



Request for Applications 2016

Clean Infrastructure Royalty Credit Program

Ministry of Natural Gas Development

Request for Applications (RFA) Number: Installment #01- 2016-01v2

Issue date: **August 19, 2016**

Closing Time: Applications must be received before 2:00 PM Pacific Time on: **October 7, 2016**

Government Contact Person:

All enquiries related to this RFA are to be directed, in writing, to the following person. Information obtained from any other source is not official and should not be relied upon. Enquiries and any responses will be recorded and may be distributed to all Applicants at the Province's option:

Lana Smith, Senior Project Manager, Policy and Royalty Branch,
Upstream Development Division, Ministry of Natural Gas Development
e-mail: MNGDInfrastructure@gov.bc.ca

DELIVERY OF APPLICATIONS:

What to Submit: One (1) complete paper copy plus one (1) electronic copy on a flash drive.

How to Submit: Applications **WILL ONLY** be accepted by courier or by hand delivery.

Closing Location: Applications **MUST BE** submitted by the Closing Time to:

Ministry of Natural Gas Development
Attention: Lana Smith, Senior Project Manager
Policy and Royalty Branch, Upstream Development Division
Courier or Hand Delivery Address: 5th Floor – 1810 Blanshard Street, Victoria, BC V8T 4J1

Applicant Section - RFA Cover Page – complete and attach this page to all applications

A person authorized to sign on behalf of the Applicant **must** complete and sign the Application Section (below), leaving the rest of this page otherwise unaltered, and include the originally signed and completed page with the paper copy of the application.

The enclosed application is submitted in response to the above referenced RFA, including any addenda. Through submission of this application the applicant(s) agree to all of the terms and conditions of the RFA and agree that any provisions in this application that are inconsistent with the terms and conditions of the RFA will not be considered or agreed to by the Administrator and will be of no force or effect. The applicant(s) has (have) carefully read and examined this entire RFA (including sample agreements, templates and all attachments), and has (have) conducted such other investigations as were prudent and reasonable in preparing this application. The applicant(s) agree to be bound by statements and representations made in this application.

<i>Signature of Applicant Contact:</i>	<i>Legal Name of Applicant(s), (and Doing Business As Name if applicable):</i>
<i>Printed Name of Applicant Contact:</i>	<i>Address of Applicant Contact:</i>
<i>Title:</i>	
<i>Date:</i>	
<i>Designated Contact phone and email address:</i>	

Version Control

RFA Number:	Date	Comment
Installment #01-2016-01	August 17, 2016	Original
Installment #01-2016-01v2	September 1, 2016	Correction: addition of the word ' <i>not</i> ' to section H2d. <i>Project construction does not start before the Closing Time.</i>

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A. Definitions and Administrative Requirements

1. Definitions

Throughout this RFA, the following definitions apply:

- a) "Administrator" means "administrator" as defined in the Regulation;
- b) "Agreement" means a written agreement resulting from this RFA executed by the Province and Successful Applicant;
- c) "Applicant(s)" means a Producer(s) or Pipeline Company(ies) applying jointly with a Producer(s), that submits an application or applications in response to this RFA;
- d) "Closing Time" means the closing time indicated on page one of this RFA;
- e) "Ministry" means the Ministry of Natural Gas Development;
- f) "must", or "mandatory" means a requirement that must be met in order for an application to receive consideration;
- g) "Pipeline Company" means "pipeline company" as defined in the Regulation;
- h) "Producer" means "producer" as defined in the Regulation;
- i) "Program" means the Clean Infrastructure Royalty Credit Program;
- j) "Province" means Her Majesty the Queen in Right of the Province of British Columbia as represented by the Administrator;
- k) "Regulation" means the Petroleum and Natural Gas Royalty and Freehold Tax Regulation, B.C. Reg. 495/92 and any amendments thereto; and
- l) "Successful Applicant" means a Producer(s) or a Pipeline Company(ies) applying jointly with a Producer(s) with whom the Administrator, or her delegate(s), intends to enter into negotiations for an Agreement.

See Section D: Key Program Terms and Conditions for additional information.

2. Term and Conditions

The following terms and conditions will apply to this RFA. Submission of an application in response to this RFA indicates acceptance of all the terms that follow and that are included in any addenda issued by the Province. Provisions in applications submitted by an Applicant that contradict any of the terms of this RFA will not be considered or agreed to by the Administrator and will be of no force and effect.

3. Eligibility

Applications will only be accepted from Producer(s) or Pipeline Company(s) applying jointly with Producer(s).

4. Changes to Applications

By submission of a clear and detailed written notice to the Government Contact Person indicated on page one, an Applicant may amend or withdraw its application prior to the Closing Time. Applicants may not change the wording of their applications after the Closing Time and no words or comments will be added to the application unless such revisions were requested by the Province for purposes of clarification.

5. Late Applications

Applications submitted to the Ministry after the Closing Time will not be accepted and will be returned to the Applicant un-read.

6. Ownership of Applications

All applications submitted to the Program will be under the custody and control of the Province, become the property of the Province once submitted, and are subject to the provisions of the *Freedom of Information and Protection of Privacy Act*. The application(s) will be used to assess project(s) that may be eligible under the Program. For more information regarding this Program, refer to the Government Contact Person indicated on page one.

7. Acceptance of Applications

- a) This RFA should not be construed as an agreement to purchase goods, services or construction. The Province is not bound to enter into an Agreement with any Applicant. Applications will be assessed in light of the stated review criteria. Other than receipt of applications submitted prior to the Closing Time, the Province will be under no obligation to receive further information or materials, whether written or oral, from any Applicant or any other person with respect to the Program.
- b) Neither acceptance of an application nor execution of an Agreement will constitute approval of any activity or development contemplated in any application that requires any approval, permit or license pursuant to any federal, provincial, regional district or municipal statute, regulation or by-law.

8. Evaluation of Applications

Evaluation of applications will be by a committee formed by the Province and may include employees and contractors of the Province. Applications will be checked against the mandatory criteria. Applications not meeting all the mandatory criteria will be rejected without further consideration. Applications that do meet the mandatory criteria will then be further evaluated based on established criteria and ranked.

9. Results Notification to Applicants

At the conclusion of the RFA process, all Successful Applicants will be notified in writing. This notification will not constitute an Agreement.

10. Negotiation Delay

If an Agreement with a Successful Applicant has not been fully negotiated to the satisfaction of the Administrator within 30 days of an Applicant receiving notification that it is a Successful Applicant, the Province may, at its sole discretion at any time thereafter, terminate negotiations with that Successful Applicant.

11. Applicants' Expenses

Applicants are solely responsible for their own expenses in preparing an application and for subsequent negotiations with the Province, if any. If the Province elects to reject all applications, the Province will not be liable to any Applicant for any claims, whether for costs or damages incurred by the Applicant in preparing the application, loss of anticipated profit in connection with any final Agreement, or any other matter whatsoever.

12. Limitation of Damages

Further to the preceding paragraph, the Applicant, by submitting an application, agrees that it will not claim from the Province damages or any other compensation, for whatever reason, relating to an Agreement, if any, or in respect of the RFA process, in excess of an amount equivalent to the reasonable costs incurred by the Applicant in preparing its application and the Applicant, by submitting an application, waives any claim for loss of profits if no Agreement is entered into with the Applicant.

13. Currency and Taxes

Costs described in an application are to be submitted:

- a) in Canadian dollars; and
- b) inclusive of duty, where applicable; FOB destination, delivery charges included where applicable.

14. Completeness of Applications

By submission of an application the Applicant warrants that all labour, materials and components necessary to design and construct the project described in such application have been identified therein or will be provided under an Agreement at no additional cost to the Province.

15. Partner Application

- a) If a combination of Producer(s) and Pipeline Company(ies) will be involved in a given project, all such persons must submit a joint application in respect of a project and each such party must be clearly identified in the application.
- b) The Province may refuse to consider an application involving multiple parties where the Province determines, in its sole discretion, that current or past corporate or other interests pertaining to one or more of such parties may give rise to a conflict of interest in connection with the project proposed in an application, or the Program described in this RFA. If an Applicant is in doubt as to whether its proposed application gives rise to a conflict of interest, the Applicant should consult with the Government Contact Person listed on the RFA cover page prior to submitting an application.

16. Agreement

Any Agreement will be substantially similar to the terms and conditions of the sample agreements set out on the RFA webpage, which also includes requirements as outlined in Section J of this document.

The Administrator will only sign a single Agreement concerning a given project. All Producers and Pipeline Companies involved with the project shall be parties to such Agreement. Once an Agreement has been fully signed, no additional parties will be allowed to be added, nor other changes made, without written consent of all parties thereto.

17. Liability of Errors

While the Province has used considerable efforts to ensure information in this RFA is accurate, the information contained in this RFA is supplied solely as a guideline for Applicants. The information is not guaranteed or warranted to be accurate by the Province, nor is it necessarily comprehensive or exhaustive. Nothing in this RFA is intended to relieve Applicants from forming their own opinions and conclusions with respect to the matters addressed in this RFA.

18. Modification of RFA

The Province reserves the right to modify this RFA at any time at its sole discretion. This includes the right to cancel this RFA at any time prior to entering into any Agreement.

19. Use of RFA

Any portion of this document, or any information supplied by the Province in relation to this RFA may not be used or disclosed, for any purpose other than for the submission of applications.

20. No Lobbying

Applicants must not attempt to communicate directly or indirectly

with any employee, contractor or representative of the Province, including the evaluation committee and any elected officials of the Province, or with members of the public or the media, about the application described in this RFA or otherwise in respect of the RFA, other than as expressly directed and permitted by the Province.

B. Clean Infrastructure Royalty Credit Program – Summary

The Policy and Royalty Branch of the Upstream Development Division of the Ministry invites Producers and Pipeline Companies to submit applications for the Clean Infrastructure Royalty Credit Program. The purpose of the Program is to advance clean technologies and solutions for reducing the environmental impact of oil and gas upstream development. The Province has allocated up to \$20 million for the Program in 2016 which may be available to Applicants in respect of Eligible Projects. The focus of the Program in 2016 is to achieve cost-effective greenhouse gas (GHG) emissions reductions through the retrofit, replacement or conversion of venting source equipment.

The new Program supports actions in the **BC Natural Gas Strategy** to continue to implement emission reduction measures while allowing the natural gas sector to maintain its competitive position. The Program also complements new requirements for methane emission reductions under the 2016 Climate Leadership Plan by providing an incentive for early actions. This is accomplished by providing Producers with a royalty deduction in respect of certain Eligible Costs relating to completing the Eligible Project, if and as approved by the Administrator. Applicants will be required to fund the entire cost of an approved Eligible Project and may receive up to 50 percent of (i) the estimated completion costs for a “step” of the project, or (ii) the amount actually spent to complete such “step” of the project, whichever amount is less. Special consideration will be given to applications based on the expected timeline for GHG emissions reductions, favouring projects that achieve reductions earlier rather than later. The Program is governed by section 4 of the *Petroleum and Natural Gas Royalty and Freehold Production Tax Regulation*.

Applications will be evaluated and ranked based on the criteria contained in this Request for Applications (RFA). This RFA invites Producers and Pipeline Companies to submit applications to compete for the Clean Infrastructure Royalty Credit allocation before the Closing Time as indicated on page one.

Highlights of the 2016 Program:

- \$20 million in royalty credits will be available for 2016-2017.
- Eligible Projects for 2016 include GHG emissions reduction projects focusing on reductions from vented sources (upgrades and retrofits only), e.g., high-bleed to low-bleed pneumatic conversions, instrument gas to instrument air conversions, pump conversions, and vent gas capture projects.
- Producers or partnerships (between a combination of Producer(s) and Pipeline Company(ies)) are eligible to apply.
- To the extent that credits are assigned, assignment will be done through a competitive RFA process.
- Applications will be evaluated based on the royalty credit emission reduction ratio (i.e., the amount of credits requested per the estimated amount of GHG emissions reduced), the construction timeline, and a project business case (including a description of any barriers to the project, industry payback period, the use of new/innovative technology, and potential project risks).

- An Applicant must provide a completed RFA Template including, among other things: a detailed description of the project, a cost breakdown for the project, an estimate of GHG emissions reduced using a quantification methodology approved by the Province, construction timelines, the amount of royalty credit requested, a business case and a draft verification plan; plus other supporting documentation as outlined in Section E – Application to the Program.
- Third party verification of GHG emissions reductions is required and will be considered an Eligible Cost if verification complies with the Agreement. Verification will typically require the use of one year of data, and should be completed on or before the earlier of the fifth anniversary of entering into the Agreement or January 31, 2022, whichever occurs first.
- All costs of the project must be paid by the Applicant up front. The Applicant may request half of the available royalty credit associated with completing construction within 6 months of construction completion. The second half of the royalty credit associated with completing construction, and the royalty credit associated with completing verification, may be requested within 6 months of completing Post-Project Verification.
- Please refer to this RFA, the RFA Template and the Clean Infrastructure Royalty Credit Program Guidance Document for examples and further information.

IMPORTANT NOTICE: Nothing in this section or document or its attachments authorizes or should be construed as the authorization to conduct oil and gas activities as defined under OGAA or any other activities that may require permits or other authorizations under applicable law.

C. Key Program Terms and Conditions

The following provides a summary of certain key provisions of the Program and the Agreement. Please review the sample Agreements in order to confirm how the Program will apply to Successful Applicants. In the event of any discrepancy between this document and an Agreement entered into by a Successful Applicant and the Province, the terms of such Agreement shall prevail.

1. Eligible Project

An “Eligible Project” is one undertaken by a Producer(s) or combination of Producer(s) and Pipeline Company(ies) that reduces GHG emissions from vented sources¹ by the retrofit, replacement, or conversion of equipment currently in operation in British Columbia.

Example project types include:

- 1) High-bleed to low-bleed conversions;
- 2) Instrument gas to instrument air conversions;
- 3) Pump conversions; and,
- 4) Vent gas capture projects.

References to relevant quantification methodologies for these project types and quantification examples are included as Appendix A. Other project types appropriate for the 2016 Program focus may be considered if the quantification methodologies have been approved by the Province.

2. Project Construction

To be eligible for royalty deductions under the Program, Project Construction for an Eligible Project may not start before the Closing Time.

3. Post-Project Verification

The “Post-Project Verification” process for projects in the Program will involve the following:

- 1) The Applicant submitting and obtaining approval by the Administrator of a verification plan.
- 2) The Applicant completing a GHG emissions reduction report that details the actual GHG emissions reductions from the project; and,
- 3) The review of the GHG emissions reduction report, and the submission of a verification statement, by a qualified, third party verification body.²

¹ Vented sources refer to sources of “venting emissions” as defined in BC’s Greenhouse Gas Emission Reporting Regulation.

² The requirements for a “verification body” are defined in section 26(1) of BC’s Greenhouse Gas Emission Reporting Regulation.

Further information related to the Post-Project Verification process is included in Appendix B.

4. Project Completion

A project must be complete on or before the earlier of (i) the 5th anniversary of the Agreement; and (ii) January 31, 2022 in order for Eligible Costs (as defined below) associated with the project to be eligible for royalty deductions under the Program. This five year project timeframe includes the completion of both Project Construction and Post-Project Verification.

To be eligible for a royalty deduction under the Program, an Applicant must complete Project Construction on or before the earlier of (i) the third anniversary of the Agreement, and (ii) January 31, 2020.

To be eligible for a royalty deduction under the Program, an Applicant must complete Post-Project Verification on or before the earlier of (i) the fifth anniversary of the Agreement, and (ii) January 31, 2022.

5. Eligible Costs

- a) “Eligible Costs” are those costs incurred by the Applicant(s) in the retrofit, replacement, or conversion of equipment currently in operation in British Columbia for the purpose of reducing GHG emissions from vented sources, as more particularly outlined in the Agreement.
- b) Subject to 5(c) below, Eligible Costs are costs incurred by Applicant(s) between the Closing Time and the Project Completion Date that are set out in Schedule A of the Agreement, and which are based on Section 2.2 (Summary of Project Work and Step(s) Table) in the RFA Template.
- c) Costs incurred by the Applicant(s) for the project prior to the Closing Time or after the Project Completion Date specified in Schedule A to an Agreement would only be considered Eligible Costs if such costs fall within the definition of “Eligible Costs” in the Agreement and have been detailed by the Applicant in **Schedule D – Special Equipment, Inventory or Services** of the Agreement.
- d) For GHG emissions reduction projects, examples of Eligible Costs include: planning costs, design costs, costs associated with obtaining licenses and approvals or engineering expenditures, construction costs, equipment costs, installation costs, and costs related to the verification of GHG emissions reductions.

6. Ineligible Costs

The following are costs that will not constitute Eligible Costs and will not be eligible for royalty deductions under the Program:

- a) contingency allowances, administration costs, overhead, accounting, interest

and the purchase of, and amortization and depreciation on, capital equipment that is not integral to the operation of the project;

- b) routine maintenance costs;
- c) costs associated with maintaining compliance with regulations, including the Greenhouse Gas Emission Reporting Regulation; and
- d) goods and services tax (GST).

D. Application to the Program – Which forms and what format?

IMPORTANT:

The RFA Application must be completed, signed and submitted in the sequence and formats set out in the table below to ensure full consideration is given during the Province’s evaluation process.

Where indicated, templates of the documents listed below are available for download on the Program website. Further information and guidance on completing the RFA is available in the Clean Infrastructure Royalty Credit Program Guidance Document.

Be sure to use the templates provided on the Clean Infrastructure Royalty Credit Program website. DO NOT use other templates such as those from the Infrastructure Royalty Credit Program.

Doc #	Document Title	Description and Required Electronic Format (paper copy also required)
1.	Checklist for Submitting RFA Documents	This is a checklist to assist in ensuring that the RFA Application package is complete. Template on website. REQUIRED FORMAT: No electronic copy required
2.	RFA Cover Page	This is the first page of the RFA submission. All instructions on the RFA Cover Page must be followed and the page signed by the Applicant. Template on website. REQUIRED FORMAT: pdf or Microsoft WORD
3.	Cover Letter about the Project	Submit a short (two pages maximum) cover letter summarizing the key features of the proposed project. The letter also needs to include a short corporate overview of the Applicant(s). REQUIRED FORMAT: pdf on Company letterhead
4.	Supporting Letter(s) (if a partner application)	a) One letter signed by each partner (or individual letters from each) that agrees to the joint project application; b) Each letter must have the exact percentage of the royalty credit allocation between the partners, and all contact information. REQUIRED FORMAT: pdf on Company letterhead
5.	Proposed Construction Schedule	Submit a Proposed Construction Schedule. Template on website. REQUIRED FORMAT: Microsoft EXCEL
6.	Clean Infrastructure RFA Template 2016	Submit a completed Clean Infrastructure RFA Template 2016. This is the primary document used for evaluation and ranking of the proposed project application by the Province.

Doc #	Document Title	Description and Required Electronic Format (paper copy also required)
		<p>Template on website.</p> <p>REQUIRED FORMAT: Microsoft WORD</p>
6a.	Draft Verification Plan	<p>Submit a Draft Verification Plan as required in Section 2.2 of the <i>Clean Infrastructure RFA Template 2016</i>.</p> <p>REQUIRED FORMAT: Microsoft WORD</p>
6b.	Project and Equipment Cost Estimate Breakdown Tables	<p>Submit the Project and Equipment Cost Estimate Breakdown Tables.</p> <p>Template on website.</p> <p>REQUIRED FORMAT: Microsoft EXCEL</p>
6c.	Estimated GHG Reductions Calculation	<p>Submit an Estimated GHG Reductions Calculation.</p> <p>Template on website.</p> <p>REQUIRED FORMAT: Microsoft EXCEL</p>
6d.	Estimated Industry Payback Calculation	<p>Submit an Estimated Industry Payback Calculation.</p> <p>Template on website.</p> <p>REQUIRED FORMAT: Microsoft EXCEL</p>
7.	Mapping Requirements	<p>The requirements are:</p> <ol style="list-style-type: none"> SITUATION MAP: SUBMIT AN 8.5 x 11 map showing the location of the project in relation to existing infrastructure/equipment and communities in the area. The proposed project including existing infrastructure to be upgraded and new infrastructure/equipment to be installed/retrofit should be clearly identified on the map. <p>REQUIRED FORMAT FOR 8.5 x 11 Situation Map: In paper copy and also as a digital file in Adobe.pdf format.</p> <ol style="list-style-type: none"> ESRI SHAPEFILE: An ESRI shapefile of the proposed project must also be provided. Shapefiles will be accepted in either the UTM Zone 10 NAD83 or BC Environment Albers NAD83 projections. Information on type of projection must be included with the submission. <p>REQUIRED FORMAT FOR ESRI SHAPEFILE: An ESRI shapefile can be up to as many as seven different files. The most important files are:</p> <ol style="list-style-type: none"> Main file with extension (shp), Index file (shx), dBase table (dbf), Projection file (prj). <p>Polygon shapes are not accepted. A qualified GIS Technician must prepare this mapping information.</p>

Doc #	Document Title	Description and Required Electronic Format (paper copy also required)
		<p>EXAMPLE OF ESRI SHAPEFILE: See the background ESRI shapefile format from the Environmental Systems Research Institute website link below for completing the mapping shapefile as required:</p> <p>Note: Data submitted to the Ministry in support of the mapping information of this RFA Application is not required to meet the Oil and Gas Commission ePASS submission requirements.</p> <p>Also refer to: ESRI Source information: www.esri.com/library/whitepapers/pdfs/shapefile.pdf (Technical Description of Shapefile – ESRI Whitepaper July 1998)</p>

E. General Submission Information

- a) Do not submit the application documents in a binder;
- b) all documents must be fully completed and signed, as appropriate; and
- c) one paper copy of all documents and one electronic copy of all documents on a flash drive must be submitted together.

F. Application Timing

Anticipated Date	Event
August 19, 2016	RFA issued.
October 7, 2016 - 2:00 PM Pacific Time	RFA closes.

G. Evaluation

This section provides details on the evaluation process including mandatory criteria and evaluation criteria. Applicants should ensure that they respond to all criteria in order to be eligible to receive full consideration during the evaluation process.

1. Evaluation Process

The Province will evaluate applications as follows:

1. Applications will be checked for compliance with Mandatory Criteria (section H.2). Applications that do not meet the mandatory criteria will not receive further consideration.
2. The Ministry will check each Applicant’s record of royalty payments through the Ministry of Finance. The Province will reject applications from Applicants that have, in the Province’s sole opinion, an unsatisfactory record of making royalty payments to the Province.
3. Applicants that meet the Mandatory Criteria will be evaluated against the Evaluation Criteria (Section H.3).

4. Applicants will be ranked and selected according to highest score.

2. Mandatory Criteria

Applications that do not meet the following mandatory criteria will be excluded from further consideration and not proceed to the next stage of the evaluation process.

Mandatory Criteria	
a)	Applications must be received by the Ministry at the Closing Location by the specified Closing Time (see page one and Section G).
b)	Applications must be in English and must NOT be sent by facsimile, e-mail or regular Canada Post mail.
c)	Applications are to be submitted as follows to the Closing Location by courier or hand delivery (see page one): <ol style="list-style-type: none"> 1. An unaltered, completed and <u>signed</u> RFA cover page including Applicant Section must be submitted with the application; 2. One (1) complete paper copy of all documents as outlined in Section E; and 3. One (1) complete electronic copy submitted on a flash drive as outlined in Section E.
d)	Project construction does not start before the Closing Time.

3. Evaluation Criteria

The Province will use the following criteria to evaluate applications:

Evaluation Criteria	Weighting (%)
a) Royalty Credit Emission Reduction Ratio (\$/tonne CO ₂ e) The Royalty Credit Emission Reduction Ratio is calculated by taking the clean infrastructure royalty credit requested and dividing by the GHG emissions reduction estimate (based on a 5 year period between 01/01/2017 and 12/31/2021). $= \frac{\text{Clean infrastructure royalty credit requested}}{\text{Estimated GHG emissions reduction (5 years)}}$	80 %
b) Schedule (construction completion timeline)	10 %
c) Business Case	10 %
TOTAL:	100 %

Royalty Credit Emission Reduction Ratio (RCERR): The RCERR shall be calculated by taking the clean infrastructure royalty credit requested in the application and dividing by the GHG emissions reduction estimate, based on a 5 year period between 01/01/2017 and 12/31/2021. The GHG emissions reduction estimate must be calculated by the Applicant using the relevant approved quantification methodology as outlined in Appendix A. A higher point score will be assigned to projects that demonstrate a lower RCERR.

Schedule: The schedule will be evaluated based on the Construction (Step 1) Start Date and the Construction Completion Date, with a higher point score assigned to projects that achieve GHG emissions reductions earlier. Note: construction must be completed on or before the earlier of (i) the third anniversary of the Agreement; and (ii) January 31, 2020 in order for project costs to be eligible for royalty deductions.

Business Case: The Business Case will be evaluated based on identified barriers, estimated industry payback period (in months), if the project uses new or innovative technology, and potential project risks. Projects with a longer industry payback period will be scored more favourably than projects with shorter industry payback periods (assuming all other aspects of the Business Case are equal among projects being compared).

Please see the Clean Infrastructure Royalty Credit Program Guidance Document for more information on these criteria, including example calculations.

Note: The Province reserves the right to approve royalty deductions in respect of one, more than one, or no applications.

H. Agreement Process

On approval of a project under the Program, the Producer(s) or Pipeline Company(ies) jointly applying with a Producer(s), will be required to enter into an Agreement with the Province and provide the information required in the Agreement and the Program Requirements for Approved Project(s), as outlined in Section J.

It is recommended that all Applicants review the sample Agreements that can be accessed on the Program's website.

I. Program Requirements for Approved Project(s)

The Agreement sets out the requirements for royalty deductions to be allowed in respect of a project. It is strongly recommended that the Applicant(s) carefully read and review the sample Agreements to ensure greatest success. The sample Agreements are available for download on the Program's website. The following are some of the key points in the Agreement that will apply to all Successful Applicants that enter into an Agreement with the Province:

- a) An Agreement will be entered into between the Successful Applicant(s) and the Administrator that represents the Province.
- b) Construction of the project must be completed on or before the earlier of (i) the third anniversary of the Agreement, and (ii) January 31, 2020, in order to be eligible for royalty deductions in respect of Eligible Costs related to project construction (Step 1).
- c) Post-Project Verification of the GHG emissions reductions from the project must be completed on or before the earlier of (i) the fifth anniversary of the Agreement, and (ii) January 31, 2022, in order to be eligible for royalty deductions in respect of Eligible Costs related to Post-Project Verification (Step 2).

- d) Half of the available Royalty Deductions associated with completing construction (Step 1) may be requested at construction completion. The second half of Royalty Deductions associated with construction (Step 1), and 100% of the Royalty Deductions associated with Post-Project Verification (Step 2), may be requested at completion of Post-Project Verification, as more particularity outlined in the Agreement.
- e) The Successful Applicant(s) must notify the Administrator in a timely manner if the project has been cancelled.
- f) The project must be completed as outlined in Schedules A and C to the Agreement and any amendments thereto. If the project is not completed as outlined in the Agreement or any amendment thereto, the Applicant may not be eligible for any royalty deduction in respect of the project.
- g) The Producer(s) that are party to an Agreement are responsible for submitting a request for royalty deductions within six months of the date that project construction (Step 1) is complete, as more particularly outlined in the Agreement.
- h) The Producer(s) that are party to an Agreement are responsible for submitting a request for the remainder of royalty deductions within six months of completing Post-Project Verification (Step 2), as more particularly outlined in the Agreement.

The Province may undertake an audit review of project-related information including Eligible Costs incurred by the Producer(s) or Pipeline Company(ies) that are party to an Agreement (in respect of a completed step of the project, or the completed project in its entirety) and claimed by the Producer(s) in accordance with the Agreement. The Producer(s) and Pipeline Company(ies), if applicable, that are party to an Agreement must comply with such audit requests if and when requested.

Note: The Province recommends that Applicants review the Ministry Royalty Deduction Submission webpage which provides information on the royalty deduction process.

J. Clean Infrastructure RFA - Sample Agreements

The Province recommends that Applicants review the appropriate sample Agreement to ensure that all Applicants understand the requirements of the Program. The following sample Agreements are available for download on the Program's website:

Producer Agreement

Producer and Pipeline Company Agreement

K. Clean Infrastructure Royalty Credit Program Guidance Document

Before submitting an application, the Province recommends that the Applicant reviews the Clean Infrastructure Royalty Credit Program Guidance Document available on the Program's website. This document may be helpful to Applicants, and provides additional information on the objectives

and requirements of the Program, as well as suggestions and examples to assist with the preparation of the documents required for applying under the Program.

L. Further Information

To request or receive further information regarding the Clean Infrastructure Royalty Credit Program RFA, please contact by email:

Lana Smith
Senior Project Manager
Policy and Royalty Branch
Upstream Development Division
Ministry of Natural Gas Development

Email Address: MNGDInfrastructure@gov.bc.ca

Appendix A

Quantification Methodology for Clean Infrastructure Royalty Credit Program Applications

For each piece of equipment subject to retrofit, replacement, or conversion in a proposed project, estimates for greenhouse gas (GHG) emissions reductions must be calculated as follows:

$$\text{Emissions}_{\text{Reduction}} = \text{Emissions}_{\text{Baseline}} - \text{Emissions}_{\text{Project}}$$

Where $\text{Emissions}_{\text{Baseline}}$ represents the business as usual emissions scenario for the equipment and $\text{Emissions}_{\text{Project}}$ represents the emissions scenario for the equipment due to the proposed project.

All emissions estimates must be calculated using relevant Western Climate Initiative (WCI) quantification methods (WCI.363) from the following sources:

- **2012:** [Final Essential Requirements for Mandatory Reporting – Amended for Canadian Harmonization](#)
- **2013:** [WCI Essential Requirements for Mandatory Reporting – 2013 Addendum to Canadian Harmonization Version](#)

If the equipment type is not listed in the WCI quantification methods, an alternative quantification method may be proposed and must be approved by the Province.

The $\text{Emissions}_{\text{Baseline}}$ scenario must be calculated using historical operating information from the most recent twelve (12) month period available for the specific equipment subject to the application and the appropriate equations listed in WCI.363. This information may include: the make and model of equipment, operating hours, consumption data, emissions factors, etc., as required in the WCI methods.³

Using this historical operating information, the $\text{Emissions}_{\text{Baseline}}$ scenario should be developed by forecasting emissions over the proposed project period, between the completion date of project construction for the specific equipment and December 31, 2021. If the completion date for project construction is prior to January 1, 2017, then January 1, 2017 should be used as the starting period for the purposes of this calculation.

The $\text{Emissions}_{\text{Project}}$ scenario must be calculated using the appropriate equations listed in WCI.363 and the same project period as above, using the appropriate emissions factors and operating conditions for the equipment subject to the Program application.

The following table lists relevant equations for certain source types listed in WCI.363 that should be used for calculating the $\text{Emissions}_{\text{Baseline}}$ and $\text{Emissions}_{\text{Project}}$ scenarios:

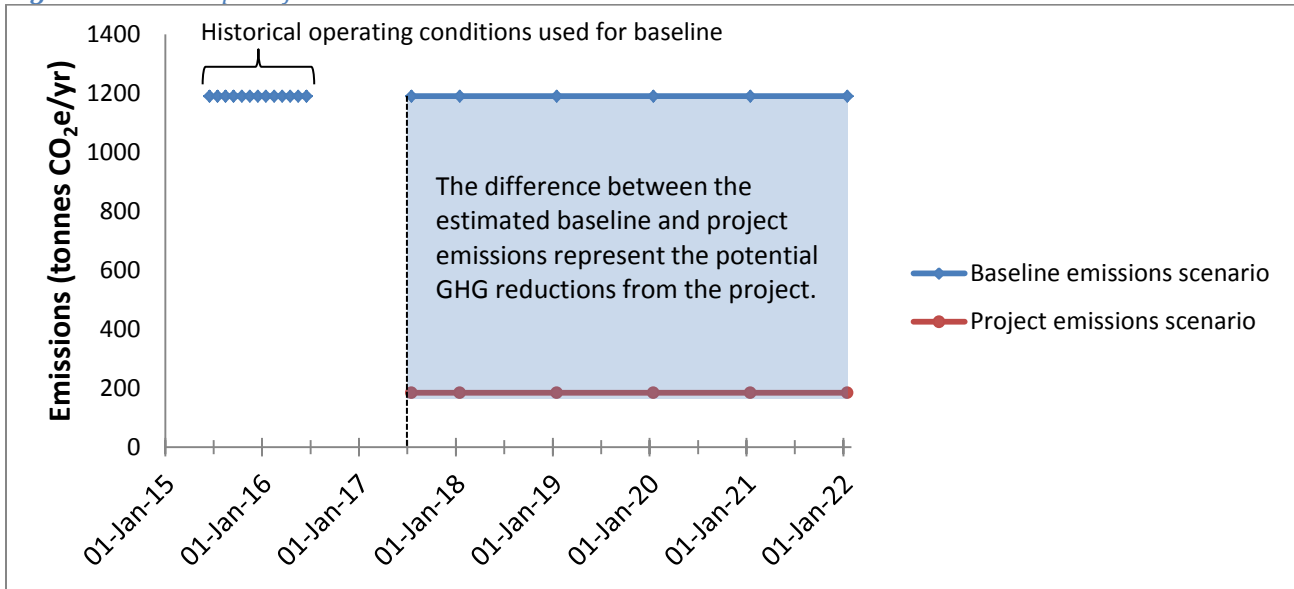
³ If historical operating information is not available for the equipment subject to the application, generic operating information may be used with the approval by the Province. If generic equipment is used for the application, the Province will require that a 20 % discount factor be applied to ensure the estimated emissions are conservative.

Source Type	WCI Reference
High bleed/low bleed/intermittent pneumatic devices	Eqns 360-1, 360-2, 360-2a, 360-4, 360-5, 360-5a, 360-6
Pneumatic pump venting	Eqns 360-3, 360-3a, 360-3b
Dehydrator vents	Eqn 360-10
Compressor venting	Eqns 360-32, 360-33, 360-34, 360-35

Other relevant equations are also provided in WCI.363 methodology, such as determining CO₂ and CH₄ emission rates (Eqn 360-41) and estimating the mass-based rate of GHG emissions from a volumetric rate (Eqn 360-42).

A representation of the estimation required is illustrated in Figure 1 below.

Figure 1 – Example of emissions reduction scenario.



In this example, completion of project construction is expected to occur in July 2017. The Emissions_{Baseline} scenario is estimated using the most recent twelve (12) months of operating data available and the relevant equations in WCI.363 as indicated by the blue line (between June 2015 and June 2016). This data is forecast over the project period (July 1, 2017 – December 31, 2021) to determine the Emissions_{Baseline} scenario.

The Emissions_{Project} scenario (as indicated by the red line) is estimated using the relevant equations in WCI.363 and the appropriate emissions factors and operating conditions for the equipment subject to the Program application.

An example calculation is provided below. Further examples for other potential project types are provided in the Clean Infrastructure Royalty Credit Program Guidance Document.

Example estimation for a project to replace 20 Fisher 4150 high-bleed pneumatic devices with 20 Fisher C1 low-bleed pneumatic devices. Assumes a 4.5-year project period of July 1, 2017 to January 1, 2022.

$$\text{Emissions}_{\text{Reduction}} = \text{Emissions}_{\text{Baseline}} - \text{Emissions}_{\text{Project}}$$

Based on Eqn. 360-2 of WCI.363 for an unmetred high-bleed pneumatic device

$$\text{Emissions}_{\text{Baseline}} =$$

$$\sum ((EF_i \times t_i \times \%_{CH_4} \times \rho_{CH_4} \times GWP_{CH_4}) + (EF_i \times t_i \times \%_{CO_2} \times \rho_{CO_2}))$$

$$\text{Emissions}_{\text{Baseline}} = 20 \times ((0.4209 \text{ m}^3/\text{hr} \times 8760 \text{ hr} \times 95\% \times 0.678 \text{ kg}/\text{m}^3 \times 25) + (0.4209 \text{ m}^3/\text{hr} \times 8760 \text{ hr} \times 2\% \times 1.86 \text{ kg}/\text{m}^3))$$

$$\text{Emissions}_{\text{Baseline}} = 1,190,169 \text{ kg CO}_2\text{e}/\text{yr} \times 1 \text{ tonne}/1000 \text{ kg} \times 4.5 \text{ years}$$

$$\text{Emissions}_{\text{Baseline}} = 5,356 \text{ tonnes CO}_2\text{e over the project period}$$

Where:

EF_i	Bleed rate of Fisher 4150 device i 0.4209 m ³ /h, as listed in Table 360-6 of WCI.367
t_i	Operating hours of device i over the reporting period, based on historical operating information
$\%CH_4$	Percentage of CH ₄ in vent gas by volume, based on gas analysis
ρ_{CH_4}	Density of CH ₄ = 0.678 kg/ m ³
$\%CO_2$	Percentage of CO ₂ in vent gas by volume, based on gas analysis
ρ_{CO_2}	Density of CO ₂ = 1.86 kg/ m ³
GWP_{CH_4}	Global warming potential of CH ₄ = 25

Based on Eqn. 360-4 of WCI.363

$$\text{Emissions}_{\text{Project}} =$$

$$\sum ((EF_i \times t_i \times \%_{CH_4} \times \rho_{CH_4} \times GWP_{CH_4}) + (EF_i \times t_i \times \%_{CO_2} \times \rho_{CO_2}))$$

$$\text{Emissions}_{\text{Project}} = 20 \times ((0.0649 \text{ m}^3/\text{hr} \times 8760 \text{ hr} \times 95\% \times 0.678 \text{ kg}/\text{m}^3 \times 25) + (0.0649 \text{ m}^3/\text{hr} \times 8760 \text{ hr} \times 2\% \times 1.86 \text{ kg}/\text{m}^3))$$

$$\text{Emissions}_{\text{Project}} = 183,516 \text{ kg CO}_2\text{e}/\text{yr} \times 1 \text{ tonne}/1000 \text{ kg} \times 4.5 \text{ years}$$

$$\text{Emissions}_{\text{Project}} = 826 \text{ tonnes CO}_2\text{e over the project period}$$

Where:

EF_i	Bleed rate of Fisher C1 device i 0.0649 m ³ /h, as listed in Table 360-6 of WCI.367
t_i	Operating hours of device i over the reporting period, based on historical operating information
$\%CH_4$	Percentage of CH ₄ in vent gas by volume, based on gas analysis
ρ_{CH_4}	Density of CH ₄ = 0.678 kg/m ³
$\%CO_2$	Percentage of CO ₂ in vent gas by volume, based on gas analysis
ρ_{CO_2}	Density of CO ₂ = 1.86 kg/m ³
GWP_{CH_4}	Global warming potential of CH ₄ = 25

$$\text{Emissions}_{\text{Reduction}} = 5,356 \text{ tonnes CO}_2\text{e} - 826 \text{ tonnes CO}_2\text{e}$$

$$\text{Emissions}_{\text{Reduction}} = \mathbf{4,530 \text{ tonnes CO}_2\text{e}}$$

Appendix B

Post-Project Verification Process for the Clean Infrastructure Royalty Credit Program

The Post-Project Verification process for projects in the Program involves four main components:

1. The submission of a draft verification plan by the Applicant(s) as part of the RFA process;
2. The submission of a verification plan by the proponent(s) when applying for royalty deductions associated with completing the construction (Step 1) of the project (and the royalty deduction associated with completing will not be allowed until the Administrator has approved the verification plan);
3. The completion and submission of a GHG emissions reduction report by the proponent(s); and,
4. The review of the GHG emissions reduction report and the submission of a verification statement by a qualified third party verification body.⁴

1. Draft Verification Plan

A draft verification plan must be submitted as part of the Application (see Section 2.2 of the RFA Template). This draft plan must detail the expected verification body, the scope of verification activities and schedules, a sampling plan, quantification methodologies, and identification of what data may be required (and how it will be collected) to calculate the GHG emissions reductions in the GHG emissions reduction report. An outline of the GHG emissions reduction report must also be provided as part of the draft verification plan. This plan must follow the guidance provided by ISO 14064.

2. Verification Plan

The draft verification plan may be revised by a proponent in consultation with the Ministry to ensure it meets the needs of the Program.

Construction (Step 1) royalty deductions will not be allowed unless that the proponent(s) has obtained approval of the verification plan from the Administrator.

3. GHG Emissions Reduction Report

3. a) GHG Emissions Reduction Report Requirements

A proponent(s) must complete and submit a GHG emissions reduction report that details the actual GHG emissions reductions from the project. It is expected that this report be completed using at least one year's worth of operating data after the project-specific equipment has been installed. The actual GHG emissions reductions from the project may differ from the estimate submitted in the RFA Application, as operating conditions or other factors may change.

⁴ The requirements for a "verification body" are defined in section 26(1) of BC's Greenhouse Gas Emission Reporting Regulation.

The GHG emissions reduction report must contain:

- the title of the project;
- the period the GHG emissions reduction report covers;
- identification of any changes in information provided that have occurred since the application was accepted;
- separate calculations detailing the realized GHG emissions reductions for each equipment or source type covered by the project;
- identification of any differences between the GHG emissions as reported in the application and those developed for the GHG emissions reduction report;
- the following assertions by the project proponent:
 - (i) the project's start date;
 - (ii) that the project was carried out as described in the accepted project application and Agreement;
 - (iii) the amount of each of the following, as applicable to the project, calculated for the GHG emissions reduction report period:
 - a. Baseline emissions for each equipment or source type;
 - b. Project emissions for each equipment or source type;
 - c. Emissions reductions for each equipment or source type.
 - (iv) that the measurements and calculations that resulted in the amounts asserted were carried out in accordance with the verification plan approved by the Province.

3. b) GHG Emission Report Methodology

In general, emissions reductions must be calculated as follows:

$$\text{Emissions}_{\text{Reduction}} = \text{Emissions}_{\text{Baseline}} - \text{Emissions}_{\text{Project}}$$

Where $\text{Emissions}_{\text{Baseline}}$ represents the business as usual emissions scenario for the equipment and $\text{Emissions}_{\text{Project}}$ represents the emissions scenario for the equipment due to the implementation of the proposed project.

For the purposes of the GHG emissions reduction report, the methodology for determining the appropriate baseline (the $\text{Emissions}_{\text{Baseline}}$ scenario) may differ from project to project.

Suggested baseline estimate methodologies are presented below:

Project Type	Baseline methodology	Parameters of interest
High-bleed to low-bleed pneumatic device conversion	Comparison-based ¹ combined with projection-based. ² Possibly historically-based. ³	Hours of operation and bleed rate of sample population
Instrument gas to air	Projection-based	Volume of pressed air used in instrumentation
Pump conversion	Projection-based	Volume of fluid displaced or pump stroke count
Vent gas capture	Projection-based	Volume of vent gas captured and combusted
<p>1 – Actual measurements from a control sample are compared with the project. This approach assumes that the control group is representative of the project.</p> <p>2 - Projections are based on the direct measurement of key parameters in the project condition. Assumes functional</p>		

equivalence between project and baseline. Projections are site specific and dynamic.
3 – Historical benchmarks are based on site specific, historical data prior to project implementation.

Further information on estimating project baselines can be found in the relevant carbon offset protocols for specific project types. The carbon offset protocols for oil and gas projects in BC are currently under review. Upon completion of the review, the Program may adopt relevant protocol methodologies. Until that time, if additional information regarding baseline calculations is required, please contact the Program's Project Manager.

For proponents that report GHG emissions under BC's Greenhouse Gas Emission Reporting Regulation, a report may be developed for the purposes of satisfying the Program's GHG emission reduction report requirement. The report must detail the year-on-year changes to facility emissions that are attributable to the specific equipment changes as a result of the implementation of the project, and be verified by a qualified, third party verification body.

All emissions estimates must be calculated using relevant Western Climate Initiative (WCI) quantification methods (WCI.363) from the following sources:

- **2012:** [Final Essential Requirements for Mandatory Reporting – Amended for Canadian Harmonization](#)
- **2013:** [WCI Essential Requirements for Mandatory Reporting – 2013 Addendum to Canadian Harmonization Version](#)

4. Verification Statement

A verification statement must be submitted, based on the process and procedures used by the verification body, that in the opinion of the verification body:

- the assertions in the GHG emissions reduction report are materially correct and are a fair and accurate representation of the project's total attributable emissions reductions for a given period, and
- the GHG emissions reduction report was prepared and the emissions reported in it were quantified in accordance with the methods described in approved verification plan.

Post-project verification must be completed on or before the earlier of (i) the fifth anniversary of the Agreement, and (ii) January 31, 2022, based on at least one year's worth of operating information unless approved otherwise by the Province. Notwithstanding the foregoing, project proponents will be required to comply with the post-project verification requirements set out in any Agreement entered into with the Administrator.