



Canada Housing Infrastructure Fund

How-To-Guide: Implementing Climate
Requirements



Aussi disponible en français sous le titre : *Fonds canadien pour les infrastructures liées au logement - Guide pratique pour mettre en œuvre les exigences climatiques*

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My CHIF project requires a Climate Report – what’s next?

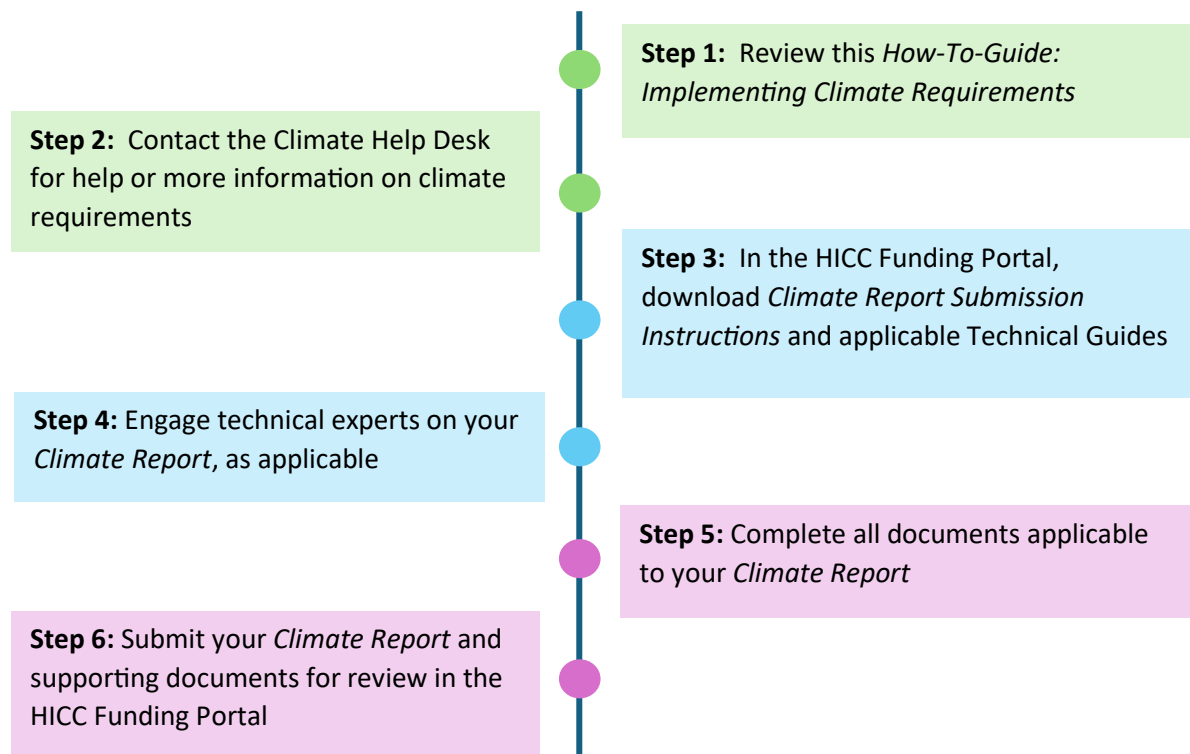


Figure 1. My CHIF project requires a Climate Report – what’s next?

Overview

The Canada Housing Infrastructure Fund (CHIF) will fund important water and solid waste infrastructure to support increased housing demand and population growth across Canada. CHIF investments will also deliver important co-benefits, contributing to Canadian communities being increasingly resilient to future climate conditions and contributing to Canada's emissions reduction commitments.

This *How-To-Guide: Implementing Climate Requirements* is for approved CHIF projects in the direct delivery and provincial and territorial (PT) agreement streams. It provides guidance on how to complete the climate requirements that apply to approved projects.

Climate requirements and 'Climate Report' (post-approval)

There are three types of climate requirements for CHIF projects:

- Resilience: applies to all capital projects, see Part A;
- Greenhouse Gas (GHG): applies to specific types of projects, see Part B; and,
- Ready-Mixed Concrete Carbon Reduction (Buy Clean): applies to specific types of projects, see Part C.

The applicability of climate requirements is described in **Table A** below. All approved projects that have climate requirements will be required to complete a *Climate Report*, an online reporting tool that can be accessed via the **HICC Funding Portal**. The *Climate Report* contains three different sections, one for each climate requirement. Only the specific sections of the *Climate Report* that are relevant to the specific project will be displayed in the *Climate Report*. The *CHIF Climate Report Submissions Instructions* will be available on the Portal.

Certain requirements involve submitting additional information, as listed in **Table A** below. Technical guidance documents (for technical experts and/or consultants) on how to meet the climate requirements, along with reporting templates, are available on the **HICC Funding Portal**. They can also be accessed by emailing Climate-Infra-Climat@infc.gc.ca.

After submission, HICC will review the *Climate Report*, and project applicants will be notified when it is accepted.

Project Support: Climate Toolkit for Housing and Infrastructure

The Climate Help Desk is a dedicated service where communities can access guidance, valuable resources, and information on sector best practices for incorporating low-carbon and climate resilience measures in infrastructure and housing projects. The Climate Help Desk will provide communities, project teams, technical experts and consultants with clear and comprehensive responses to questions related to HICC's climate requirements, including sources of climate data, and support for identifying and mitigating climate hazards that may affect their assets. Contact the Climate Help Desk by: (i) [webform](#); (ii) email: Climate-Infra-Climat@infc.gc.ca; or (iii) toll-free telephone: 1-833-834-0243. Additional resources are also available on the [Climate Insight](#) website.

Table A: Overview of CHIF climate requirement applicability and steps

Climate requirements and their applicability	Review supporting climate guides	Submit before first payment	Submit before final payment
Resilience			
All Projects for the following hazards: <ul style="list-style-type: none"> • Flood (coastal, riverine and overland flooding) • Wildfire • Extreme heat • Permafrost thaw 	<ul style="list-style-type: none"> • <i>CHIF Climate Report Resilience Requirements Info Sheet</i> 	<ul style="list-style-type: none"> • <i>Climate Report: Resilience section</i> 	N/A
GHG Emissions			
<ul style="list-style-type: none"> • Mechanical wastewater treatment plants over \$10M in total eligible costs assess and mitigate key GHG emissions sources • Select solid waste projects assess GHG emissions: landfill, organic waste processing, thermal treatment 	<ul style="list-style-type: none"> • <i>GHG Assessment Technical Guide</i> 	<ul style="list-style-type: none"> • <i>Climate Report: GHG Assessment section</i> • <i>GHG Assessment Report</i> • <i>Climate Report GHG Assessment Template – Excel</i> 	N/A - unless significant scope change
<ul style="list-style-type: none"> • Anaerobic lagoon projects • Projects awarded merit for GHG mitigation 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • <i>Climate Report: GHG Questionnaire section</i> 	N/A
Ready-Mixed Concrete Carbon Reduction (Buy Clean)			
Projects that meet all three criteria must reduce and report on embodied carbon from ready-mixed concrete: <ul style="list-style-type: none"> • Total eligible costs over \$10 million; • Municipality population > 30,000; and • Uses > 100 cubic metres (m3) of ready-mixed concrete. 	<ul style="list-style-type: none"> • <i>Ready-Mixed Concrete Carbon Reduction Technical Guide</i> 	<ul style="list-style-type: none"> • <i>Climate Report: Ready-Mixed Concrete Carbon Reduction</i> • <i>Ready-Mixed Concrete Reporting Template (design) – Excel</i> 	<ul style="list-style-type: none"> • <i>Ready-Mixed Concrete Reporting Template (as built) - Excel</i>



Part A: Climate resilience

Climate resilience requirements support infrastructure investments that increase community capacity to cope with climate impacts. The aim is to protect communities, sustain services, and reduce costs by avoiding premature asset failure and higher costs of operations. These requirements are part of both the initial CHIF Application and the *Post-approval Climate Report* (see Table B).

At application

Applicants are asked to identify their climate hazards and attest to addressing them with hazard treatment measures.

Assessing climate hazards

Climate resilience requirements apply to all projects (see Table B). At application, applicants must demonstrate that they have considered if their asset will be subject to climate hazards (flood, wildfire, extreme heat, permafrost thaw) over its lifespan and the resulting impacts on their projects, and must commit to addressing these risks. Assessing potential climate hazards will require reviewing the best available climate data. Under CHIF, climate risk assessments are retroactively eligible for funding, with conditions, as a planning cost. CHIF applications that do not identify climate hazards over the asset's lifespan will be asked for justification.

After approval

Recipients are asked to provide details on their hazard treatment measures and justification of untreated hazards.

Describing hazard treatment measures

Before first payment, all applicants are to report on the hazard treatment measures that address their identified climate hazards and:

- Identify use of national standards and guidelines (as applicable);
- Sources of best available climate design data used, including future climate design data (as available);
- Whether any climate hazards were left untreated and rationale;
- Any additional hazards examined;
- Considerations of avoiding risk transfer when designing hazard treatment measures; and
- Use of natural infrastructure as part of a hazard treatment measure.

For more information, review the *CHIF Climate Report Resilience Requirements Info Sheet* available on the HICC Funding Applicant Portal.

Table B: CHIF Resilience Requirements

Requirement	Description	What to Provide
Climate Hazard Identification (all projects)	Assess the project’s exposure to four key hazards: <ul style="list-style-type: none"> • flood (coastal, riverine and overland flooding), • wildfire, • extreme heat, and • permafrost thaw over the lifespan of the asset, using the best available climate data/projections	At application: <ul style="list-style-type: none"> • Identify applicable hazards • Identify the type of climate data used to make the assessment Post-approval: <ul style="list-style-type: none"> • Identify any additional hazards examined
Hazard Treatment (all projects)	Adopt hazard treatment measures for each identified hazard using the best available climate data and projections	At application: <ul style="list-style-type: none"> • Commit to adopt hazard treatment measures for each identified hazard and use best available climate data Post-approval: <ul style="list-style-type: none"> • Describe the planned hazard treatment measures • Identify if hazard treatment measures considered risk transfer • Identify any national standards or guidelines used to inform hazard treatment measures • Identify if future climate design data, or best available climate data, was used to inform hazard treatment measures • Identify any climate hazards left untreated and provide a justification • Share if natural infrastructure was used as a hazard treatment measures



Part B: Greenhouse gas (GHG)

The construction, repair, and operation of infrastructure creates GHG emissions. CHIF requires that certain types of projects, as outlined in **Table C**, report and/or take actions to reduce GHG emissions.

Table C: Summary of CHIF Operational Emission Measures (GHG)

Project types	Reporting requirements (before first payment)?	Project must implement GHG Mitigation Measures?
1. Mechanical wastewater treatment plants (over \$10 million in total eligible costs)	Yes. GHG Assessment Report is required in project reporting.	Yes. The GHG Assessment Report should identify how the project has mitigated major emissions sources.
2. Solid waste projects including: <ul style="list-style-type: none">• Landfills• Organic waste processing (compost and anaerobic digestion)• Thermal treatment	Yes. GHG Assessment Report is required in project reporting.	No.
3. Anaerobic lagoon and other projects identifying GHG mitigation measures	Yes. Complete <i>Climate Report</i> GHG Questionnaire in project reporting.	No.

At application

- **All Project types listed in Table C** (1 to 3) must commit to reporting on GHG emissions.
- In addition, Mechanical wastewater treatment plants over \$10 million in total eligible costs must commit to implementing GHG mitigation measures for major emissions sources, where applicable.

After approval and before first payment

- Mechanical wastewater treatment plants over \$10 million in total eligible costs and select solid waste projects (see **Table C**) must complete the supporting documents outlined in **Table D**.
- Anaerobic lagoon projects and other projects identifying GHG mitigation measures must describe GHG mitigation measures through targeted questions in the GHG Questionnaire section of the *Climate Report*. They do not need to complete a GHG Assessment Report.
- Note that GHG assessments are considered a reimbursable eligible cost, per the conditions of the CHIF Agreement.



Table D: Supporting Documents for GHG Assessment section of *Climate Report*

File	Description	Accepted File Format	Responsible Author	Submit to HICC (CHIF Portal)
<i>GHG Assessment Report</i>	A GHG Assessment Report will be developed following the guidance and outline in the <i>CHIF GHG Assessment Technical Guide</i> . The GHG Assessment Report will be an attachment to the <i>Climate Report</i> .	Microsoft Word or PDF	Recipient, or contracted technical expert	Yes
<i>Climate Report GHG Assessment Template</i>	The purpose of this template is to make it easy for the Recipient / PT to fill out the <i>Climate Report</i> with information from the <i>GHG Assessment Report</i> . This template will help the <i>GHG Assessment Report</i> author to complete the summary tables.	Excel	Recipient, or contracted technical expert	Yes

The technical expert (in-house/consultant) should review the *CHIF GHG Assessment Technical Guide* (available on the HICC Funding Portal). They are encouraged to reach out to HICC’s Climate Help Desk early to address any questions or clarifications and to ensure a clear understanding of the reporting requirements, which can support the timely approval of the *Climate Report*.

Where applicable, HICC may accept standards and methodologies for GHG quantification estimates based on Provincial/Territorial guidance relevant to the project’s jurisdiction. It is recommended the technical expert reach out to HICC’s Climate Help Desk before applying a methodology that differs substantially from the *CHIF GHG Assessment Technical Guide*.



Part C: Ready-Mixed Concrete Carbon Reduction (Buy Clean):

CHIF supports the Government of Canada’s Buy Clean policy approach by requiring a subset of projects to reduce emissions from ready-mixed concrete.

The ready-mixed concrete carbon reduction requirement is: **the total project GHG emissions from ready-mixed concrete shall be at least 10% below those calculated using the baseline mixes for the strength class and volume of each mix supplied (see definitions).**

This performance-based approach enables project engineers, architects, and suppliers to work together to select the right lower carbon solution, while meeting other performance specifications for the project. Solutions may include: using a lower carbon cement (such as Portland Limestone Cement), optimizing the concrete mix design (e.g., inclusion of supplementary cementitious materials like fly ash and slag), or designing for material efficiency (using less material).

Applicability

Projects that meet the three criteria in **Table E** are required to meet the emissions reduction requirement and to report on ready-mixed concrete emissions.

Note: This requirement does not apply in the Territories or for Indigenous-led projects.

Table E: Summary of Ready-Mixed Concrete Carbon Reduction Requirements (Buy Clean)

Project types	Reporting requirements?	Project must implement carbon reduction measures?
Project types that meet all three of the following criteria: <ul style="list-style-type: none"> • Total eligible costs over \$10 million; • Municipality population over 30,000; • and, • Uses more than 100m³ ready-mixed concrete. 	Yes. Reporting on ready-mixed concrete emissions reductions is required twice as part of project reporting.	Yes. Projects must use ready-mixed concrete that meets the carbon reduction performance requirement.



At application

- Applicants attest to whether their project meets the criteria in **Table E** (based on the best information available at time of application) and commit to implementing the ready-mixed concrete performance requirements and reporting if the project meets the criteria.

After approval

- HICC will determine if ready-mix concrete carbon reduction requirements apply.

Before first payment

- Recipients should inform their project delivery team (e.g., design and construction services) of the ready-mixed concrete carbon reduction requirements and share with them the *Ready-Mixed Concrete Carbon Reduction Technical Guide* and *CHIF Ready-Mixed Concrete Carbon Reduction Template*.
- The project will need to use the *Template* to report that the ready-mixed concrete integrated in the design meets the carbon reduction performance requirement (see **Table E**). This will be submitted as an attachment to the *Climate Report*.
- See the *Ready-Mixed Concrete Carbon Reduction Technical Guide* for more information, including information on when a request for exemption from the reduction requirement may appropriate.

Before final payment

- Recipients/PTs are required to submit the *Ready-Mixed Concrete Reporting Template*, including the “*As built*” tab as part of Final Reporting at the end of the project (see **Table F** below). This includes information on quantities of ready-mixed concrete provided by the project team (general contractor) and associated carbon footprint, to show that the project meets the carbon reduction performance requirement.

Table F: Supporting Documents for the Ready-Mixed Concrete Carbon Reduction Requirements (Buy Clean) section of *Climate Report*

File	Description	Accepted File Format	Responsible Author	Submit To HICC
Ready-Mixed Concrete Reporting Template (Design)	<p>The <i>Ready-Mixed Concrete Reporting Template</i> should be completed based on the guidance in the <i>Ready-Mixed Concrete Carbon Reduction Technical Guide</i>. The <i>Ready-Mixed Concrete Reporting Template</i> will be an attachment to the <i>Climate Report</i>.</p> <p>The Recipient/PT will fill out the 'Organization Information' and 'Project Information' tabs and the contracted technical expert will fill out the 'Reporting - Design' tab of the Template.</p>	Excel	Recipient and contracted technical expert	Before first payment on CHIF Portal
Ready-Mixed Concrete Reporting Template (As-built)	The contracted technical expert will update the 'As built' tab with actual material quantities of mixes used and the associated carbon footprint.	Excel	Recipient and contracted technical expert	Before last payment as part of final reporting



Definitions

- **Climate Data:** long-term observations and measurements, including temperature, rainfall, and wind speed.
- **Climate resilience:** The capacity of social, economic and environmental systems to cope with a hazardous event, trend or disturbance.
- **Embodied carbon:** Greenhouse gas emissions generated during material extraction, manufacture, transportation, construction, and end-of-life.
- **Hazard treatment measures:** changes to project siting, adjustments to operations and maintenance plans, incorporating standards or guidelines that address climate resilience, etc. to lessen the impact of hazard.
- **Baseline mix:** calculated based on the sum of the average emissions in the region for the type and amount of concrete used in the project. This is calculated based on the regional industry average Environmental Product Declarations for each province/region.

