediately following the last day of the offset crediting period or the extension period, whichever is applicable, of the emission offset project, and
 - (b) be no more than five consecutive years, unless otherwise specified in the applicable quantification protocol, in which case the extension period is that which is specified in the applicable quantification protocol.
- (7) An emission offset project is not eligible to generate emission offsets after the last day of the final extension period for that emission offset project.
- (8) Where the director grants an extension period to an emission offset project, the emission offset project developer must apply the most current version of the applicable quantification protocol to the emission offset project by updating
 - (a) the project plan, and
 - (b) the baseline conditionon or before the date specified by the director when granting the extension.

Division 4

Registration, Project Report and Verification

Registration

- 13(1) An emission offset project developer must register an emission offset project by submitting the following documents to the Registry:
- (a) the project report;
 - (b) in the case of an aggregated emission offset project, the aggregated project reporting sheet containing the information and data required by the director;
 - (c) the verification report prepared in accordance with the Standard for Validation, Verification, and Audit;
 - (d) a statutory declaration confirming the emission offset project developer has the exclusive authority to transact in the reduction of specified gas emissions, or net sequestration, net geological sequestration or capture of carbon dioxide identified in the greenhouse gas statement included in the project report;
 - (e) a statutory declaration confirming
 - (i) the reduction of specified gas emissions, or net sequestration, net geological sequestration or capture of carbon dioxide resulting from the emission offset project has not been registered, or serialized
 - (A) in relation to a regulatory requirement under another enactment, or
 - (B) under any other offset or other recognition scheme;
 - or
 - (ii) the net geological sequestration of carbon dioxide resulting from the emission offset project
 - (A) has not been registered or serialized in relation to a regulatory requirement under another enactment other than the Clean Fuel Regulations,
 - (B) has not been registered, or serialized under any other offset or other recognition scheme, and
 - (C) will be converted to a sequestration credit if registered or serialized under the Clean Fuel Regulations;
- and
- (f) any other information required by the director.
- (2) Where the emission offset project developer submits more than one project report for an emission offset project, the emission offset project developer must not report on the same, or any portion of the same, reporting period as any other project report submitted for that emission offset project.
- (3) An emission offset project developer must not include a subproject in more than one project report for the same, or any portion of the same, reporting period.

Project report

- 14(1) Subject to subsection (2), an emission offset project developer must submit the project report for an emission offset project in the form of, and include all information prescribed in, the Project Report Form, as amended or replaced from time to time.
- (2) The emission offset project developer must identify in the project report all sections of the Project Report Form that do not apply to the emission offset project for that reporting period, and provide an explanation as to why the sections do not apply.
- (3) For any emission offset project with a reduction of specified gas emissions, or net sequestration, net geological sequestration or capture of carbon dioxide that occurs before January 1, 2023, the emission offset project developer must
- (a) submit a project report by December 1, 2023 covering any reporting period or partial reporting period prior to January 1, 2022, and
 - (a) submit a project report by December 1, 2024 covering any reporting period or partial reporting period from January 1, 2022 to December 31, 2022.

- (4) For each project report in respect of a reduction of specified gas emissions, or net sequestration or net geological sequestration of carbon dioxide that occurs on or after January 1, 2023,
 - (a) the reporting period must not exceed two years, and
 - (b) the emission offset project developer must submit the project report within 6 months of the end of the reporting period.
- (3) The emission offset project developer must
 - (a) sign the emission offset project report, and
 - (b) complete the emission offset project report before a third party assurance provider verifies it.
- (4) If the emission offset project developer makes any changes to the emission offset project as compared to the project plan, including changes made pursuant to a deviation granted under section 4(2), the emission offset project developer must record all of these changes in the project report.
- (5) If the emission offset project developer modifies or changes the project report after it has been verified, the emission offset project developer must submit the modified or changed project report to a third party assurance provider for a new verification.

Division 5

Re-verification

Re-verification

- 15(1)** After an emission offset project has been registered under section 13, the director may select one or more project reports of that emission offset project to be re-verified by a third party assurance provider who is selected and hired by the director.
- (2) Where the director selects a project report to be re-verified in subsection (1), the director may provide any direction to the emission offset project developer of the emission offset project that the director considers necessary to facilitate the re-verification.
- (3) The emission offset project developer must comply with any direction provided to the emission offset project developer by the director in subsection (2).
- (4) The emission offset project developer of an emission offset project selected for re-verification must not make any changes to the project report from the date the emission offset project is selected for re-verification until the date the re-verification is completed.

Re-verification terminated

- 16(1)** Where the third party assurance provider terminates the re-verification of a project report in accordance with the Standard for Validation, Verification, and Audit, the emission offset project developer must
 - (a) resolve any issues that led to the termination of the re-verification in accordance with directions provided by the director,
 - (b) revise the project report, if necessary, and
 - (c) pay for a third party assurance provider, selected by the director, to re-verify the revised project report and submit to the director a revised verification report
 within six months of the date on which the third party assurance provider terminated the re-verification.
- (2) If
 - (a) the third party assurance provider terminates the re-verification of a project report for an emission offset project in accordance with the Standard for Validation, Verification, and Audit, and
 - (b) the emission offset project developer fails to comply with any part of subsection (1),
 the emission offsets for the reporting period of that project report are invalid.

Errors identified by the third party assurance provider during re-verification

- 17(1)** Where a third party assurance provider, during the course of a re-verification, identifies an error in the project report that results in an understatement of the emission offsets, the emission offset project developer must not register emission offsets in respect of the reduction of specified gas emissions or sequestration of carbon dioxide that was not included in the verified project report.

- (2) Where a third party assurance provider, during the course of a re-verification, identifies a material error in the project report that results in an overstatement of the emission offsets, the emission offset project developer must
 - (a) correct the error in the emission offset project,
 - (b) update the project report and submit it to the director, and
 - (c) pay for a third party assurance provider, selected by the director, to re-verify the updated project report and submit to the director a revised verification report
 in accordance with a written schedule set by the director.
- (3) If the emission offset project developer fails to comply with any part of subsection (2), the emission offsets for the reporting period of that project report are invalid.

Errors identified by emission offset project developer

- 18(1) An emission offset project developer must report in writing a material error in a verified project report to the director as soon as possible and in any event not later than 30 days after the emission offset project developer became aware, or should reasonably have become aware, of the material error.
- (2) Where an emission offset project developer becomes aware of an error in a verified project report that results in an understatement of the emission offsets, the emission offset project developer must not register emission offsets in respect of a reduction of specified gas emissions or sequestration of carbon dioxide that was not included in the verified project report.
- (3) Where an emission offset project developer becomes aware of a material error in a verified project report that results in an overstatement of emission offsets, the emission offset project developer must
 - (a) correct the error in the emission offset project,
 - (b) update the project report,
 - (c) hire a third party assurance provider to re-verify the updated project report, and
 - (d) submit to the Registry
 - (i) the updated project report, and
 - (ii) a new verification report of the updated project report,
 in accordance with a written schedule set by the director.
- (4) If the emission offset project developer fails to comply with any part of subsection (3), the emission offsets for the reporting period of that project report are invalid.
- (5) Subsections (3) and (4) do not apply to a project report that the director has selected to be re-verified by a third party assurance provider under section 15.

Invalid emission offsets

- 19(1) Where an emission offset is
 - (a) used in determining the net emissions for a regulated facility under section 13 of the Regulation and the associated reduction of specified gas emissions, net sequestration, net geological sequestration or capture of carbon dioxide is applied in relation to a regulatory requirement under another enactment, or
 - (b) used in determining the net emissions for a regulated facility under section 13 of the Regulation and the associated reduction of specified gas emissions, or net sequestration, net geological sequestration or capture of carbon dioxide is submitted for recognition under any other offset or other recognition scheme,
 that emission offset is invalid.
- (2) Where an emission offset is serialized on the Registry in recognition of a reduction of specified gas emissions, or net sequestration or capture of carbon dioxide, or, net geological sequestration of carbon dioxide that has not been converted to a sequestration credit, and the reduction of specified gas emissions, or net sequestration, net geological sequestration or capture of carbon dioxide is also
 - (a) registered or serialized on a registry other than the Registry, or
 - (b) registered or serialized under any other offset or other recognition scheme,
 that emission offset is invalid.
- (3) Where an emission offset is serialized on the Registry in recognition of a net geological sequestration of carbon dioxide that has been converted to a sequestration credit, and the net geological sequestration is also

- (a) registered or serialized on a registry other than the Registry or a registry for the Clean Fuel Regulations, or
 - (b) registered or serialized under any other offset or recognition scheme,
- that emission offset is invalid.
- (4) Where two emission offsets are serialized on the Registry in respect of the same CO₂e tonne reduction of specified gas emissions, or the same net sequestration, net geological sequestration or capture of one tonne of carbon dioxide, one of the emission offsets is invalid.
 - (5) Where an emission offset was serialized on the Registry in recognition of a sequestration or geological sequestration of, or a capture of, carbon dioxide, and the carbon dioxide was subsequently released into the environment, that emission offset is invalid.

Division 6

Miscellaneous Provisions

Contact Information

- 20** An emission offset project developer must immediately notify the Registry in writing of any changes to the contact information provided by the emission offset project developer in a project plan.

Reporting

- 21** The emission offset project developer must immediately report any contravention of this standard to the director.

Standard amendment

- 22** Part 1 of this standard will be reviewed as changes in technology and other standards warrant.

Effective date

- 23** This standard is effective January 1, 2023.

Part 2 - Requirements for Greenhouse Gas Emission Offset Project Developers

1.0 Overview of the Alberta Emission Offset System

The Alberta emission offset system is a regulatory system managed by the Ministry of Alberta Environment and Protected Areas that enables facilities regulated under the Technology Innovation and Emissions Reduction Regulation to use Alberta emission offsets to meet compliance obligations. System requirements are set out in the *Emissions Management and Climate Resilience Act*, the Technology Innovation and Emissions Reduction (TIER) Regulation, Standards, Guidelines and Notices, and quantification protocols. The Alberta emission offset system is based on the ISO 14064-2, with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removals.

The scope of Part 2 of this standard is to provide information to emission offset project developers, to assist them with the initiation and implementation of an emission offset project. This standard may also be informative to other stakeholders in the Alberta emission offset system. The objective of Part 2 of this standard is to:

- provide additional guidance on the requirements of the Alberta emission offset system as they apply to an emission offset project developer,
- describe the process an offset project developer can follow to initiate and implement an emission offset project in Alberta, and
- explain the documents, records and data management systems needed to support emission offset project implementation in the Alberta emission offset system.

Emission offset project developers can contact the department via email: AEP.GHG@gov.ab.ca

1.1 Aggregated Emission Offset Projects

An aggregated emission offset project is two or more emission offset subprojects that an emission offset project developer submits to the Registry as a single aggregated emission offset project. An offset project developer that submits an aggregated emission offset project is referred to as an aggregator. The benefit of an aggregated emission offset project is that the aggregator can minimize administration and verification costs associated with each emission offset subproject by combining multiple similar subprojects into a single aggregated emission offset project. The emission offset project developer (aggregator) is responsible for submitting complete, correct information for their emission offset projects and subprojects.

Aggregated Project Planning Sheets (APPS) and Aggregated Project Reporting Sheets (APRS)

Project developers must submit an APPS with the project plan and an APRS with each project report for an aggregated project. The APPS will be for internal use only and will not be posted on the Registry. The APPS will include information for each subproject such as project name, location, activity start date, and unique site identifier. The APRS will include the information on each subproject listed in the APPS, as well as the calculated emission reductions or carbon dioxide sequestrations, reporting period start date, and reporting period end date.

The APPS and APRS forms are available from the Registry.

Errors in APPS

It is the emission offset project developers responsibility to ensure that all APPS are complete and accurate. If a project developer detects an error(s) in an APPS (e.g. typographical error in the location data for a subproject) the project developer may submit an APPS error correction request to the Registry. The Registry will forward the request to the department and the department will consider processing error corrections. As a general rule, the department will not consider processing error corrections for more than 5 per cent of the total number of subprojects listed in the project. The department will only consider processing error corrections for a maximum of 3 data cells per subproject. If the department does not process the error corrections the project developer may remove the subproject(s) and may add the complete accurate subproject as a new subproject as set out in section 8(3).

Activity Start Dates

An aggregated emission offset project may have subprojects that begin operating at different times, meaning they have different activity start dates. If the activity start date for a subproject is before the offset start date, the subprojects listed in the APPS are eligible to start generating emission offsets on the offset start date.

Adding New Subprojects

If the activity start date for a subproject is after the offset start date and the aggregator adds a new subproject by updating the APPS, the new subproject may generate emission offsets beginning on the activity start date as long as the updated project planning sheet is submitted to the Registry within 30 days of the activity start date and only until the end of the offset crediting period for the overall project. Aggregators must provide evidence to any third party assurance provider to demonstrate each subprojects activity start date and assigned subproject crediting start date from the APRS. This will mean a credit duration of less than the crediting period of the offset project for the subprojects added after the offset start date.

The intent of subproject tracking in the APPS, is to ensure go forward crediting from the time of project initiation or go forward crediting from the time new subprojects are added into an aggregated emission offset project. Land based agricultural projects must also meet the intent of go forward crediting for projects and subprojects. Additional requirements for projects using the Quantification Protocol for Agricultural Nitrous Oxide Emission Reductions are articulated below.

Transferring Subprojects

If an emission offset project developer chooses to transfer a subproject from one aggregated emission offset project to a different aggregated emission offset project, the emission offset project developer must follow the process outlined below. Examples of why a project developer may transfer a subproject include but are not limited to: change in ownership of a facility, change in right to transact on emission offsets for a subproject, or operational changes. Transfers are subject to director approval. In order to request a transfer of a subproject the project developer must submit an updated APPS to the Registry, listing only the subprojects which are to be transferred. Subproject transfers will not be permitted or processed for Agricultural Nitrous Oxide Emission projects.

In order to process the transfer, the APPS must include the subproject information of the project its being moved from and to and:

- Be attached to an email titled 'APPS subproject transfer request';
- Indicate in the comments column the effective transfer date;
- Indicate in the comments column the Project ID# of the original emission offset project;
- Indicate in the comments column the offset start date of the original emission offset project; and
- Indicate in the new serial number/unique identifier column, the serial number/unique identifier with "-Transfer" at the end of the number.

The overall offset crediting period of the subproject will not exceed the offset crediting period of the original project or the project the subproject is transferred to.

If a project developer has not serialized emission offsets for a subproject the above transfer process does not apply. The process that does apply is the removal process and addition of a new subproject where the project developer must:

1. Submit a request to remove the subproject(s) from the APPS in its original project, and
2. Submit the subproject, as a new subproject in an updated APPS into the Registry per section 8(3) and (4) of the Standard.

Agricultural Nitrous Oxide Emission Reductions Projects

This section sets out additional requirements that apply to projects using the Agricultural Nitrous Oxide Emission Reduction quantification protocol. The offset start date is defined in Part 1 as the date the offset project plan is submitted to the Registry. If the project is aggregated, emission offset project developers must submit a completed APPS at the same time the project plan is submitted to the Registry in order to be considered a complete submission. Subproject transfers will not be considered or processed for Agricultural Nitrous Oxide Emission projects.

For emission offset project initiated on or after January 1, 2024: Offset project plans submitted to the Registry after May 1 of a year are not eligible to generate emission offsets in the same calendar year. Project developers may add subprojects after the offset project plan is submitted to the Registry by submitting an updated aggregated project planning sheet to the

Registry on or before May 1. Subprojects listed in aggregated project planning sheets submitted to the Registry after May 1 of a year will not be eligible to generate emission offsets in the same calendar year..

For emission offset project initiated in 2023: Offset project plans submitted to the Registry after June 15, 2023 are not eligible to generate emission offsets in 2023. Project developers may add subprojects after the offset project plan is submitted to the Registry by submitting an updated aggregated project planning sheet to the Registry on or before June 15, 2023. Subprojects listed in aggregated project planning sheets submitted to the Registry after June 15, 2023 of a year will not be eligible to generate emission offsets in 2023.

Projects and subprojects cannot be compiled annually in the way that Conservation Cropping projects can be. The subproject cannot generate emission offsets outside of the aggregated emission offset project's offset crediting period. Subprojects for Agricultural Nitrous Oxide Emission Reduction Projects may not be moved from one emission offset project to another emission offset project.

Conservation Cropping Projects

The conservation cropping protocol was withdrawn on December 10, 2020. This means that no conservation cropping emission offset projects can be initiated as of December 10, 2020, and no conservation cropping subprojects can be added to an emission offset as of December 10, 2020. The prescribed duration of the offset crediting period for emission offset projects using the conservation cropping protocol that were initiated on or before December 9, 2020 is December 31, 2021. This means that subprojects listed in a conservation cropping master planning sheet prior to May 1, 2020 may continue to generate emission offsets, as eligible, until December 31, 2021. No emission offsets may be generated after December 31, 2021. Project reports for conservation cropping projects must be submitted by December 1, 2023.

For conservation cropping projects, the aggregator must submit an aggregated project reporting sheet with the project report that lists all subprojects, farmers and land locations, that met the requirements of the quantification protocol for the reporting period year the emission reductions occurred. The subprojects (land locations) must be listed only once in the APPS. If a subprojected is listed in the APRS, it must have first been listed in the APPS. , and must be listed in the master planning sheet on or before May 1 of the year the emission reductions occurred.

1.2 Baseline Condition and Project Condition

The baseline condition represents the specified gas emissions that would have occurred had the offset project not been implemented. Baseline conditions vary and are assessed during protocol development; the protocol will outline baseline condition and how it is quantified using the applicable quantification protocol. The eligible project condition(s) will be documented within an approved protocol and describes the specified gas emissions that occur once the project is implemented. Where the emissions from the project condition are less than the emissions from the baseline condition, the difference represents the specified gas emission reduction, or sequestration for the emission offset project.

1.3 Conservativeness

Conservativeness is a principle that is defined as the use of conservative assumptions, values and procedures to ensure that a specified gas emissions reduction or sequestration is not over-stated. Offset project developers must apply the principle of conservativeness when developing emission offset projects. If there is a decision point during project development where an offset project developer needs to decide on an approach to quantification, measurement, usage of a flexibility mechanism etc. the project developer must choose a conservative approach. If a project or baseline condition is not listed as an eligible option in the quantification protocol then the emission offset project developer must submit a deviation request to the director. All conservative approaches must be rationalized and documented in the offset project plan.

A negligible emissions threshold has not been set for emission offset projects. Included project emissions must be assessed according to the applicable quantification protocol. The quantification must include each relevant specified gas applicable to the project. The specified gases and applicable global warming potentials (GWPs) are listed in the Standard for Completing Greenhouse Gas Compliance and Forecasting Reports.

1.4 Right to Transact Emission Offsets

In order for an emission offset project developer to register emission offsets in the Alberta emission offset system they need to submit a statutory declaration stating that they have the 'right' to generate and sell the emission offsets associated with the emission offset project. The director relies on the statutory declaration as proof of the emission offset project developer's right to transact. The evidence of emission offset project ownership may vary between projects and activity types, and may be more complex in the case of aggregated emission offset projects. It is the emission offset

project developer's responsibility to ensure that they are the owner and/or have the authority to transact on the emission offsets associated with an emission offset project. It is also the emission offset project developer's responsibility to resolve any ownership disputes outside of the offset system process; the director and/or the department will not participate in ownership disputes.

1.4.1 Land Based Projects

Aggregated agricultural land based projects are required to have proof of practice records for the project activity both at the location where the reduction occurred and with the third-party aggregator. Both proof of practice and consent from the land owner are required for a subproject to be listed within an aggregated emission offset project and to generate emission offsets.

Indian reserves are administered and controlled by His Majesty the King in right of Canada ("Canada") for the use and benefit of a particular First Nation. A First Nation, a First Nation member or anyone engaging in relevant activities on reserve must enter into an agreement with Canada in order to register emission offset projects that occurred on reserve land.

Metis Settlement land is held in fee simple by the Metis Settlements General Council (MSGC) under letters patent issued by His Majesty the King in right of Alberta. A Metis Settlement, a Metis Settlement member or anyone engaging in relevant activities on Metis Settlement land must enter into an agreement with the MSGC in order to register emission offset projects that occurred on settlement land.

1.5 Project Extension

An application for an extension period must include the following information for the director's consideration:

- demonstration that the offset project continues to meet the Alberta emission offset system requirements,
- , demonstration of the offset project's financial need for the continued emission offset generation, and
- explanation of any changes to the baseline condition and offset project condition.

The director may request any additional supporting information as needed to review the request and the project, and will provide a decision to the request in a letter. The decision letter must be included in an updated Offset Project Plan and submitted as a separate document to the Registry. The extension approval letter will be posted on the project listing with the updated project plan in support for the extended crediting period.

If the director does not approve an extension period for an emission offset project, or the project developer does not apply for an extension period to an emission offset project, the emission offset project will be given a status of 'ended'.

1.6 Protocol Erratas and Clarifications

If the department identifies an error in a protocol, or identifies a need for clarification in a protocol, an Errata and/or Clarification notice will be posted on the website. The notification will include instructions on how and when project developers will be required to correct their emission offset projects.

1.7 Deviation Requests

Quantification protocols provide the methodology, rules, and requirements for emission offset projects. The Alberta emission offset system webpage will list all approved quantification protocols. If an emission offset project developer finds an approved quantification protocol fits the intent but not all of the requirements within a protocol can be met they may apply to the director for deviation. If a deviation is granted, all other requirements set out in the protocol must be met.

Emission offset project developers may apply to the director for a deviation when one or more of the requirements of a quantification protocol cannot be met. Common examples of appropriate use of a deviation request include: an emission offset project can not meet a protocol requirement, an emission offset project has a source or sink that cannot be recorded or quantified as indicated in the quantification protocol, or an emission offset project has a similar project type to the approved protocol with a slight variance. The director will only consider deviation requests for quantification protocol elements, and cannot grant deviations for other system requirements.

An application for deviation must identify which quantification protocol requirements require a deviation and explain how the integrity of the quantification will be maintained if the deviation is granted. The director may consider a variety of factors, including but not limited to whether the deviation:

- will materially impact the quantification of emission offsets in the project,
- will affect the additionality of the emission offset project,

- is conservative, and
- quantifies emission reductions that meet Alberta emission offset system requirements.

If approved, the director will issue authorization of the deviation with instructions to the emission project developer, and the deviation authorization will be filed with the Registry. All deviation approvals must be included as appended to either one or both of the offset project plan or offset project report, and the third party assurance provider must verify of all requirements of the deviation approvals are met. The project developer must provide evidence of meeting any requirements in a deviation approval to a third party assurance provider.

If an emission offset project activity is not included in any of the approved quantification protocols, and a deviation is not approved or appropriate, the emission offset project developer may propose to develop a new protocol. Requirements and process for developing a protocol in the Alberta emission offset system are set out in the Technical Guidance for Offset Protocol Development and Revision available on the Alberta emission offset system webpage.

1.8 Quantification Protocol Flagged

Quantification protocols may be flagged for a number of reasons, including but not limited to:

- inconsistencies and/or errors in a quantification protocol,
- change in science,
- change in records requirements,
- potential for double counting,
- potential for double pricing of emission reductions,
- evaluation of the additionality of the activity, and
- a change in regulatory requirements.

Flagged quantification protocols will be assessed by the director to determine if the quantification protocol will be withdrawn or replaced with a revised quantification protocol; and how the offset crediting period or extension period of any existing emission offset project will be affected.

See section 4 (6-9) of Part 1.

1.9 Quantification Protocol Withdrawn

See section 6 of Part 1.

Quantification protocols may be withdrawn for a number of reasons, including but not limited to:

- if the reduction and/or activity
 - is required by law,
 - is directly priced,
 - results in double counting of emission reductions,
 - is not additional,
- if there are no emission offset projects using the protocol,
- changes in science, and
- errors/omissions identified in the quantification protocol.

The reason for withdrawal will impact whether the quantification protocol is replaced. It will also affect whether, and the conditions under which, any projects initiated under the withdrawn quantification protocol may continue generating emission offsets.

Where a specified gas emission reduction or action associated with a quantification protocol becomes required by law, refer to section 6(6) of Part 1.

If a quantification protocol is withdrawn because the reduction activity becomes required by law, the offset crediting period (or extension period) for existing projects will end immediately, unless the withdrawn quantification protocol is replaced with a new quantification protocol. If the quantification protocol is replaced, the project must apply the new quantification protocol in accordance with Part 1 sections 6(5).

If a quantification protocol is withdrawn because:

- the reduction activity is no longer additional,
- there are changes in science, and/or
- errors have been identified,

and the quantification protocol is replaced with a new quantification protocol, the project developer may choose whether to continue generating emission offsets using the withdrawn quantification protocol or using the new quantification protocol, in accordance with Part 1 section 6(3).

If a quantification protocol is withdrawn or withdrawn and revised because the reduction activity becomes priced or could result in double counting of emission reductions or for another reason not mentioned above, the treatment of existing projects will be determined by the director.

1.10 Requests to use more than one quantification protocol

Emission offset project developers may apply to the director for authorization to use more than one quantification protocol for the same emission offset project occurring within the same project boundary.

When reviewing requests to use more than one quantification protocol in an emission offset project, the director will consider if:

- the emission offsets quantified under each quantification protocol must be directly connected through a shared emission reduction activity,
- the application explains how the project will meet all of the requirements of each quantification protocol,
- the application identifies the risks for quantifying the offsets under more than one protocol, and
- the application outlines how the risks will be mitigated.

If an aggregated emission offset project is using more than one quantification protocol, the project developer must submit an aggregated project planning sheet and reporting sheet for each type of quantification protocol.

1.11 Carbon Offset Emission Factors Handbook and Global Warming Potential

The Carbon Offset Emission Factors Handbook published by the department (the “Handbook”) contains a listing of common emission factors, the electricity grid displacement factor (EGDF), and common quantification methodologies that emission offset project developers use in initiating and implementing emission offset projects. Common emission factors, the EGDF and quantification methodologies are subject to periodic updates. Emission offset project developers must use the most current version of the Handbook when initiating an emission offset project, when beginning an extension, or as outlined in any deviation or extension approval letter. For common emission factors and common methodologies the emission offset project developer may use the factors or methodology for the entire offset crediting period or extension. For projects initiated on or after January 1, 2024, the EGDF the emission offset project developer is required to use the EGDF that corresponds to the vintage as set out in the Handbook.

Common Emission Factors

If the Handbook is updated during the offset crediting period or extension period of an emission offset project, the emission offset project developer may continue to use the common emission factors from the version of the Handbook that the project was initiated under for a project report, or may choose to use the updated emission factors. When using updated emission factors in a project report, the emission offset project developer must (1) use all applicable common emission factors in the Handbook, (2) reassess and apply the updated common emission factors to the baseline and project conditions, and (3) record the use of updated common emission factors in the project report. The emission offset project developer must not use emission factors from different versions of the Handbook in a single project report. In the case of aggregated emission offset projects, this means that the addition of a subproject will automatically result in a requirement to update all common emission factors to the most recent version of the Handbook.

Electricity Grid Displacement Factor

A 10-year schedule of the Electricity Grid Displacement Factor will be published in the Carbon Offset Emission Factors Handbook. Emission offset projects initiated on or after January 1, 2024 must use the EGDF published in the schedule for each year that corresponds to the year the reduction occurred (vintage). This means that the EGDF will not be the same for the entire crediting period.

Emission offset projects initiated before January 1, 2024 must use the EGDF that was current at the time the project was initiated or, if an extension has been granted, the EGDF that was current at the time the extension was granted for the remainder of the crediting period unless subprojects are added.

If subprojects are added in 2023, the project must adopt the 2023 EDGF go forward. If subprojects are added in 2024 or beyond the project must adopt the annual EDGFs in the schedule of the most current Carbon Offset Emission Factors Handbook at the time on a go forward basis. To quantify the vintage prior to the year the subproject is added, the project developer may use the EGDF that was applicable to the offset project prior to the addition of the subproject.

Common Methodology

If the Handbook is updated during the offset crediting period or extension period of an emission offset project, the emission offset project developer may continue to use the common methodology from the version of the Handbook the project was initiated under for a project report, or may choose to use the updated quantification methodologies. When using an updated methodology in a project report, the emission offset project developer must (1) also update to all applicable common emission factors and methodologies in the Handbook, (2) reassess and apply the updated quantification methodology to the baseline and project conditions, (3) update the offset project plan, and (4) use the most current quantification protocol.

Adding Subprojects

When an emission offset project developer adds a subproject by updating the aggregated project planning sheet to an existing emission offset project, the common emission factors, and common methodology for all subprojects in the project must be updated to the version of the Handbook that is current in the year the subproject is added. When an emission offset project developer adds a subproject by updating the aggregated project planning sheet to an existing emission offset project, the electricity grid displacement factor must be adjusted as per the guidance in the above section on EGDF.

Global Warming Potential

Global warming potentials (GWPs) are listed in the Standard for Completing Greenhouse Gas Compliance and Forecasting Reports. If a GWP is updated during the offset crediting period or extension period of an emission offset project, the emission offset project developer may continue to use the GWP that was current when the project was initiated, or may choose to use the updated GWP on a go forward basis from the year the GWP was updated. When using an updated GWP, the emission offset project developer must (1) also update common emission factors and methodologies in the Handbook, (2) reassess and apply the updated GWP to the baseline and project conditions, (3) updated the offset project plan, and (4) use the most current quantification protocol. Project developers can only use an updated GWP on a go forward basis from the year the GWP was updated (e.g. if GWP is updated in 2023 it can not be used to quantify 2022 emission offsets).

1.12 Sources and Sinks

An emission source is any process or activity that releases a greenhouse gas into the atmosphere. An emission sink is any process, activity, or mechanism that removes a greenhouse gas from the atmosphere. Each quantification protocol contains a detailed list of included and excluded sources and sinks applicable to the specific reduction or sequestration activity. Included sources and sinks must be part of the emission offset project monitoring, measurement and quantification.

1.13 Validation

Emission offset project validation is currently not required in the Alberta emission offset system. Validation is optional and is initiated by the emission offset project developer to support the project design and inform appropriate monitoring, data collection, and calculations for the emission offset project and how the project meets system criteria. Validation occurs before the emission offset project begins and focuses on whether appropriate baseline and project conditions are used and whether the calculations of potential emission offsets are correct. Additional information on verification is provided in section 2.3 and additional information on project validation is available in ISO 14064.

1.14 Priced Emission Reductions

Emission offsets are a policy tool to extend the carbon price signal beyond activities required to pay a carbon price directly. In response to the implementation of a carbon levy on transportation and heating fuels, the department revised and removed several quantification protocols to avoid double pricing of emissions. Quantification protocols were revised

to distinguish between levied and non-levied sources and sinks so that levied sources are excluded from the quantification of emission offsets.

Emission offset project developers were required to use these revised quantification protocols to quantify emission offsets no later than January 1, 2019 and no earlier than January 1, 2018. This means that it is optional to exclude levied emissions to quantify emission offsets that occurred in 2018. The Alberta carbon levy was repealed effective May 30, 2019. Emission offset project developers are required to exclude levied sources and sinks when quantifying emission offsets that occurred between January 1, 2019 and May 29, 2019. Emission offset project developers may include previously levied sources and sinks when quantifying emission offsets that occurred between May 30, 2019 and December 31, 2019. Emission offset project developers were required to update their project plan by January 1, 2019 to use the quantification protocols revised to align with the carbon levy.

The federal fuel charge under the *Greenhouse Gas Pollution Pricing Act* applies to all fossil fuels used in Alberta effective January 1, 2020, exemptions may apply. For the purposes of using quantification protocols to quantify emission offsets, fuels regulated under TIER are considered equivalent to fuels priced by the federal fuel charge. When quantifying emission offsets that occur after January 1, 2020, emission offset project developers are required to exclude emissions that are from fuels priced by the federal fuel charge. This includes an emission offset project, or emission offset subproject, that is using the engine fuel management portion of the Quantification Protocol for Engine Fuel Management and Vent Gas Capture.

1.15 Conventional Oil and Gas Facilities

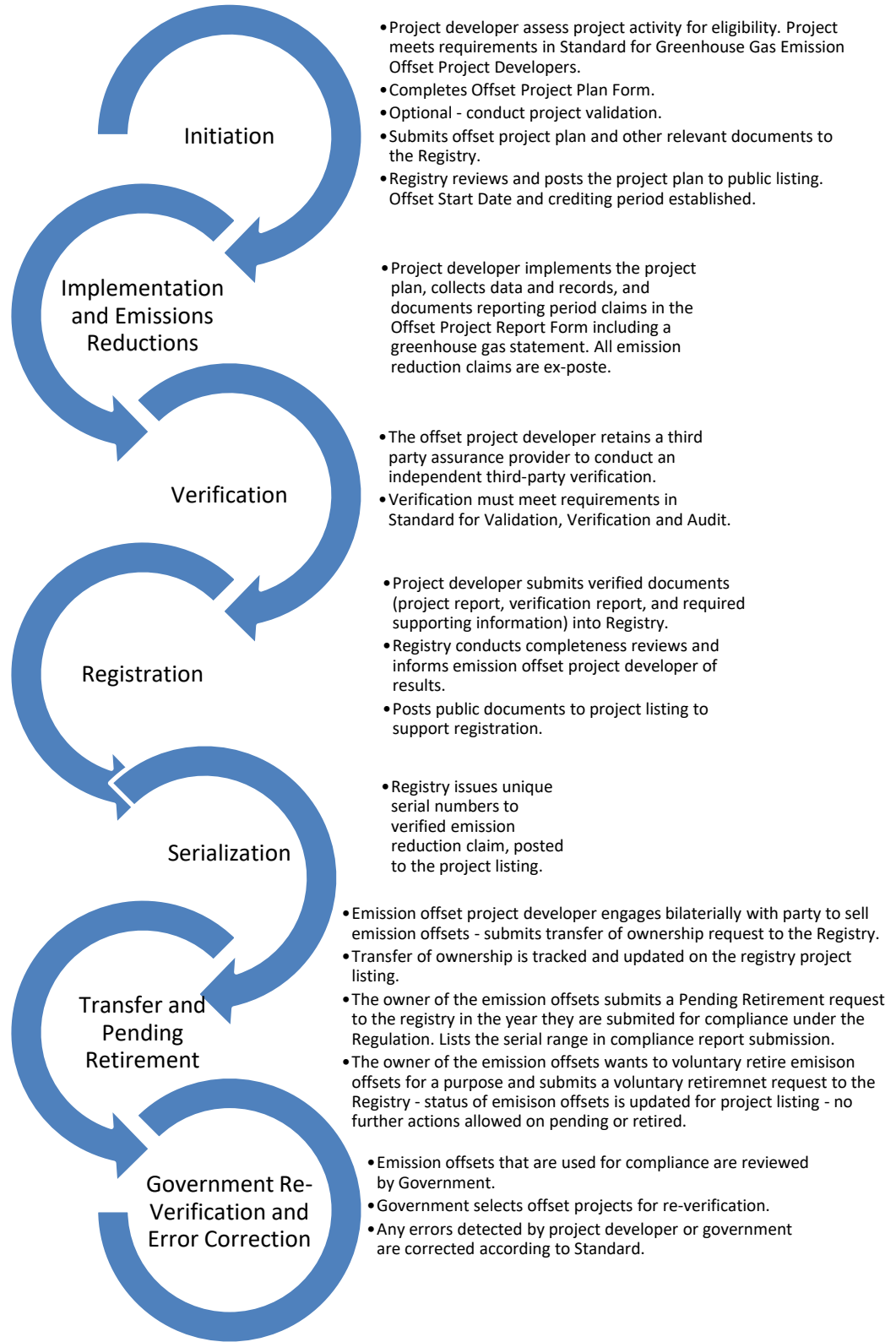
TIER enables conventional oil and gas facilities below the emissions threshold to opt in or be designated as an aggregate facility.. Regulated emissions for aggregate facilities include stationary fuel combustion emissions and flaring emissions. Therefore, whether a conventional oil and gas project is designated as an aggregate or pays the federal fuel charge, stationary fuel combustion emissions and flaring emissions will be directly priced. If a conventional oil and gas facility opts in to TIER all direct emissions, except biomass CO₂ emissions, are priced. The compliance period is from January 1 regardless of when the facility opts in or is designated as an aggregate facility.

As of January 1, 2020, an existing emission offset project, or emission offset subproject, using the engine fuel management portion of the Quantification Protocol for Engine Fuel Management and Vent Gas Capture is at a facility designated as an aggregate facility, the emission offset project or subproject will no longer be eligible to generate emission offsets. The reason that engine fuel management projects or subprojects will no longer be eligible to generate emission offsets if they are designated as an aggregate facility is because stationary fuel combustion emissions are included in the calculation of an aggregate facility's total regulated emissions. An existing emission offset project or subproject that is using the vent gas capture portion of the Quantification Protocol for Engine Fuel Management and Vent Gas Capture is at a facility designated as part of an aggregate facility, the emission offset project or subproject is eligible to continue generating emission offsets because vented gas is not included in the calculation of an aggregate facility's total regulated emissions. Quantification of emission offsets in these cases must exclude sources associated with stationary fuel combustion. Existing emission offset projects or subprojects that use the vent gas capture portion of the Quantification Protocol for Engine Fuel Management and Vent Gas Capture and have some crediting period remaining will receive specific instructions from the Director on quantification methodology.

2.0 Emission Offset Project Lifecycle

The emission offset project lifecycle for participation in the Alberta emission offset system is illustrated in Figure 1 and a more detailed description of each step in the lifecycle is provided. During the development stage the emission offset project developer will assess the proposed project activity to ensure that it will conform to the Regulation, Standards, quantification protocol and the Alberta emission offset system requirements.

FIGURE 1: DESCRIPTION OF PROCESS OF EMISSION OFFSET PROJECT LIFECYCLE



2.1 Initiation

In order to initiate an emission offset project, the emission offset project developer must submit a complete offset project plan and other applicable documents to the Registry, in the form of Appendix A (as updated from time to time). The Registry checks the documents for completeness and, when complete, posts the emission offset project on the Registry. Registry processing times are estimated to be up to 10 business days, however project developers can expect longer processing times during busy periods or if the Registry receives incomplete information. If the Registry receives incomplete information the Registry will communicate the nature of the incomplete information to the offset project developer and request that the project developer provide complete information. If the offset project developer does not respond or does not provide complete information within 30 days of the Registry's request, the offset project developer must submit a new completed project plan and the offset start date will be the date the completed project plan is submitted. It is the project developers responsibility to ensure project initiation is complete by checking the Registry for their project listing. If a project is not listed on the Registry within 10 days of submitting documents or if the project developer has not received any correspondence from the Registry, this means there is a problem and the project developer must follow up with the Registry. Registry processing of project plans does not constitute a validation, and the Registry does not assess whether an emission offset project conforms with regulatory or other standard requirements. Ensuring project documents meet system requirements remains the responsibility of the emission offset project developer. The department or the Registry may request corrections or clarifications at any time.

The offset project plan is developed by the project developer and is a road map for the project. A project plan includes a description of project ownership structure and how the project meets regulation, protocol, standard and system requirements. The project plan is intended to be static for the offset crediting period (excluding extensions); however, there are instances where an emission offset project developer choses to or is required to update their project plan to reflect changes in the emission offset project operations. These instances include, but are not limited to, when:

- There is a change of ownership or right to transact on the emission offset project,
- The project is using a new or revised approved quantification protocol or methodology,
- There is a change in project operating conditions that impacts the eligibility or quantification of sources and sinks.

In these instances the project developer must update the project plan to reflect the change within 30 days of the change occurring.

There are also instances when the director will require a project developer to update the project plan. Examples of when the director will indicate that the project developer is required to update the project plan include, but are not limited to, when:

- an extension is granted,
- a deviation is granted if it affects the overall project operations, or
- the director requires the project developer use a different quantification protocol and/or a diferent version of a quantification protocol.

When the director requires a project developer to update the project plan, the director will indicate the deadline for updating the project plan.

2.2 Implementation and Generation

Generation is a term used to describe emission offset projects undertaking activities to reduce specified gas emissions or sequester carbon dioxide. During this time, the emission offset project developer is collecting data and records and tracking the implementation of the emission offset project.

The offset project report is a document that describes the project operating conditions and the nature of the specified gas emissions reduction or carbon dioxide sequestration, in the form of Appendix B (as updated from time to time). The project report describes the reporting period and how the project was implemented relative to the project plan and any variance from the project plan must be documented in the project report.

The first reporting period begins on or after the offset start date; an emission offset subproject may not generate emission offsets for a subproject that is not listed in the Aggregated Project Planning Sheet(s). Reporting periods may not extend later than the last day of the offset crediting period (and in the case of a project granted an extension, beyond the last day of the extension period). The length of reporting periods is set out in Part 1. Reporting periods of an emission offset project cannot overlap with one another. Aggregated emission offset projects must use common reporting periods for all

subprojects. Each project report must be verified. Once verification is complete, the required project documents may be submitted to the Registry for review. Once complete, the project report will be posted on the Registry.

2.3 Verification

Verification describes the process by which an independent third party assurance provider examines and reviews a project plan and project report (including the greenhouse gas statement) and provides an opinion or conclusion on the accuracy of the statement. The emission offset project developer is responsible for ensuring that the third party assurance provider they retain meets the verification, qualification and independence requirements outlined in the Standard for Validation, Verification and Audit. The emission offset project developer is also responsible for providing the third party assurance provider sufficient information and access, including access to project site(s) and records, to evaluate the emissions reduction or sequestration quantified in the project report. The emission offset project developer is responsible for ensuring that all project information is complete and correct before the verification is finalized. This includes resolving any material verification findings identified. The emission offset project developer then submits the applicable documents to the Registry for registration.

2.4 Registration

Registration is the term used to describe the process the emission offset project developer follows to register an emission offset project report and the emission reductions or sequestrations that occurred during the reporting period of the verified project report submitted. The emission offset project developer begins the registration process by submitting required documents into the Registry.

If an emission offset project developer has contracted or is planning to sell emission offsets to a regulated facility to use the emission offsets in determining the facility's net emissions, the transfer(s) and pending retirement request(s) must be complete prior to the TIER compliance deadline. Emission offset project developers should allow adequate time for the Registry to serialize emission offsets. The Registry cannot guarantee processing and availability of emission offsets by the compliance deadline for project reports submitted to the Registry less than 30 days before the compliance deadline.

Registering a project on the Registry does not constitute approval of that project, the project report, the verification report, or the third party assurance provider. Ensuring project documents meet system requirements remains the responsibility of the emission offset project developer. The director may request further documentation or corrections at any time, if registration information or documentation does not meet system requirements.

Emission offset project developers should be aware that projects are not eligible to serialize emission offsets if they

- received or requested registration as a renewable energy certificate (REC) in respect of the associated emission reduction , or
- received funding from a policy/program that claims ownership or prohibits sale or use of the associated emission reduction or carbon dioxide sequestration.

2.5 Serialization

Serialization is the term used to describe the process the Registry follows when issuing and assigning unique serial numbers to verified emission reductions or carbon dioxide sequestration from an eligible project activity. Once an emission offset project developer completes the registration process, the Registry performs a completeness check and will post documents to the project. The Registry will work with the emission offset project developer to correct incomplete documents. The Registry does not certify, verify, or validate emission offsets. The unique serial numbers are assigned to the emission reduction registration.

Aggregated emission offset projects are not serialized by subproject. The Registry will not allocate tonnes based on percent ownership shares, or subproject ownership.

2.6 Conversion, Transfer and Pending Retirement/Retirement

Conversion is a term used to describe how emission offsets from net geological sequestration may convert to sequestration credits and then potentially used as capture recognition tonnes under TIER. Conversion occurs after serialization and will be tracked by the department or the Registry. The potential uses for sequestration credits and capture recognition tonnes are set in the Standard for Completing Greenhouse Gas Compliance and Forecasting Reports.

Transfer is a term used to describe the transaction of emission offsets from one owner to another. Transfer occurs after serialization and must be tracked by the Registry when a change of emission offset project ownership occurs. The buyer

and the seller negotiate the details of the sale and once an agreement is reached, the emission offset project developer submits a request to transfer to the Registry. Applicable processes for Registry transactions are available online from the Registry User account. A list of the actions required by the Registry for transfers is shown in Table 2.

Once the emission offsets are registered and serialized in the emission offset project developers name and are being used for a facility's net emissions for compliance, the emission offsets are required to be transferred into the owner's legal name, the owner must submit a pending retirement action request into the Registry via their registry user account. This status change is required to ensure appropriate tracking and usage of emission offsets for compliance purposes. An emission offset may be voluntarily retired at any time to the environment or for other purposes. All voluntary retirements must be tracked on the Registry. These are permanent statuses.

2.7 Government Re-verification

The Government of Alberta re-verifies a selection of emission offset project reports annually to ensure that projects meet Alberta emission offset system requirements. The re-verifications also help to assess and inform the overall performance of the Alberta emission offset system and identify opportunities for improvement. If government selects an offset project report to reverify, it does not preclude any further re-verifications in the future for that offset project or the emission offset project developer. The typical steps of the re-verification process are as follows:

- Emission offsets registered and serialized to an emission offset project,
- Emission offsets submitted by regulated facilities for compliance,
- Department conducts desktop reviews,
- Department uses risk based process to select projects for re-verification,
- Department retains third party assurance provider to re-verify an emission offset project,
- Department notifies emission offset project developer,
- Re-verification is conducted by third party assurance provider,
- Department receives and reviews re-verification report,
- Department holds a close out meeting with the project developer with results,
- Department works with project developer on follow up actions, if applicable, and
- Department cancels any invalid emission offsets and notifies compliance in effect of any regulated facility(s) compliance reports.

The government may also re-verify a sample of emission offsets that have not been used for compliance purposes. Each emission offset that is submitted for compliance is reviewed by the government in the desktop review process. The purpose of the desktop review is to ensure completeness and identify potential risks with the project. The desktop review is not a re-verification or an assurance that the emission offset meets all Alberta emission offset system requirements. The information from the desktop review is used in conjunction with a risk-based approach and a random component to select emission offsets for re-verification.

Emission offset projects or emission offset project developers may be the subject of more than one re-verification so that the department can better understand how projects are tracking emission reductions, or carbon dioxide sequestration over time. Once the re-verification selection process is complete, the government will initiate the procurement process to retain third party assurance providers. Project reports selected for re-verification are considered final and cannot be changed over the course of the re-verification. The emission offset project developer will be notified in writing that their project report has been selected for government re-verification.

The government re-verification process uses a similar approach to third-party verification. Third party assurance providers retained by the government must meet the requirements of a third party assurance provider outlined in the Regulation and the Standard for Validation, Verification, and Audit. Third party assurance providers will not be assigned to re-verify an emission offset project where there is actual or perceived conflict of interest. Any conflicts must be reported to the director upon notice of re-verification by the emission offset project developer.

The re-verification will be conducted in accordance with the Standard for Validation, Verification, and Audit. The third party assurance providers will work directly with the emission offset project developer to set up an appropriate re-verification schedule and to request supplemental information needed to complete the re-verification. Criteria for the re-verification are set by the government and the third party assurance provider. The verification plan is submitted to the government and a copy is forwarded to the emission offset project developer prior to the site visit. A site visit is required and emission offset project developers must enable this. Failure to allow access may result in a qualified verification finding, and could result in a compliance investigation. The emission offset project developer can provide additional information during the

re-verification to clarify how the project was implemented, but cannot make changes to the emission offset project or greenhouse gas statement once the re-verification is initiated.

At the conclusion of the re-verification, the government will schedule a close-out meeting with the third party assurance provider to discuss key findings and preliminary results. The third party assurance provider will issue a final verification report that summarizes any errors identified during the re-verification. Once the report is finalized, the government will host a re-verification close out meeting with the emission offset project developer and communicate the re-verification results. At the conclusion of the re-verification, the government will issue written notice to the emission offset project developer outlining the follow up process. The government may require correction of either of immaterial and material findings due to results of a re-verification.

Where an error correction process is applicable, the government will notify the Registry that no further transactions, transfers, registrations or serializations will be allowed on the emission offsets or emission offset project until the error correction process is complete. The scope of the error correction process may be expanded to other project reports or to other emission offset projects that were initiated and implemented by that emission offset project developer. The director will notify the emission offset project developer in writing of the requirements for error correction.

In the event of an error correction process that requires a second re-verification, the verification team will, in most cases, be the same team that identified the initial error. However, an alternate re-verification team may be chosen by the director. For second re-verifications, the emission offset project developer is responsible for all costs of the re-verification of the corrected project report.

Third party assurance providers contracted by the government are bound by Government of Alberta confidentiality requirements for data, and must comply with all appropriate government regulations. Government contracts explicitly reference confidentiality requirements under the *Freedom of Information and Protection of Privacy Act*.

2.8 Error Correction

Any corrective actions between the buyer and seller of emission offsets to address invalid emission offsets are beyond the scope of the government regulatory system.

2.8.1 Error Identified During Verification

If a third party assurance provider identifies immaterial errors, the emission offset project developer is required to correct them on a go forward basis. It is the third party assurance provider's responsibility to ensure that immaterial errors from previous verifications are corrected when conducting a subsequent verification. If the third party assurance provider identifies material errors, the emission offset project developer is required to make corrections to the project report and greenhouse gas statement before the verification can be completed. Once the project developer makes the corrections, the third party assurance provider must confirm the corrections and then may complete the verification and issue a final report.

The project report, including the verified greenhouse gas statement and supporting information such as the aggregated project reporting sheet, cannot be changed once the third party assurance provider has signed the statement of verification. Changes made to documents after the third party assurance provider has issued a statement of verification will not be accepted.

2.8.2 Error Identified by Emission Offset Project Developer

If an emission offset project developer becomes aware of errors that cause a previously issued verification to be incorrect or inaccurate, the emission offset project developer must apply the following error correction process. If the error is an understatement or an immaterial overstatement, the error must be documented in the next project report and be reviewed by the third party assurance provider in the next verification. Corrections cannot be made to register missed tonnes from a previous project report registration.

If the error is a material overstatement, the error must be corrected as outlined in Part 1 section 18(3). Once the error is corrected, the emission offset project developer must remove invalid emission offsets from the Registry to reflect the corrected project report and greenhouse gas statement. The emission offset project developer must notify the department when invalid emission offsets are to be removed from any emission offset project.

2.8.3 Error Identified During Government Re-verification

If a third party assurance provider identifies an understatement or immaterial overstatement during a re-verification, the emission offset project developer must correct the error in all subsequent project reports. The director also has the discretion to require the project developer to correct immaterial overstatements in the report that is the subject of

the re-verification. Corrections cannot be made to register missed tonnes from previous registrations but can be corrected for the next reporting period. Corrections made due to follow up from government re-verification must be documented in subsequent project reports and the scope of the verification of the subsequent report must confirm that corrective actions are complete.

If a third party assurance provider identifies a material overstatement, the error must be corrected in the project and project report that is the scope of the re-verification and will be subject to a second re-verification as described in Part 1. The Director may also require the project developer to correct errors in previous project reports and/or on a go-forward basis.

If new errors are identified during the second re-verification, the director will give the project developer the option to repeat the re-verification or have associated emission offsets cancelled. In the case of a second re-verification the corrective actions will be at the discretion of the director.

2.8.4 Removal and Exported

Removals are permanent and irreversible. A Notice of Removal Form must be completed by the project developer for all requested actions to document the reason(s) for removal. The director must be notified of any removals to an emission offset project report and sign off on the Notice of Removal prior to processing by the Registry.

Emission offsets must be removed from the Registry if an emission offset project developer decides to sell their emission offsets elsewhere (e.g. voluntary market).

If a project developer would like to remove emission offsets, they must notify the director and complete the required Registry action request. Emission offsets status will be changed to removed, and are no longer be available for compliance. No further transactions are permitted on these emission offsets, and any corrective actions between the buyer and seller of emission offsets are beyond the scope of the Alberta emission offset system.

3.0 Registry Process

The Registry interface is a publicly available and transparent website that displays information about an emission offset project including project status, supporting documentation and unique serial numbers including status. Emission offset project status and emission offset statuses as defined by the Registry shown in Table 1 and 3.

Alberta has established a memorandum of understanding with Environment and Climate Change Canada (ECCC) to enable Alberta emission offsets generated from recognized offset protocols to be used as recognized units for compensation under the federal output based pricing system (OBPS) Regulations. The Registry statuses below that reference the federal OBPS reflect statuses of emission offsets that may be, or have been used as recognized units under the federal OBPS. Responsible Persons for a covered facility under the federal OPBS Regulations are responsible for understanding the federal OBPS requirements. The Government of Alberta is not responsible for determining if Alberta emission offsets meet federal OBPS requirements.

TABLE 1: REGISTRY EMISSION OFFSET STATUS TERMINOLOGY

Status	Description
Active	Emission offsets that have been assigned unique serial number(s) and are posted to the emission offset project on the Registry. These emission offsets will be in the current owners name and may be available for purchase or use as a compliance instrument.
Pending Retirement	Emission offsets that have been submitted by a regulated facility in determining the net emissions for a regulated facility. These emission offsets are no longer available for purchase or use.
Pending Retire – Federal OBPS	Emission offsets that are intended to be used as recognized units for compensation under the federal OBPS. This emission offsets are locked but status can be changed back to Active upon request.
Retired (Voluntary Retire)	Emission offsets that have been used by an owner to offset emissions (i.e., voluntarily). This status is irreversible and these emission offsets are no longer available
Retired for Compliance	Emission offsets that have been remitted under TIER as a compliance instrument. This status is irreversible and these emission offsets are no longer available.

Retired – Federal OBPS	Emission offsets that have been remitted as recognized units to ECCC and determined to be eligible for compensations under the federal OBPS. This status is irreversible and these emission offsets are no longer available.
Removed	Emission offsets that have been withdrawn from the project in the Registry by the project developer due to errors identified by the project developer in an emission offset project registration. This status is irreversible and these emission offsets are no longer available.
Cancelled	Emission offsets that have been cancelled in accordance with section 22(2) of TIER. This status is irreversible and these emission offsets are no longer available.

The emission offset project developer is required to submit specific documentation to the Registry at various stages in the emission offset project process. The specific documents required by the Registry for project initiation, serialization, and status changes such as transfer/pending retirement/retirement are included in Table 2, but not limited to these exclusively.

Emission offset project developers should be aware that all Registry submissions and requests are subject to a minimum 10 business day processing time. The Registry may require additional time if they identify issues during completeness reviews. Partial or incomplete submissions will be rejected and will delay Registry processing times.

Applicable Registry processing fees are listed in the Registry. Late payment for transactions may result in transactions or emission offsets given a temporary status of hold until payment is received.

TABLE 2: ACTIONS AND DOCUMENTS REQUIRED FOR THE REGISTRY FOR TRANSACTIONS

Action	Documents Required by Registry
Project Initiation	Enter applicable Project Initiation information for Registry processing within user account, upload documents and submit the Action Request to the Registry (previously referred to as Schedule D) – note the Registry is not responsible for users submitting incomplete requests. Offset Project Plan Validation Report (optional) Aggregated Project Planning Sheet (if applicable) Project boundary file – geospatial emission offset project boundary file. See ‘Guidance for Creating Boundary Files’.
Registration	Enter applicable Project Registration information for registry processing within user account, upload documents and submit the Action Request to the Registry (previously referred to as Schedule D) – note the Registry is not responsible for users submitting incomplete requests. Project Report including the verified greenhouse gas statement Third-Party Verification Report Statutory Declaration Aggregated Project Reporting Sheet (project specific upon request to registry, if applicable)
Pending Retirement	Enter applicable information for registry processing within user account, submit the Action Request to the Registry (previously referred to as Schedule D) – note the Registry is not responsible for users submitting incomplete requests. Select project(s) and enter the amount of emissions for pending retirement. If there are multiple vintages with credits, enter the quantity to retire from each of them separately. Follow Registry instructions to have designated signing authority sign off legal ownership of emission offsets which includes electronic notification and signatures.
Transfer of Ownership Requests	Enter applicable Transfer of Ownership information for registry processing within user account, submit applicable Action request to the Registry (previously referred to as Schedule D) – note the transfer of ownership must be completed via registry user accounts (both parties require an account in order to hold emission offsets).

The project developer may designate an 'Authorized Project Contact' to their emission offset project by completing applicable Registry actions. If a project developer has designated an authorized project contact, the department may contact the authorized project contact for administrative questions or to arrange a government re-verification. However, the responsibility for the project remains that of the emission offset project developer.

4.0 Records

Records are critical in demonstrating the validity of emission offsets and in enabling verification and re-verification of an emission offset. The verification process relies heavily on the quality and availability of records. Attestation is not considered objective evidence and will not be accepted as a 'record'. The types of records required to demonstrate that an emission offset project meets regulatory and quantification protocol requirements will vary and should be clearly outlined in the project plan.

Records are required to be:

- Legible, identifiable, traceable;
- Accessible;
- Dated;
- Easily located (easily searched);
- Orderly;
- Retained in accordance with the Regulation; and
- Prevented from loss.

Project developers (including aggregators) are required to retain copies of all required records and any additional records needed to support emission offset projects or all subprojects in an aggregated emission offset project. The project developer must establish and apply quality management procedures to manage data and information. Written procedures must be established for each measurement task outlining responsibility, timing and record location requirements. The greater the rigour of the management system for the data, the more easily a verification or re-verification will be conducted.

Records are required to prove that emission reductions and sequestration were generated as planned. Records include but are not limited to project plans, project reports, greenhouse gas statements, invoices, contracts, metered results, maintenance logs, calculations, data, databases, photographs, calibration records etc. Project specific records requirements are identified in the quantification protocols and must be documented in the project plan. In the case of an aggregated emission offset project, individual project proponents will retain sufficient records to demonstrate that the Alberta emission offset system requirements are met. Records must be available and be disclosed to a third party assurance provider, government, or government third party assurance provider upon request.

4.1 Data Management

Data management can be manual, automated or a combination of the two, and may range from internally developed tracking sheets to third party software. Systems that rely more heavily on manual data transfers and Excel spreadsheets are inherently less robust than more automated systems. Automated systems, if correctly set up, tend to be less prone to error than manual systems, and therefore provide a higher level of accuracy and security around data handling. Project developers must develop and make available data flow charts for their specific system including sample calculations for all calculations used in the project. Third party assurance providers will assess all equations used in automated systems to ensure the data management systems are correctly calculating project information.

Data controls are procedures conducted to ensure that the data is complete, accurate, valid, and not subject to corruption. Data controls are integral to the data management system and should serve to meet the following objectives:

- Completeness – ensuring the data is complete according to the project plan and quantification protocol;
- Accuracy – ensuring the data has been calculated appropriately and the measurements reflect the correct values;
- Validity – making sure no erroneous information is introduced into the data;
- Restricted access – addresses the security of the data management system.

Controls exist throughout the data management system, but are most essential whenever there is a transfer or exchange of data or information. Examples of data controls include passwords on computers, read access requirements on files, reasonability limits on data inputs, record length checks on file transfers, approvals and testing procedures for algorithm changes, distribution lists for reports, and management review of reports.

In all cases, developing and implementing good quality assurance/quality control (QA/QC) checks can reduce the likelihood of errors and improve confidence in the overall reporting. Security access also improves the overall robustness of the system and general comfort with the data.

APPENDIX A: Project Plan Form

APPENDIX B: Project Report Form
