

**The Climate Registry**

# **General Verification Protocol for the Voluntary Reporting Program**

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**Version 2.0**

Accurate, transparent, and consistent measurement of  
**greenhouse gases** across North America

**June 2010\***

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I'm very grateful to be part of this important document.

Sincerely yours,



Doug Scott  
Chairman of the Board of Directors  
The Climate Registry

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## ABBREVIATIONS AND ACRONYMS

AR4	IPCC Fourth Assessment Report (2007)
Btu	British thermal unit(s)
CEMS	Continuous Emissions Monitoring Systems
CHP	Combined Heat and Power
CH <sub>4</sub>	Methane
COP	Coefficient of Performance
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> -e	Carbon Dioxide Equivalent
COI	Conflict of Interest
EU-ETS	European Union Emission Trading Scheme
GCV	Gross Caloric Value
GHG	Greenhouse Gas
GWP	Global Warming Potential
HFC	Hydrofluorocarbon
HHV	Higher Heating Value
IPCC	Intergovernmental Panel on Climate Change
kg	Kilogram(s)
kWh	kilowatt-hour(s)
lb	Pound
LHV	Lower Heating Value
LPG	Liquefied Petroleum Gas
MMBtu	Million British thermal units
MWh	Megawatt-hour(s)
NO <sub>x</sub>	Oxides of Nitrogen
N <sub>2</sub> O	Nitrous Oxide
PFC	Perfluorocarbon
RFP	Request for Proposals
SAR	IPCC Second Assessment Report (1996)
SF <sub>6</sub>	Sulfur Hexafluoride
TAR	IPCC Third Assessment Report (2002)
U.S. EPA	United States Environmental Protection Agency
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute



# PART 1: INTRODUCTION

## 1.1 Introduction to the GVP

This General Verification Protocol (GVP) presents the verification requirements for The Climate Registry's (The Registry) voluntary greenhouse gas (GHG) emissions reporting program. The Registry developed this GVP to provide Registry-recognized<sup>1</sup> Verification Bodies with clear instructions for executing a standardized approach to the independent verification of annual GHG emissions reported to The Registry. This standardized approach defines a verification process that promotes the completeness, consistency, comparability, accuracy and transparency of emissions data reported to The Registry. The GVP is written primarily for Verification Bodies; however, Members may also find the document useful.<sup>2</sup>

### 1.1.1 Background on The Registry's Verification Program

One of the guiding principles of The Registry is to establish a high level of environmental integrity in reported emissions. In part, the measurement, estimation, and reporting requirements articulated in The Registry's *General Reporting Protocol* will assure the quality and integrity of the collected data. Equally important is the third-party evaluation of the accuracy of Members' annual emission reports and their conformity with the *General Reporting Protocol's* prescriptions<sup>3</sup>. Third-party verification is defined as an independent expert assessment of the accuracy of Members' emission reports, and its conformity with agreed upon criteria.

<sup>1</sup> The Registry recognizes Verification Bodies that are accredited to ISO 14065 by a partnering Accreditation Body.

<sup>2</sup> In addition, Chapter 19 of The Registry's *General Reporting Protocol* contains an overview of the verification process that focuses on Members' responsibilities in the process.

<sup>3</sup> Including approved Member-Developed Methodologies and General Reporting Protocol Updates and Clarifications published by The Registry on its website.

The purpose of third-party verification is to provide confidence to users (state regulatory agencies, native sovereign nation authorities, investors, suppliers, customers, local governments, the public, etc.) that the emissions data submitted to The Registry represents a faithful, true and fair account of emissions—free of material misstatements and conforming to The Registry's accounting and reporting rules.

Third-party verification is a widely accepted practice for ensuring accurate emissions data. Verification has been employed in the context of a number of voluntary and mandatory GHG reporting programs. It is required by the California Climate Action Registry (CCAR) and recommended by the Department of Energy's 1605(b) reporting program. In the U.S., the Environmental Protection Agency (EPA) does not require third-party verification of GHG emissions reported under its mandatory reporting rule; however, third-party verification is relied upon by several GHG regulatory programs, including the California Air Resources Board (CARB), the Western Climate Initiative (WCI), Massachusetts Department of Environmental Protection (MassDEP), the European Union's Emissions Trading System (EU ETS), the United Kingdom's GHG Emissions Trading System, Alberta's Specified Gas Emitters Program, and British Columbia's Greenhouse Gas Reduction Act.

### 1.1.2 International GHG Standards

The Registry developed this GVP to facilitate consistency with the following international GHG standards:

- **ISO14064-3:2006 – Greenhouse Gases – Part 3: Specification with Guidance for the Validation and Verification of Greenhouse Gas assertions.** The Registry based its verification process on the principles of ISO 14064-3, and aims to maintain as much consistency with the

- standard as is possible. While ISO 14064-3 serves as the foundation for The Registry’s verification program, The Registry provides additional guidance, verification requirements, and specificity in this GVP.
- **ISO14065:2007 – Greenhouse Gases – Requirements for Greenhouse Gas Validation and Verification Bodies for Use in Accreditation or Other Forms of**

**Recognition.** This standard provides a framework for accrediting Verification Bodies. The Registry has developed a separate document that describes its accreditation process (*Guidance on Accreditation*). Like the GVP, this document is based in large part on the international standard, but supplements the framework with program-specific processes and criteria.

**The International Organization for Standardization (ISO) ([www.iso.org](http://www.iso.org))**

ISO is the recognized institution that sets agreed international standards for a wide range of products, services and systems; since 1947 it has published more than 16,500 International Standards. Membership in ISO is composed of the single national body “*most representative of standardization in its country.*”

ISO members participate in the standards development process by convening a series of working groups comprised of experts in the relevant field and other interested parties (such as regulators, academia and non-governmental organizations). These working groups draft and determine the text language of proposed voluntary standards designed for global application. Wherever possible, the working groups draw from existing best practices and standards that may have been pioneered at a national level.

In 2002, ISO recognized that the various schemes emerging in the international, national and voluntary arenas were using different rules for GHG accounting, thereby giving rise to inconsistencies in the quality of the various GHG programs. To remedy this they decided to create a series of standards that would:

- Enhance environmental integrity by promoting consistency, transparency and credibility in GHG quantification, monitoring, reporting and verification;
- Enable organizations to identify and manage GHG-related liabilities, assets and risks;
- Facilitate the trade of GHG allowances or credits; and
- Support the design, development and implementation of comparable and consistent GHG schemes or programs.

## 1.2 Overview of the Verification Process

Members and Verification Bodies must use this GVP in combination with The Registry’s *General Reporting Protocol* and *Guidance on Accreditation* to comply with The Registry’s reporting and verification requirements. Verification Bodies must verify that Members’ annual GHG emission reports comply with the

standards set forth in the *General Reporting Protocol*<sup>4</sup>. Through this document, The Registry provides guidance to Verification Bodies for completing annual verification activities.

<sup>4</sup> Including approved Member-Developed Methodologies and General Reporting Protocol Updates and Clarifications published by The Registry on its website

## 1.2.1 Key Players

The verification process involves a number of key players; these players and their main responsibilities are as follows:

- **Accreditation Body:** Responsible for approving Verification Bodies to perform verification activities for The Registry's voluntary reporting program. This includes complying with the ISO 14065 standard as well as The Registry's additional accreditation criteria. Accreditation Bodies are also responsible for ensuring the consistency and quality of The Registry's verification process by monitoring each Verification Body's compliance with program requirements; assessing the accuracy of each Verification Body's work; and sanctioning Verification Bodies which do not continue to meet program requirements.<sup>5</sup> In addition, if disputes between Members and Verification Bodies cannot be resolved, parties may bring such disputes to the Accreditation Body<sup>6</sup> for resolution. Refer to The Registry's *Guidance on Accreditation* for more information on the accreditation process and the role of an Accreditation Body.
- **Verification Body:** A Registry-recognized firm responsible for verifying emission reports submitted to The Registry. Each verification engagement undertaken by a Verification Body will utilize the following four types of experts:

**Lead Verifier (Required):** Responsible for leading the verification engagement, including the assignment of individual verification team members to specific tasks and quality assurance of each team member's work. The Lead Verifier must

<sup>5</sup>The Registry is currently partnered with the American National Standards Institute (ANSI) to administer its accreditation process. In the future, The Registry intends to consider expanding this accreditation partnership to include other relevant accreditation bodies in North America.

<sup>6</sup> The Accreditation Body designates an "Accreditation Committee" to respond to such disputes. The Registry has representation on this Committee, and thus contributes to the resolution of any disputes.

indicate his or her approval of the verification team's effort by signing the Verification Report and the Verification Statement. The Lead Verifier and the Independent Peer Reviewer cannot be the same person.

### **Independent Peer Reviewer**

**(Required):** Another individual qualified as a Lead Verifier and Independent Peer Reviewer, with no involvement in the specific verification engagement. The Independent Peer Reviewer is assigned to conduct an independent quality assurance review of the work of the verification team. The Independent Peer Reviewer must indicate his or her approval of the verification team's efforts by signing the Verification Report and the Verification Statement. The Lead Verifier and the Independent Peer Reviewer cannot be the same person.

While it is neither The Registry's intent nor recommendation that Independent Peer Reviewers observe facility visits, The Registry does not prohibit the Independent Peer Reviewer's observation of the facility visits as long as the Independent Peer Reviewer is strictly an observer and does not engage in verification activities.

**Verifier (Optional):** An individual member of the verification team responsible for performing specific verification tasks within his or her area(s) of expertise, as directed by the Lead Verifier. The number of Verifiers needed on a verification team will vary based on the scope and complexity of a Member's emissions.

**Technical Expert (Optional, based on the technical needs of the verification activities):** An individual who provides specific industry knowledge to the verification team, as directed by the Lead Verifier. Technical Experts may not be

needed if either the Lead Verifier or one or more of the Verifiers possesses the requisite industry knowledge. Technical Experts can have expertise in GHG quantification within a sector, specific emitting technologies, or both. Technical Experts will likely be subcontractors brought in to supplement the Verification Body's staff competencies to complete the needed verification activities.

*Note: Verification Bodies may hire subcontractors to perform any or all of the above roles within their verification teams. All subcontractors must be identified and disclosed on the Verification Body's Case Specific Conflict of Interest Assessment Form. All subcontractors must meet the Personal Conflict of Interest requirements as stipulated in Section 3.2.*

- **Member:** Responsible for reporting its GHG emissions and selecting a Registry-recognized Verification Body to assess the quality of their emission report. A Member must provide the information, documents, and site access a Verification Body needs to complete the verification effort, and must correct any material errors, omissions, or misrepresentations in the emission report discovered by the Verification Body.
- **Verification Advisory Group (VA Group):** Verification Advisory Group to be comprised of the following representatives:
  1. Registry-recognized Verification Body representatives: 1 individual from each accredited body. As the number of Registry-recognized Verification Bodies grows, The Registry will reconsider whether a subset of Verification Bodies can represent the entire group.
  2. Members: 1 individual from up to 10 different Member organizations of various sizes and representing various sectors.
  3. Other Stakeholders: between 5 and 10 representatives (for example,

Registry jurisdictional representatives, voluntary and mandatory GHG programs, environmental organizations).

4. Advisors are consulted on an as-needed basis for legal, ethical, and other areas of expertise.

The responsibilities of the Verification Advisory Group are as follows:

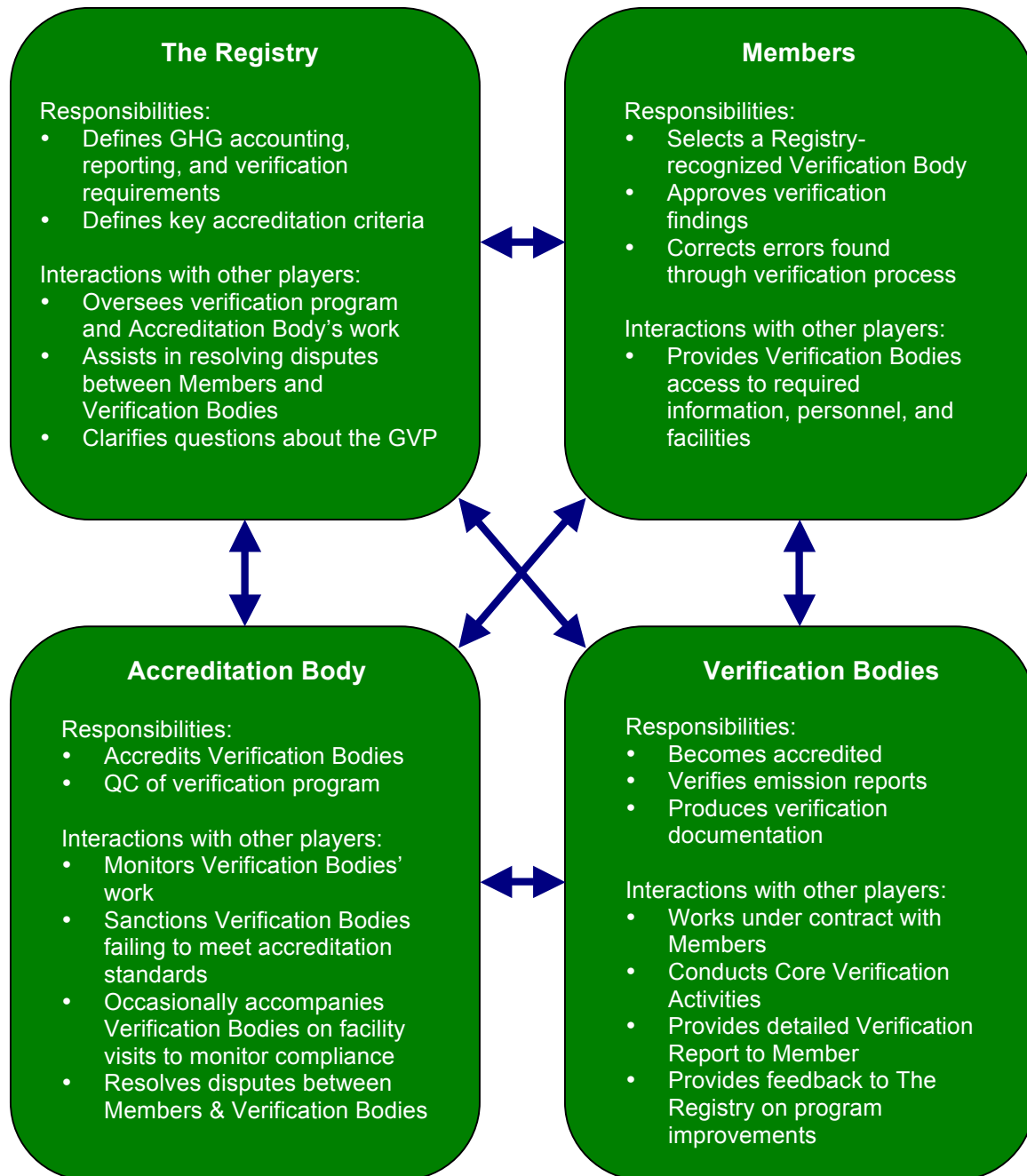
- Review draft sector-specific verification requirements and guidance.
- Review draft GVP Updates and Clarifications documents.
- Bring to the attention of The Registry any emerging verification or accreditation issues.
- Provide feedback on verification and accreditation issues on an as-needed basis via e-mail and/or surveys.
- A representative of the VA Group may be invited by the Manager of Verification Services to serve for a one-year term on a partnering Accreditation Body's Accreditation Committee.
- **Audit & Verification Oversight Committee:** This Committee exercises the authority of the Board to oversee The Registry's accreditation and verification programs, and recommends resolutions to any disputes arising between a Member and Verification Body related to the Verification Statement or Verification Report<sup>7</sup> and other ethical concerns or complaints that may arise.

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<sup>7</sup>Note: Any other disputes between a Member and a Verification Body must be resolved consistent with their contract terms (arbitration, etc.).

Figure 1.1 illustrates the responsibilities and interactions of the key players in the verification process.

**Figure 1.1 Responsibilities and Interactions of the Key Players**





### 1.2.2 Becoming a Registry-Recognized Verification Body

Prospective Verification Bodies must become accredited by a partnering Accreditation Body before they can conduct verification activities for The Registry's voluntary reporting program. The Registry designed its accreditation process to be consistent with the ISO 14065 standard (*Greenhouse Gases – Requirements for Greenhouse Gas Validation and Verification Bodies for use in Accreditation or other forms of Recognition*). Please refer to The Registry's *Guidance on Accreditation* for details about accreditation.

To undertake verification for any Registry Member, a Verification Body must be accredited to the organizational-level general scope (e.g. ANSI Group 1<sup>8</sup>) by a Registry partner Accreditation Body.

If the Verification Body is not accredited for the sector in which it will undertake verification activities, it shall not make reference to its accreditation status or use the Accreditation Body's accreditation symbol for that sector.

The Registry's requirements for sector-specific accreditation are as follows:

- Power Generation (e.g. ANSI Group 2): Verification Bodies must be accredited to this sector in order to verify inventories prepared in accordance with The Registry's Electric Power Sector Protocol.
- Electric Power Transactions (e.g. ANSI Group 4): Verification Bodies must be accredited to this sector in order to verify inventories prepared in accordance with The Registry's Electric Power Sector Protocol for Members with electric power transactions.
- Oil & Gas Production (e.g. ANSI Group 8): Verification Bodies must be accredited to this sector in order to verify inventories prepared in accordance with The Registry's Oil & Gas Production Protocol.

<sup>8</sup> ANSI's policy and assessment requirements for accrediting firms to industry sector scopes can be viewed through [ANSI's website](#).

- All Other Sectors: Verification Bodies must be accredited to the organizational-level general scope (e.g. ANSI Group 1).

The Registry's sector-specific requirements for verification are specified in the GVP addenda provided in Appendix C.

While The Registry does not explicitly require a Verification Body be accredited to other organizational-level scopes (for example, manufacturing, waste, mining and mineral production, etc.) in order to provide verification services for Members, the Verification Body must assemble a verification team with the necessary competence and an appropriate level of knowledge and understanding of source types in the Member's inventory.

### 1.2.3 Verification Documentation

Upon completion of all verification activities, Verification Bodies must produce the following documentation (Please refer to Part 5 for detailed guidance on completing verification documentation):

- Verification Report
- Verification Statement

In addition, Verification Bodies must retain all verification documentation (i.e. working papers) pertaining to verification activities for all Members for at least five years.

### 1.2.4 Climate Registry Information System (CRIS)

The Registry has developed a sophisticated GHG emissions calculation, reporting, and verification tool for all stakeholders (Members, Registry Directors, Verification Bodies, The Registry, and the public) to use to enter, review, and access GHG data. In the verification process, Verification Bodies will use CRIS to review a Member's emissions.

To access CRIS, go to:  
[www.theclimateregistry.org](http://www.theclimateregistry.org)

### 1.2.5 Registry Review and Public Release of Data

To complete the GHG reporting process, The Registry will review a Member's Verification Statement and release the Member's successfully verified data to the public. This data may be accessed by the public via CRIS.

## 1.3 Organization of the GVP

This GVP is divided into five Parts which outline the necessary steps a Verification Body must follow to initiate and complete the verification of a Member's GHG emissions.

**Part 1, Introduction** (this section): Provides a brief background on The Registry's verification program, an overview of the purposes of the verification, and definitions of key terms.

**Part 2, Summary of the Verification Process and Requirements:** Provides an overview of the entire verification process. This Part also outlines The Registry's requirements on issues such as the level of assurance, materiality, scope of verification, and the frequency of verification.

**Part 3, Preparing for Verification:** Describes the activities that take place prior to a Verification Body executing the core verification activities. This Part includes bidding for a contract with a Member, assessing potential conflicts of interest, providing required notifications to The Registry, and designing an appropriate verification plan for each Member.

**Part 4, Core Verification Activities:** Explains how Verification Bodies should assess a Member's emissions.

**Part 5, Completing the Verification Process:** Covers procedures for completing the verification process, including preparing a

Verification Report and Verification Statement, and recording and retaining proper records.

## 1.4 Updates to the GVP

While the GVP is intended to guide most verification activities, The Registry may update this document in the future to reflect changes in international best practices and to provide additional clarity and guidance.

Any updates to the GVP will be documented in an Updates and Clarifications document that will be posted on The Registry's website at [www.theclimateregistry.org](http://www.theclimateregistry.org). Until the next version of the GVP is released, all Members and Verification Bodies should refer to the latest Updates and Clarifications document for the most current interpretation and explanation of verification policies, processes, and activities.

In addition, The Registry has developed additional sector-specific addenda to this GVP to accompany corresponding sector-specific reporting protocols, including the Local Government Operations Protocol, the Electric Power Sector Protocol, and the Oil and Gas Production Protocol. These addenda are included in Appendix C. The Registry will develop additional GVP addenda to accompany any future sector-specific reporting protocols.

The Registry will inform stakeholders of changes to the GVP in a timely manner, and will provide explicit direction for when new verification policies or procedures will be required.

The Registry welcomes feedback and suggestions for improving the GVP from all stakeholders. Interested parties may submit feedback to The Registry by e-mailing [verification@theclimateregistry.org](mailto:verification@theclimateregistry.org).



# PART 2: SUMMARY OF THE VERIFICATION PROCESS AND REQUIREMENTS

## 2.1 Principles of Verification

Several verification principles underpin and guide The Registry's verification process. They provide a compass to direct Verification Bodies in cases where assessments are not black and white. As an overarching principle, Verification Bodies must seek consistency with the principles defined in ISO 14064-3, which are:

1. **Independence:** To ensure the credibility of the emissions data reported to The Registry, the verification process must remain free from bias and conflicts of interest. Verification Bodies must maintain objectivity throughout the verification process to ensure that findings and conclusions will be based on objective evidence. Refer to Section 3.2 for additional guidance on conflict of interest.
2. **Ethical Conduct:** Verification Bodies must demonstrate ethical conduct through trust, integrity, confidentiality, and discretion throughout the verification process.
3. **Fair Presentation:** Verification Bodies must reflect truthfully and accurately the results of the verification activities.
4. **Due Professional Care.** Verification Bodies must exercise due professional care and judgment in accordance with the importance of the task performed and the confidence placed by clients and intended users. In addition, Verification Bodies must have the necessary skills and competences when executing the verification activities described in this GVP.

In addition to the above principles of verification, Verification Bodies must ensure that Members' emissions conform to the GHG reporting principles as defined in The Registry's *General Reporting Protocol*.

## 2.2 Verification Process Overview

Before any verification activities take place, Verification Bodies must take a number of procedural steps to ensure that the obligations and responsibilities of both the Verification Body and Member are clear.

The complete verification process consists of the following 12 steps:

1. **Member submits CRIS report for verification:** Once the report is submitted for verification, data is "read-only" to the Member.
2. **Member selects a Verification Body:** Member contacts one or more Registry-recognized Verification Bodies to request a proposal for verification services. Member selects a Verification Body and negotiates contract terms.
3. **Verification Body submits a Case-Specific Conflict of Interest (COI) Assessment Form:** After a Member chooses a Verification Body, the Verification Body must submit a Case-Specific COI Assessment Form to the Registry. The Registry reviews the COI assessment and notifies the Verification Body of its determination within 15 business days.
4. **Verification Body and Member finalize verification contract:** If The Registry has determined that the potential for COI between a Member and Verification Body is low, the Verification Body may finalize its contract with the Member.
5. **Verification Body develops verification plan:** The Verification Body develops a risk-based sampling plan, identifies facilities to be visited, and submits a Notification of Planned Facility Visits form to the Registry at least 15 business days before the scheduled visits.

6. **Verification Body conducts core verification activities:** The Verification Body follows the guidance in the General Verification Protocol to evaluate a Member's annual GHG emission report and conducts core verification activities
8. **Verification Body informs Member of reporting errors:** The Verification Body prepares a detailed summary (e.g. Draft Verification Report) of the verification activities and misstatements (both material and immaterial) and reviews it with the Member.
9. **Member implements corrective action:** The Member corrects all material misstatements and as many immaterial misstatements as possible.
10. **Verification Body prepares final Verification Report and Verification Statement:** The Verification Body assesses corrective actions taken by Member, prepares a final Verification Report and Verification Statement and reviews these documents with the Member.
11. **Verification Statement is submitted through CRIS:** Once authorized by the Member, the Verification Body signs the Verification Statement, uploads it in CRIS, completes the verification form and submits the verification in CRIS. The Member then downloads and signs the Verification Statement that was uploaded by the Verification Body, uploads it back into CRIS, and accepts the verification. The Registry accepts digital signatures on Verification Statements.
12. **The Registry reviews verification documentation:** The Registry reviews the Verification Statement and evaluates the Member's emission report. Once accepted by the Registry, the Member's emission report and the Verification Statement become available to the public via CRIS.

These steps must be repeated annually to complete The Registry's verification process.

If there are any changes to the information provided on the Case-Specific COI Assessment Form or the Notification of Planned Facility Visits Form, the Verification Body must notify The Registry in writing within 7 business days of the change and resubmit the applicable form if requested.

## 2.3 Level of Assurance

The level of assurance a Verification Body attaches to its verification work dictates the relative degree of confidence the Verification Body has in its assessment of the accuracy of the reported data, and by extension the level of confidence that The Registry or other users can place in the reported information. Generally, The Registry requires Verification Bodies to attest that Members' emission reports meet a reasonable assurance level.

**Reasonable Assurance:** Reasonable assurance statements are usually crafted in a positive fashion; a Verification Body provides reasonable assurance that an emission report *is* materially correct. A reasonable assurance opinion is generally considered to generate the highest possible level of confidence.

However, given the nature of Batch Verification<sup>9</sup> (desk review and phone interview) The Registry realizes that it may be difficult for Batch Verification Bodies to verify qualifying emission reports to a standard of reasonable assurance. Therefore, The Registry requires Batch Verification Bodies to apply a limited assurance standard when reviewing Batch Members' emissions.

Given that Batch Verification will apply only to small office-based organizations with less than 1000 tonnes of CO<sub>2</sub>-e, the emissions data will likely not be used for more than tracking internal energy usage (the majority of most Batch Members' emissions are indirect emissions). Emission reports that receive Batch Verification will clearly indicate that they

<sup>9</sup> Refer to Section 2.9.

have been verified to a level of limited assurance rather than a level of reasonable assurance so that stakeholders will not be confused as they review multiple emission reports.

**Limited Assurance:** Limited assurance statements are usually crafted in a negative fashion; a Verification Body asserts that there is no evidence that an emission report is not materially correct. Limited assurance statements generally involve less detailed testing of GHG data and less examination of supporting documentation. Findings of limited assurance provide less confidence in the reported data than those of reasonable assurance.

## 2.4 Verification Criteria

Verification Bodies must verify Members' GHG emission reports using the following criteria:

- The Registry's *General Reporting Protocol*<sup>10</sup> (for guidance on GHG calculation and reporting)
- ISO 14064-3<sup>11</sup> (*Specification with Guidance for the Validation and Verification of Greenhouse Gas Assertions*)
- This GVP for supplementary guidance on verification activities

To the extent that any requirement of ISO 14064-3 might prohibit a Verification Body from complying with this GVP, the requirements contained in the GVP will take precedence.

## 2.5 Materiality

Verification Bodies use the concept of materiality to determine if omitted or misstated GHG emissions information will lead to significant misrepresentation of a Member's emissions, thereby influencing conclusions or

<sup>10</sup> Including approved Member-Developed Methodologies and General Reporting Protocol Updates and Clarifications published by The Registry on its website

<sup>11</sup> ISO 14064-3: 2006 (E)

decisions made on the basis of those emissions by intended users. A material misstatement is the aggregate of errors, omissions, non-compliance with program requirements, and/or misrepresentations that could affect the decisions of intended users.

The Registry sets this materiality threshold at five percent (for both understatements and overstatements) of a Member's Direct (Scope 1, including any reported biogenic emissions) and Indirect (Scope 2) emissions. Thus, The Registry requires Verification Bodies to assess the accuracy of a Member's direct and indirect emissions separately. A Member's direct and indirect emissions must both be deemed as accurate (within five percent) for a Verification Body to issue a positive Verification Statement for the Member.

**Material Misstatement:** A discrepancy is considered to be material if the collective magnitude of compliance and calculation errors in a Member's emission report alters a Member's direct or indirect emissions by plus or minus five percent.

The total emissions from each of these two broad categories (Scope 1 and Scope 2) may be orders of magnitude different, so the tolerance for error will also be significantly different in these cases. In some cases (e.g. power generators), the direct emissions may overwhelm the indirect emissions, and in other cases (e.g. transmission companies), the opposite will be true. Consequently, a small misstatement within, for example a transmission company's direct emissions total, may be materially far more significant than a relatively large misstatement within a generator's direct emissions.

Verification Bodies are required to assess materiality only at the entity level; however, it is good practice to consider the risk for error at the facility and source/unit level.

As illustrated in Figure 2.1, The Registry requires Verification Bodies to assess the positive and negative errors outside of an inherent uncertainty band surrounding the true

value of a Member's emissions. Due to the inherent uncertainty associated with metering equipment, emission factors, etc., a Member's emissions will more than likely deviate to some extent from their "true" emissions. The Registry recognizes and accepts this inherent uncertainty surrounding reported emissions.

The Registry defines inherent uncertainty as the uncertainty associated with: 1) the inexact nature of measuring and calculating GHG emissions (rounding errors, significant digits, default emission factors, etc.) and 2) the inexact nature of the calculations associated with The Registry's permitted use of simplified estimation methods (for up to five percent of the sum of an entity's Scope 1, Scope 2, and biogenic emissions from stationary and mobile combustion).

If a Verification Body deems that a Member's use of simplified estimation methods is correct and appropriate, these emissions should be considered part of the inherent uncertainty of a Member's emission report. Therefore, they should be excluded from a Verification Body's assessment of material misstatements.

Please refer to the Simplified Estimation Methods text box on page 13 for additional information on verifying simplified estimation methods.

## Simplified Estimation Methods

In general, Members must use the emission estimation methodologies prescribed in the *General Reporting Protocol* to compute their emissions. However, to reduce reporting burden and focus efforts on the main sources of emissions, the *General Reporting Protocol* allows the application of alternative simplified estimation methods for small emission sources or those with difficult to calculate emissions. The sum of emissions estimated using such simplified methods cannot exceed five percent of an organization's total emissions on a CO<sub>2</sub>-e basis. This five percent threshold applies separately for North America and also for the overall worldwide inventory, if optionally reported.

Members have discretion in choosing which sources and/or GHGs to estimate using simplified methods, as long as the five percent threshold is not exceeded. Verification Bodies must undertake the following steps to verify the use of simplified methods:

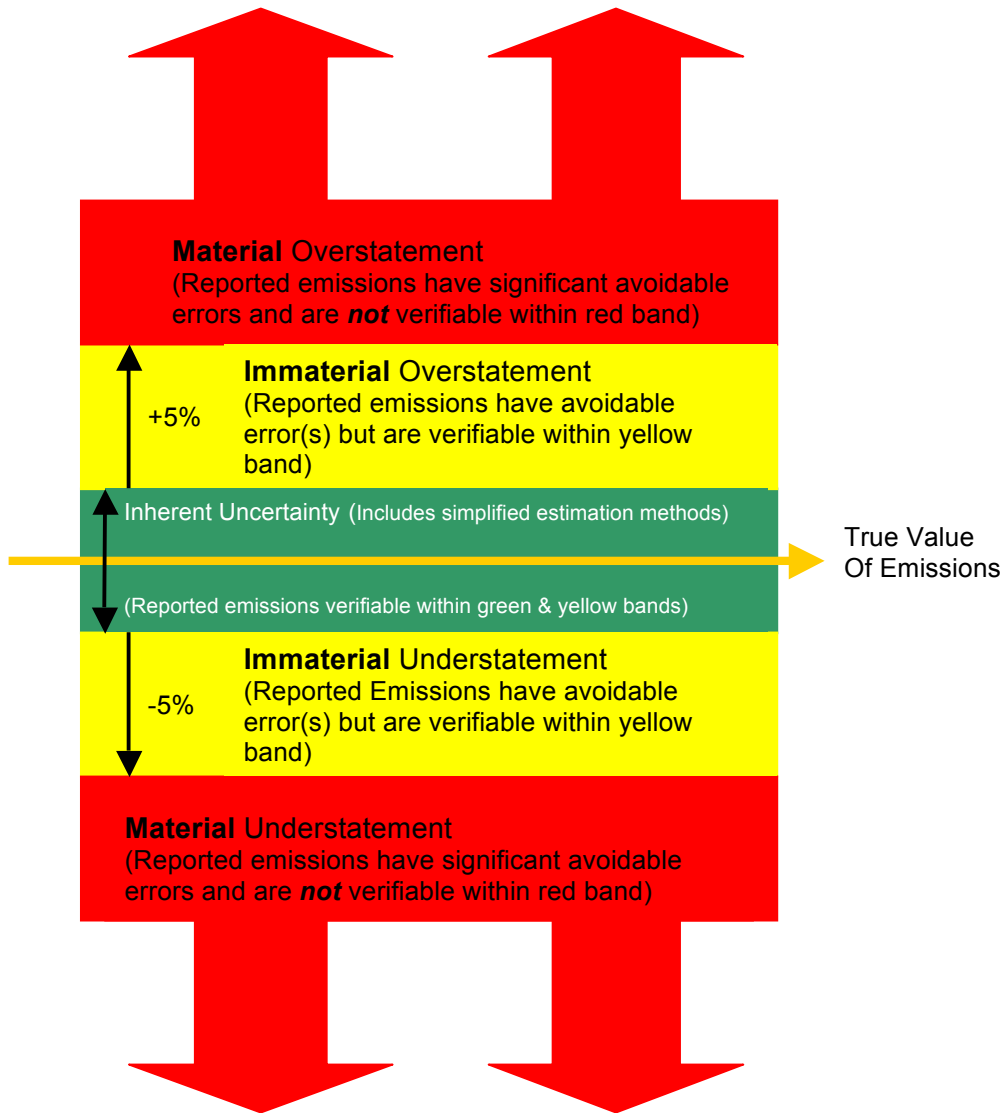
1. Review Members' documentation and explanations of how emissions were calculated to confirm that not more than five percent of total emissions have been estimated using simplified methods not prescribed in the *General Reporting Protocol*.
2. Review any simplified estimation methods used to ensure that they are appropriate to the emissions source(s) to which they have been applied, and that the resulting emission estimates are reasonably accurate.

It is possible that the discovery of material misstatements not attributable to simplified estimation methods may nonetheless necessitate a revision to the emission sources estimated using such methods. In particular, if the correction of material misstatements in a Member's emission inventory results in a *reduction* in the Member's total reported emissions, it may be necessary to re-estimate emissions using *General Reporting Protocol*-prescribed methodologies for some sources that were originally estimated using simplified estimation methods. Such re-estimations will be necessary if the sum of emissions estimated using simplified methods exceeds five percent of the revised total emissions.

If a Verification Body discovers a material misstatement(s) that necessitates a downward revision in a Member's total emissions, the Verification Body must alert the Member to the need to review and possibly revise the sources eligible to be estimated using simplified methods based on the entity's corrected emissions total.

Once emissions estimated using simplified methods are approved by a Verification Body, they do not need to be re-calculated in future emissions years as long as the initial assumptions upon which the calculations are based remain constant and the five percent threshold is not exceeded.

Figure 2.1 Conceptual Application of the Materiality Threshold





Verification Bodies must ensure that errors discovered do not cause a Member's stated direct or indirect emissions to vary by more than five percent above or below the band of (acceptable) inherent uncertainty surrounding a Member's stated emissions in order to issue the Member a finding of "Verified."

In determining whether a material misstatement has occurred, the Verification Body must compare the *aggregate total* of individual misstatements (separately for direct and indirect emissions) against the five percent materiality threshold. Thus, the discovery of many small reporting errors, each of which might be immaterial when considered in isolation, may nonetheless lead to a material misstatement when aggregated to the entity level.

Although the materiality threshold is applied at the entity level, Verification Bodies must conduct a risk-based assessment of all of the facilities associated with an entity and sample an appropriate number of systems, sources, and calculation methodologies to look for errors or omissions within the emission report. If Verification Bodies discover reporting errors, they must determine if these errors, when extrapolated throughout the Member's operations, will result in a material misstatement.

It is possible that a Verification Body may discover more than one form of misstatements during their risk assessment. Since The Registry is ultimately interested in ensuring that a Member's total Scope 1 and Scope 2 emissions are within five percent of the reported emissions, The Registry directs Verification Bodies to sum the total discrepancies of direct

and indirect emission separately to determine if a material misstatement has been made in either category at the entity level.

In assessing whether misstatements are material, the Verification Body shall determine whether the total reported emissions, separately for Scope 1 and Scope 2, are at least 95 percent accurate using the following equation:

Percent accuracy =

$$100 - \frac{(\text{sum of errors, omissions, misreporting}) * 100}{\text{total reported emissions}}$$

As long as the Member correctly applied one of The Registry's approved quantification methodologies for an emissions source, the Verification Body should not associate any error or misreporting with the Member's estimate. For example, if a Member decides to use an approved methodology that uses a default emission factor, then the Verification Body should not associate any error with the difference between that methodology and the quantity of emissions that would have resulted based on direct measurement.

*Note: As defined earlier, The Registry's GVP sets verification guidelines for its voluntary reporting program. Therefore the entity-wide materiality threshold of five percent of direct emissions and five percent of indirect emissions pertain to The Registry's voluntary reporting program as detailed in the General Reporting Protocol. Any state/provincial/regional/federal mandatory GHG reporting programs may have different materiality thresholds.*



### Example 2.1 Application of the Five Percent Materiality Threshold

A Verification Body has been contracted to verify the emission report submitted by a small regional bank. The bank has 20 branches located in Illinois. The Verification Body has completed its review of the bank's direct (Scope 1) emissions, and has found no material errors. However, in reviewing the bank's indirect (Scope 2) emissions from electricity use, the Verification Body discovers that the bank incorrectly applied the electricity emission factors for eGrid Subregion 14 to *all* of its branches. Although most of Illinois falls within Subregion 14, the northern tier of the state is in Subregion 12, and six of the bank's branches are located in this northern tier.

The difference between the emission factors for Subregion 12 and Subregion 14 is 19 percent. However, this 19 percent error applies only to the six branches in northern Illinois. Reviewing the emission report, the Verification Body determines that these six branches accounted for 30 percent of the bank's indirect (Scope 2) emissions. Therefore, the use of the incorrect emission factor leads to an error of  $(0.3 \times 19\%) = 5.7$  percent in the bank's *total entity level* indirect CO<sub>2</sub>e emissions. Although the bank had no material discrepancies in its reported *direct* emissions, the 5.7 percent discrepancy in *indirect* emissions exceeds the five percent materiality threshold, and therefore the Verification Body concludes that the bank's emission report has a material misstatement.

In this example, it should be emphasized that considerable uncertainty surrounds the electricity emission factors for eGrid Subregions 12 and 14 (and all of the other eGrid Subregions). Thus, even after the bank corrects its report by applying the Subregion 12 emission factor to the six northern Illinois branches, uncertainty will remain in the reported Scope 2 emission estimate. However, the uncertainty associated with the eGrid electricity emission factors (as with *all* emission factors and methodologies approved for use by The Registry and included in the *General Reporting Protocol*) is considered to be inherent uncertainty, and therefore need not be estimated and should not be treated as a discrepancy for the purposes of determining whether or not material misstatements have occurred.

### Example 2.2 Offsetting Errors

During verification, a Verification Body finds that a Member used an incorrect emissions factor to calculate its CO<sub>2</sub> emissions, resulting in an overstatement of direct CO<sub>2</sub> emissions by seven percent. The Verification Body also discovers that the Member underestimated its SF<sub>6</sub> emissions from one facility, resulting in an understatement of direct emissions by four percent on a CO<sub>2</sub>e basis. In this situation, a Verification Body must total the misstatements to determine if their sum exceeds the five percent materiality threshold.

$$(+7\%) + (-4\%) = 3\% \text{ total variance of reported emissions due to discrepancies}$$

In this case, assuming these were the only misstatements a Verification Body discovered, the Member's emission report would be verifiable, as the total discrepancy (three percent) is less than The Registry's materiality threshold of five percent.

If the above Member *overstated* rather than understated its SF<sub>6</sub> emissions by four percent, then the discrepancies would total 11 percent, and the Member's emissions would not be verifiable:

$$(+7\%) + (+4\%) = 11\% \text{ total variance of reported emissions due to discrepancies}$$

### Example 2.3 Non-Offsetting Errors: Direct vs. Indirect Emissions

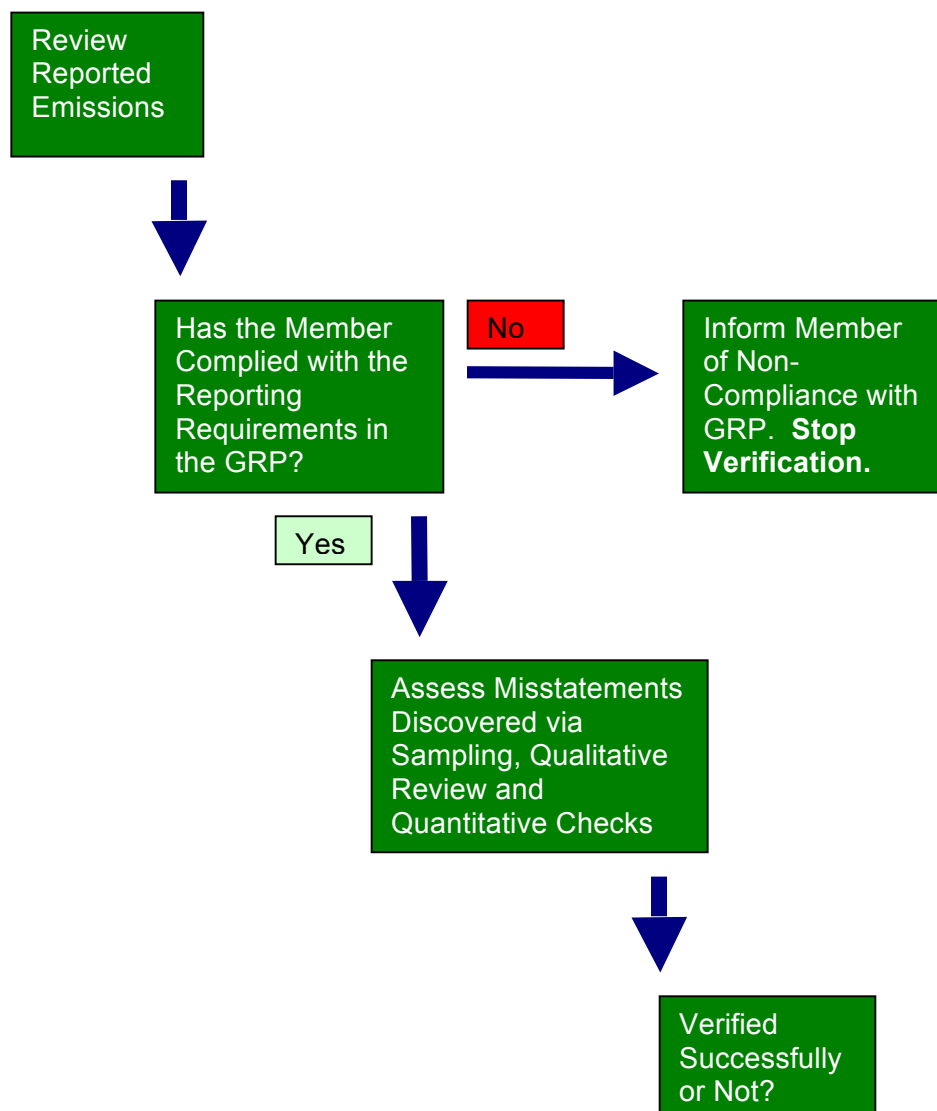
During verification, a Verification Body finds that a Member applied an incorrect emissions factor to calculate its CO<sub>2</sub> emissions from natural gas combustion, resulting in an overstatement of its *direct* emissions by seven percent. The Verification Body also discovers that this Member used an incorrect emissions factor for its electricity consumption in California, leading to an underestimation of its *indirect* emissions by four percent. In this case, while the four percent indirect emissions discrepancy is acceptable, the seven percent direct emissions discrepancy leads to a finding that a material misstatement has occurred. The Member must correct its direct emissions estimates for natural gas combustion before its emission report can be accepted as verified.

As this example illustrates, while discrepancies must be summed *within* Scope 1 (direct emissions) and Scope 2 (indirect emissions) to determine whether a material misstatement has occurred, discrepancies are never summed *across* Scopes. Instead, the five percent materiality threshold must be applied separately to Scope 1 and Scope 2 emissions. If the sum of discrepancies for *either* Scope 1 or Scope 2 emissions is found to exceed five percent, a material misstatement has occurred.

The application of a materiality threshold involves qualitative as well as quantitative considerations (see Figure 2.2 and Examples 2.4 through 2.6). The Registry requires that Verification Bodies follow a hierarchical assessment when evaluating material misstatements. First, a Verification Body must confirm that a Member meets all of The Registry's reporting and programmatic requirements (qualitative assessment).

Then, a Verification Body must conduct a risk assessment to sample for reporting errors (quantitative assessment). If a Verification Body discovers that a Member has not complied with The Registry's program requirements (e.g. has not reported its Canadian operations) then it must inform the Member, and cease further verification activities until the Member can correct the error.

**Figure 2.2 Materiality Hierarchy**



#### **Example 2.4 Qualitative Misstatement Due to Systemic Omission of GHGs**

During verification, a Verification Body finds that a Member has not included HFCs in its emissions reporting. Upon further inspection, the Verification Body discovers that there were HFC emissions from air conditioning units for the company vehicles and buildings. The Verification Body's estimate of the omitted HFC emissions is less than two percent of the Member's reported direct emissions. In this case, while quantitatively the oversight would be immaterial (below the five percent materiality threshold), the systemic omission of one of the GHGs required to be reported by The Registry constitutes a qualitative material misstatement that requires corrective action.

If, however, the Member reported HFCs but accidentally omitted emissions from a couple of HVAC units that comprised 0.5 percent of the Member's direct emissions, then this would constitute an immaterial misstatement.

As this example illustrates, basic Registry program requirements must be met. Systemic omission of one of the six GHGs required to be reported by The Registry constitutes a material misstatement.

#### **Example 2.5 Qualitative Misstatement Due to Omission of a Facility or Emissions Source**

During verification, a Verification Body finds that the Member has omitted one of its warehouses and one satellite office from its reported inventory. The Verification Body estimates that, combined, these emissions constitute less than two percent of the Member's total indirect emissions. Furthermore, for the main headquarters, the Verification Body finds that the Member has omitted its emergency generator (which was operated during the emissions year). From upper bounds calculations, the Verification Body concludes that the emissions from the emergency generators constitute less than one percent of the Member's total direct emissions.

Though the quantity of emissions associated with the omitted warehouse and satellite office may not be quantitatively material, the omission of these facilities constitutes a lack of complete reporting and a qualitative material misstatement. Conversely, the isolated omission of the emergency generator from the headquarters can be considered an immaterial misstatement. If the Member were to systemically omit emergency generators from several of its facilities, then this would be a qualitative material misstatement due to failure to report emissions sources as required by The Registry.

As this example illustrates, even if an omitted facility or systemic omission of a particular emissions source is below the five percent materiality threshold, the omission still represents a qualitative material misstatement due to The Registry's requirements for complete reporting.

#### **Example 2.6 Qualitative Misstatement Due to Miscategorization of Emissions**

During verification, a Verification Body finds that the Member has correctly quantified the emissions from its emergency generators; however those emissions have been miscategorized as mobile combustion rather than stationary combustion. Furthermore, the Verification Body finds that some fugitive emissions have also been cited incorrectly as process emissions. Though the reported numbers are correct, the miscategorization of emission sources is a qualitative material misstatement.

### 2.5.1 Mitigating Discrepancies

If during the course of conducting the verification activities, a Verification Body discovers a discrepancy (either material or not), it must inform the Member of the error in a timely fashion, so that the Member may work to correct the error or discrepancy. The Registry requires Members to correct as many misstatements as is possible; however, it realizes that some misstatements may not be able to be corrected in a timely manner or at all (missing data, etc.). As a result, The Registry allows non-material misstatements to remain in a Member's report.

Verification Bodies must communicate with Members to determine how much time a Member will require to correct any discovered misstatements, so that they can plan another assessment of the corrected misstatements accordingly.

While The Registry requires Verification Bodies to inform Members of discrepancies and encourages the correction of errors before completing a final Verification Statement, The Registry strictly *prohibits* Verification Bodies from providing any consulting activities to the Member to help them correct the discovered error or discrepancy. In summary, Verification Bodies must clearly explain the error to the Member, but cannot help the Member correct the error. Verification Bodies should agree to a typical and reasonable response that will allow for ample time for Members to correct discrepancies before completing the Verification Statement.

### 2.6 Risk-Based Approach to Verification

Given the impossibility of assessing and confirming the accuracy of every piece of GHG information that goes into an emission report, The Registry has adopted ISO 14064-3's risk-based approach to verification. This approach directs Verification Bodies to focus their attention on those data systems, processes, emissions sources, and calculations that pose

the greatest risk of generating a material discrepancy in an effort to locate systemic reporting errors.

The main objective of the verification effort is to confirm that the Member's stated emissions comply with The Registry's materiality threshold of five percent. Thus, a Verification Body's risk assessment of a Member's emissions will focus on those errors that might materially affect the Member's stated emissions. Verification Bodies must perform risk assessments at the entity-level.

This means that Verification Bodies must survey a Member's emission sources, facilities, GHG gases, processes, policies, and operations and identify those that pose the greatest threat to causing material misstatements in the reported emissions. From this entity-level risk assessment, Verification Bodies will identify certain facilities, sources, policies, etc. to sample for errors. Thus, a Verification Body will visit some individual facilities and they will be assessing the overall entity-level risk of the Member's emissions.

### 2.7 Scope of Verification

The scope of a Verification Body's assessment of GHG emissions is defined by the required components of The Registry's *General Reporting Protocol* and the complexity of the Member's operations. All Verification Bodies must be familiar with this document, and they should refer to it regularly during their verification activities.

While CRIS prepares multiple emission reports for a single Member for each emissions year, The Registry requires Verification Bodies to verify only the emissions contained in a **Member's Entity Emissions Detail Report (Private)** (which summarizes a Member's total entity emission in North America, as well as all facility emissions, and includes a list of

emissions sources for each facility). All other data contained in the Entity Emission Report. Since CRIS will aggregate a Member's data automatically to create other reports, The Registry accepts these additional reports as correct if the underlying Entity Emissions Report is verifiable. If a Member optionally reports its worldwide emissions inventory, the Verification Body must additionally verify the Worldwide or Non-North America Entity Emissions Detail Report (Private); however, as discussed in Section 2.7.4, the Verification Body may apply the verification criteria to all worldwide emissions (including North America).

### 2.7.1 Data from Regulatory Programs

Some Members will include GHG data in their entity-wide emissions footprint that they have also reported to government agencies for regulatory purposes (e.g., CO<sub>2</sub> from CEMS as required by the U.S. Environmental Protection Agency's (EPA) Acid Rain program: 40 CFR Part 75).

While The Registry requires Verification Bodies to include regulatory data in their entity-wide risk assessment, it encourages Verification Bodies to take into account the providence of the regulatory data in developing their risk-based assessment. Thus, if a Verification Body judges that certain emissions reported under regulatory programs are likely to be accurate, it might assign a low risk value to these reported emissions.

### 2.7.2 Transitional Reporting

The *General Reporting Protocol* provides Members with a time limited option to report less than complete emissions data during their first two years of participation in The Registry. Members that choose to utilize this option will be called "Transitional Members." Transitional Members may choose to limit their reports to fewer than all six GHGs (but must report CO<sub>2</sub> emissions from stationary combustion sources within one state, province, territory, or native sovereign nation at a minimum). Furthermore, Transitional Members may choose to limit their reports to one or more countries, states,

CRIS reports are generated based on the GHG provinces, or native sovereign nations (but they must report comprehensively for the geographic areas chosen). Transitional reporting is allowed for no more than two years of data.

If a Member chooses to report on a transitional basis, the Verification Body must first check the eligibility requirements set forth in the *General Reporting Protocol* to confirm that the Member is in fact eligible to submit a transitional report. The Verification Body should then check to make sure that the Member has met the minimum reporting requirements for transitional reporting.

Beyond these eligibility and reporting requirement checks, the verification process for Transitional Members is the same as for other (complete) Members. The only difference is the scope of the verification which, for Transitional Members, is limited to those geographic regions and GHGs that the Member has chosen to include in the emission report.

Please refer to Chapter 8 of the *General Reporting Protocol* to learn about transitional reporting in greater detail.

### 2.7.3 Historical Emissions Data

Members may also choose to report any number of years of historical GHG emissions to The Registry. Historical data is data that has been previously calculated but may not meet The Registry's reporting and verification requirements.

The minimum reporting requirements for historical data are described in the *General Reporting Protocol*. Please refer to Chapter 9 in the *General Reporting Protocol* for more information.

If historical data was third-party verified as part of another GHG program, The Registry does not require this data to be re-verified, however, a formal written attestation of verified data by a third-party Verification Body must be submitted to The Registry along with the historical emission report.



If a Member's historical data is calculated, but has not previously been third-party verified, The Registry recommends that Members use a Registry-recognized Verification Body to verify this data.

If a Member chooses to report GHG emissions for a past year in accordance with The Registry's reporting requirements and the Member does not want the emissions report be classified as "historical," then the Member must have the emissions report verified by a Registry-recognized Verification Body in accordance with The Registry's verification requirements.

### 2.7.4 Other Optional Emissions Data

Members may choose to report emissions in addition to those required by The Registry. For example, in addition to their Scope 1 and 2 emissions, Members may voluntarily choose to report their:

- Scope 3 emissions (e.g., indirect emissions from sources outside Scope 2). Scope 3 emissions will be clearly identified.
- Unit-level emissions (individual sources, etc.)
- Emissions based on both equity share and control consolidation methodologies
- Performance metrics
- GHG reduction goals
- Other GHG management policies or documents
- Worldwide emissions

In general, The Registry does not require optional emissions to be verified. Thus these types of emissions are outside the normal verification scope. Two exceptions to the rule which must be verified are:

1. The optional category of Scope 1 and Scope 2 worldwide emissions; and,
2. Equity share consolidation methodology.

### Climate Registered™ Program

Climate Registered™ is a program that recognizes organizations for voluntarily reducing their greenhouse gas (GHG) emissions. The program includes four levels of recognition, ranging from Climate Registered™ - if an organization has reported and verified its complete GHG inventory to The Registry - to Climate Registered™ Silver, Gold and Platinum, which are achieved through absolute GHG reductions and other measures.

Verification Bodies are not required to verify emissions reductions claimed by organizations as part of the Climate Registered™ program.

### Verifying Worldwide Emissions

Since The Registry's reporting requirements are limited to a Member's North American GHG emissions, The Registry requires Verification Bodies to prepare Verification Statements attesting to the quality of a Member's stated North American emissions. These Verification Bodies must be recognized by The Registry to conduct verification activities—meaning that they must be accredited to ISO 14065 and meet The Registry's additional accreditation criteria (Refer to The Registry's *Guidance on Accreditation*).

If a Member chooses to report their worldwide emissions, they must decide between one of the following two options:

Option 1: The Member may choose to prepare two separate emissions reports, one for North America only and one for non-North America, and have these emissions reports verified separately. The Member must use a Registry-recognized Verification Body for verification of the North American emissions report but may choose a different, ISO 14065-accredited verifier (not necessarily Registry-recognized) for verification of the non-North American emissions report. Each report and verification must conform to The Registry's criteria (e.g. five



percent materiality threshold, five percent threshold for simplified estimation methodologies, etc.). The Member may also choose to have one Registry-recognized Verification Body conduct both the North American and non-North American verifications; however, separate verification statements are still required for each emissions report.

Option 2: The Member may choose to prepare separate emissions reports, one for North America only and one for worldwide (including North America). The Member must use one Registry-recognized verifier for both reports and separate verification statements must be provided for each emissions report. The Verification Body will need to verify the Worldwide Entity Emissions Detail Report (Private).

Regardless of which option is selected for verification of worldwide emissions, the verification must be conducted to a reasonable level of assurance.

Since reporting worldwide emissions is optional, The Registry does not include non-North American emission factors or calculation guidance for worldwide emissions, in its *General Reporting Protocol*. Furthermore, The Registry does *not* provide oversight of the verification of worldwide emissions (e.g. The Registry does not perform its final quality check on non-North American emissions). Nonetheless, The Registry strives to ensure the high quality of any emissions data reported to its voluntary program. Consequently, Verification Bodies used to conduct verification activities related to non-North American emissions for Registry Members must still be accredited to ISO 14065.

### 2.7.5 Other (Non-Emissions) Data

Beyond GHG emissions, Members' emission reports will also contain other organizational information that will need to be sampled and/or assessed as part of the verification activities.

This additional information includes:

1. **Activity level emissions data.** This includes data used to compute emissions (emission factors, fuel use, etc.)
2. **Quantification methods used for entering pre-calculated emissions in CRIS.** If the Member has chosen to calculate any emissions off-line (rather than using the automated calculation procedures included in CRIS, Verification Bodies must confirm that the Member's offline quantification methodologies are appropriate, valid, of a comparable accuracy as those defined in the GRP and are transparently documented in the Member's emission report..
3. **Other Descriptive Entity Information.** This includes documentation on management systems, information systems, ownership, etc.

## 2.8 Verification Cycle

The Registry requires annual verification of all GHG data and allows for Members to contract with the same Verification Body for up to six consecutive years. The verification cycle starts anew each time a Member retains a new Verification Body, even if the Member switches Verification Bodies before six years.

Verification Bodies must conduct verification activities every year of the Verification Body-Member relationship. However, if a Member's management systems and/or emissions sources do not change from year to year, then The Registry allows Verification Bodies to use their professional judgment to determine the appropriate level of a verification assessment in order to issue a Verification Statement with reasonable assurance of a Member's stated emissions. At a minimum, each year a Verification Body must conduct an entity-wide risk assessment and check for reporting errors and misstatements.

The Registry allows Verification Bodies to streamline verification activities for Members in the years following a successful comprehensive verification process in order to minimize

verification costs whenever this is possible without compromising the integrity and credibility of the reported GHG data. To this end, The Registry allows for a three-year verification cycle, which permits a streamlined verification process in the second and third years of the cycle, assuming a Member does not experience any significant changes to their organizational structure or GHG emissions (see Figure 2.3 below).

In Year 1 of the three-year cycle, a Verification Body must comprehensively assess a Member's emission report and its compliance with Registry requirements; confirm its emissions sources and GHGs; review its management policies and systems; and sample data for calculation and reporting errors in order to gain a detailed understanding of a Member's operations and resulting GHG emissions.

If a Member's organizational structure and GHG emissions have not changed significantly, and the Member asks the same Verification Body to verify the Member's emissions the next year, then a Verification Body may choose to streamline their verification activities, as long as the Verification Body can still provide reasonable assurance that the Member has accurately reported its emissions within five percent.

While The Registry largely defers to a Verification Body's professional judgment to assess if the Member's organizational structure or emissions have changed significantly after the first year of the verification cycle, The Registry deems the following changes as being material, and therefore as triggering a review on the part of the Verification Body as to whether more comprehensive (or more substantial) verification activities might be required:

- A Member becomes a "complete" reporter (no longer a Transitional Reporter)
- A Member's emissions change by more than five percent from the previous year's emissions
- Changes to GHG data collection, management, and/or reporting systems and/or the key persons responsible

- Misstatements identified through the course of verification activities

- Other issues as deemed appropriate by the Verification Body

While some of the above changes might necessitate a full verification, other changes may still be addressed as part of a streamlined process, depending on the professional judgment of the Verification Body. A full verification, including one or more facility visits, is required if:

- The Member selects a new Verification Body;
- The Member's overall Scope 1 emissions increase or decrease by more than 10 percent on a CO<sub>2</sub>-e basis as a result of:
  - Acquired or new facilities and/or operations;
  - Changes in the nature of emissions sources, emissions control technology, and/or emissions monitoring equipment.

Changes in the quantity of emissions generated as a result of the following are exempt from this analysis: increased or decreased energy use due to increases or decreases of previously existing production operations, divestiture of facilities, cessation of operations.

If a full verification is triggered, at least one facility visit must be conducted. The minimum number and selection of facilities to be visited shall be based on the Verification Body's risk assessment and the methodologies provided in Section 4.3.4. For example, if during Year 1, the Verification Body identified that a minimum of five facility visits was required, and the following year, due to an increase in emissions from acquired facilities, application of the methodology indicates a minimum of seven facility visits, then the Verification Body must make up the difference in number of facility visits required and visit at least two ( $7 - 5 = 2$ ) additional facilities in Year 2.

The specific activities that constitute streamlined verification will vary depending on

the circumstances, but in all cases the Verification Body must perform the minimum set of activities that will allow it to conduct a risk-based assessment of materiality and to attain reasonable assurance in the findings presented in its Verification Statement. The minimum required activities include the risk-based assessment and the verification of emission estimates against the verification criteria.

Beyond these required activities, the Verification Body should use its professional judgment to determine the set of verification activities that will be required to meet the reasonable assurance goal. Suppose, for example, that a Member divested itself of a subsidiary but all of the existing information systems and controls remain unchanged from the first year of the verification cycle. In this case, a full review of the information systems and controls may not be necessary.

Similarly, if a Member opens a new facility but retains its existing GHG information system, the Verification Body may need to ensure that the new facility has been properly incorporated into the information system but may not need to conduct another detailed review of that information system.

In short, The Registry does not prescribe the specific activities that should constitute a streamlined verification (beyond the activities noted above), but rather encourages Verification Bodies to use professional judgment in tailoring a verification process appropriate to the specific circumstances of each Member. This latitude to tailor the verification process to the circumstances applies *only* to streamlined verifications; not to the full verification that the Verification Body *must* conduct at least once every three years.

*NOTE: The Registry articulates this process to serve as guidance for ways to streamline the verification process. Verification Bodies are not required to follow this three-year cycle, but are allowed to do so, as long as they can meet the intent of the verification process, appropriately manage their own risks, and thus are able to*

*provide reasonable assurance that a Member's emissions contain no material errors, omissions or misrepresentations.*

### **Verifying Multiple Years of Data**

If a Member needs to correct a previously reported and verified year of data, a Verification Body may verify this information together with the Member's current emission report. This will count as one year in the three-year verification cycle.

If a Member requests its Verification Body to verify multiple years of historical data along with its current emission report, they may do so. There is no limit to the number of years of historical data that can be verified during the three-year verification cycle. In other words, historical years of data are not counted toward the three-year verification cycle. For example, if in 2009 a Verification Body verifies a Member's current (2008) emission report in addition to four consecutive years of historic data (2004 through 2007), the Verification Body will have completed only one year of the six-year relationship and will be eligible to serve as the Member's verifier for another five years.

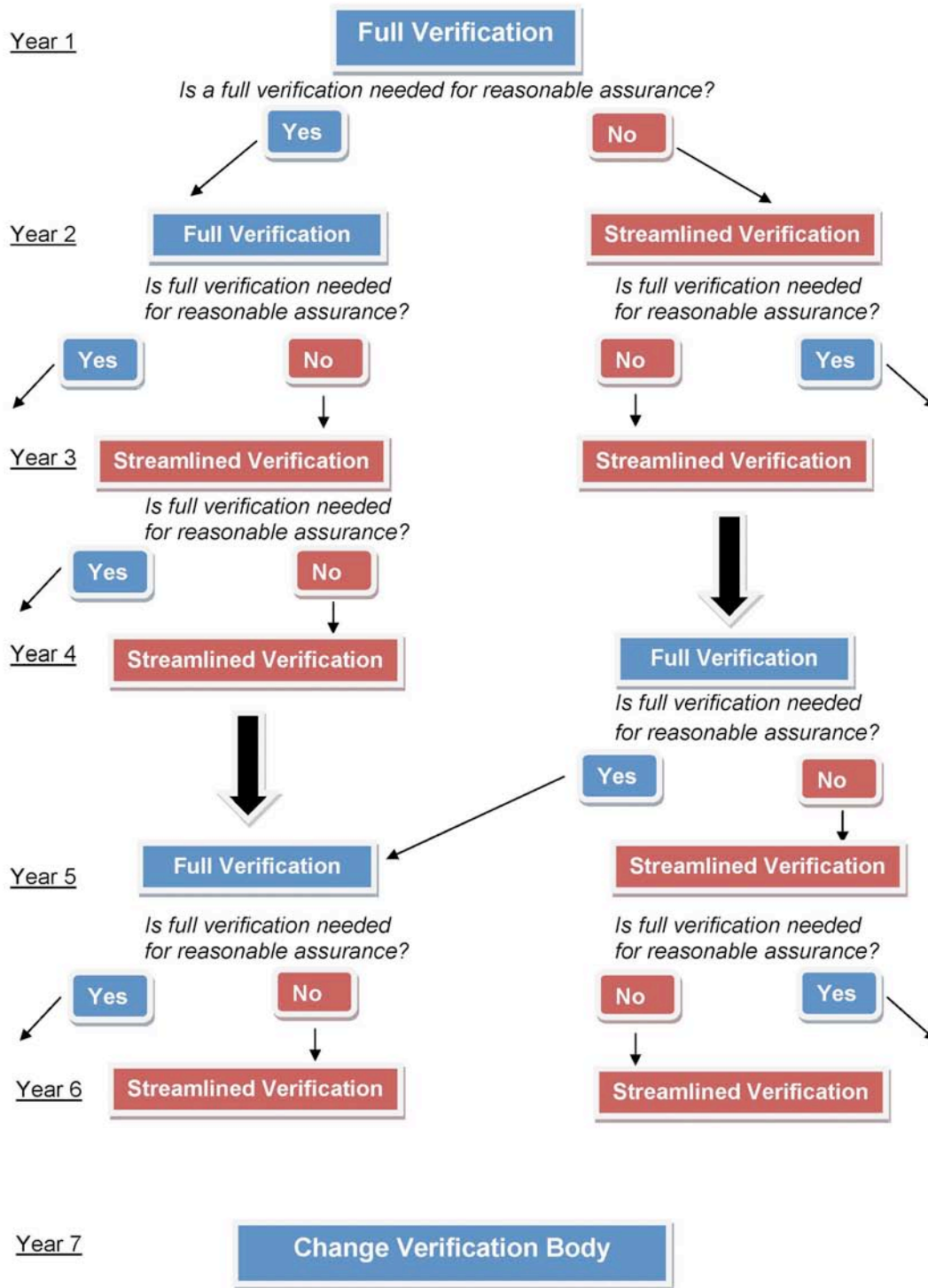
### **Previous Verification Body- Member Relationships**

If a Verification Body has a previous relationship with a Member through a different registry or program (e.g. CCAR, Chicago Climate Exchange, CARB or other mandatory programs, etc.) then the prior GHG verification work will count toward The Registry's six-year limit on the Verification Body/Member relationship.

The six-year limit begins at the time the Verification Body is retained by the Member for verification services, whether for The Registry or another program. The Verification Body- Member relationship must not exceed verification of six (current) emissions years. The Registry does not limit the number of past years of data that a Verification Body can verify for a Member during this six-year period.

For example, if a Verification Body has provided verification services to a CCAR Member for two years and the CCAR Member joins The Registry, the maximum number of years the Verification Body will be able to continue to provide verification services to the Member under The Registry is four years, even if the Verification Body verified eight past years of data for that CCAR Member during the last two years. If a Verification Body has provided six years of verification services to a CCAR Member and the CCAR Member joins The Registry, then the Verification Body must wait three years before providing verification services to the Member for The Registry.

**Figure 2.3 Three-Year Verification Cycle**





## 2.9 Batch Verification Process

To reduce the transaction costs associated with the verification of small office-based organizations, The Registry offers a modified version of its standard verification process. The Registry refers to this modified process as “batch verification.”

The Registry offers batch verification options to Members that have:

- Not more than 1000 tonnes total CO<sub>2</sub>-e emissions per emissions year,
- No process emissions; and
- Fugitive emissions that comprise less than five percent of the entity’s total emissions.

In addition, Scope 1 and Scope 2 emissions must originate from only the following sources:

- Indirect emissions from electricity consumption;
- Direct emissions from stationary combustion for heating, cooling, or emergency electricity generation;
- Direct emissions from mobile combustion; and,
- Fugitive emissions from refrigeration, air conditioning, and/or fire suppression.

For Members whose emissions are just outside of the above parameters, the Batch Verification Body will determine eligibility on a case by case basis.

The following is a summary of the steps of the batch verification process.

1. **Registry Selects a Batch Verification Body Each Year:** Each year, The Registry will solicit competitive bids from accredited Verification Bodies interested in providing batch verification services. The Registry will

select one or more Verification Bodies to perform all eligible verifications for the current and any previous emissions years. Upon serving as a Batch Verification Body, a Verification Body will be ineligible to bid on batch verification for the following three years, but may continue to conduct individual verifications for the current emissions year as well as future emissions years.

2. **The Registry and Batch Verification Body Develop Standardized Contract**
3. **Members Calculate and Report Their Annual GHG Data**
4. **Members Communicate Interest in Batch Verification and Batch Verification Body Determines if They Are Eligible:** Members interested in batch verification must submit an application to the Batch Verification Body (listed on The Registry’s website). The Batch Verification Body will be responsible for determining the eligibility of Members.
5. **Batch Verification Body and Members Sign Contract:** Each Member signs a standardized contract with the Batch Verification Body. If Members require non-standard contract language, they may request to negotiate a specific contract for an additional fee as The Registry’s contract with the Batch Verification Body permits.
6. **Batch Verification Body Receives Members’ Documentation:** Once the respective parties have signed the contracts, the Batch Verification Body will review all batch Members’ emission information. Members must supply information using standardized templates provided by The Registry. Members are required to submit their reports for verification in CRIS and submit supporting documentation to the Batch Verification Body.

**Continue to steps 6-12 of the verification process (Refer to Section 2.2).**

At the beginning of each year, The Registry will publish as schedule for batch verification, including deadlines for submittal of the application and for submittal of data in CRIS. The verification deadline for Batch Verification may be accelerated (e.g. Members may be required to upload the final Verification Statements in CRIS by the beginning of July).

Since The Registry selects Batch Verification Bodies on an annual basis, there will be little risk that a Batch Verification Body will have an ongoing potential for conflict of interest with a Batch Member. Therefore, The Registry waives the requirement for Batch Verification Bodies to conduct Case-Specific COI Assessments<sup>12</sup> prior to commencing a batch verification. The Batch Verification Body is however required to provide a letter to The Registry attesting that they have not provided GHG inventory development consultancy services to the Member.

If the Batch Verification Body is unable to provide a finding of limited assurance of a Member's emissions without visiting a facility, the Batch Verification Body must inform the Member that they are not eligible for batch verification. At that time, the Member must contract with a Verification Body to conduct normal verification activities. The Batch Verification Body may bid on this contract.

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<sup>12</sup> Refer to Section 3.2.



## PART 3: PREPARING FOR VERIFICATION

### 3.1 Responding to a Member's Request for Proposal for Verification Activities

Members may approach Verification Bodies to discuss verification activities at any point in the emission reporting process. However, it will be most efficient for Verification Bodies to discuss verification activities and prepare a verification proposal for a Member if the Member has completed entering their annual GHG emissions into CRIS, as then Verification Bodies will understand the total scope of the Member's operations and emissions.

Verification Bodies will likely need to respond to a Member's Request for Proposal (RFP) before the Member selects them to conduct the verification activities. Verification Bodies should review the Member's request, evaluate if they have the needed competency to assess the Member's emissions, evaluate any potential conflicts between the Member and the Verification Body, and respond to the Member's request, if they are interested. Two key components of this process are: 1) assessing case-specific conflict of interest, and 2) assembling a verification team.

### 3.2 Conflict of Interest (COI)

To protect the credibility and rigor of The Registry's verification process, the relationship between Verification Bodies and Members must not create or appear to create a high potential for COI. In some instances, where potential or real conflicts do exist, Verification Bodies must take steps to mitigate COIs before The Registry will allow verification activities to proceed.

While conducting verification activities for Members, the Verification Bodies must work in a credible, independent, nondiscriminatory and transparent manner, as outlined in ISO 14065 Annex B. In addition to the guidance in ISO 14065, The Registry requires Verification Bodies to adhere to additional rules to protect

against unacceptable potential for COI between parties. The Registry developed these rules to minimize the risk of potential and real COIs between Verification Bodies and Members.

Throughout the verification process The Registry requires Verification Bodies to assess three types of COI with Members:

1. **Case-Specific COI.** A direct conflict between a Member (including its parent company and all related organizations) and their chosen Verification Body (including its parent company and all related organizations). Every year a Member requests a Verification Body to conduct verification services, the Verification Body must evaluate and document all pre-existing relationships and conflicts between it and the Member before a contract for services is negotiated and signed. The Registry will screen each case-specific COI Assessment Form before verification activities begin. Additionally, the Accreditation Body will reevaluate and confirm the COI evaluation during their surveillance audits. This process will ensure that a Verification Body can render an impartial opinion of a Member's GHG emission report. Additional details about this process are explained below in Section 3.2.1.
2. **Emerging COI.** A direct conflict between a Member and their chosen Verification Body in the 12 months that follow the completion of verification activities. For a period beginning with the signing of the contract, and continuing until one year following the close of the contract, Verification Bodies must monitor their relationship (and the relationship of individual team members) with the Member to ensure impartiality has been protected in the verification process.

*Note: The Registry automatically deems the potential for COI between the Batch Verification Body and an eligible Member as low, provided that the Batch Verification Body has not*

*provided GHG inventory development consultancy services to the Member. Given that Batch Verification Bodies are selected by The Registry (not the Member) and will change on an annual basis, there will be little risk that a Batch Verification Body will have an ongoing conflict with a Batch Member. Therefore, The Registry waives the requirement to conduct case-specific COI assessments prior to commencing a batch verification. The Batch Verification Body is however required to provide a letter to The Registry attesting that they have not provided GHG inventory development consultancy services to the Member.*

### **3.2.1 Case-Specific COI**

For purposes of The Registry's voluntary reporting program, a case-specific COI is defined as a situation in which a Verification Body has competing professional and/or personal interests that could impede its ability to objectively review and evaluate a Member's compliance with The Registry's reporting requirements. Even without explicit indication of a compromised relationship between a Member and a Verification Body, a COI could also involve a situation in which the appearance of impropriety could undermine confidence in the Verification Body's ability to assess the reported emissions.

In evaluating their case-specific COIs, Verification Bodies must thoroughly assess any prior or existing relationships with the Member, and the Member's GHG inventory technical assistance provider (if one), as well as relationships between subcontractors and all individual members of the proposed verification team and the Member. The COI assessment findings must be reported to The Registry using the COI Assessment Form in Appendix A1. In general, The Registry will deem a Verification Body to have a high risk of COI with a Member

if: 1) the Verification Body has a conflict with a Member, and/or 2) any member of the proposed verification team has a conflict with the Member. Any Verification Body that determines that its risk for COI is anything other than low may not provide verification services to that Member.

To assess the impartiality of a Verification Body and its staff, a Verification Body must confirm that the following conflicts do not exist:

1. A Verification Body will have a high COI if;
  - It and a Member share any management
  - It has provided any GHG consultancy services to the Member
  - It has provided non-GHG consultancy services that may influence the Verification Body's impartiality
2. Additionally, a Verification Body must assess Personal COI as a part of its case-specific COI assessment. A member of the verification team will have a high risk Personal COI with a Member if they:
  - Have a direct conflict with the Member.
  - Have been an employee of the Member within the last three years.
  - Have provided any of the prohibited GHG services (as described in the box below) to the Member.
  - Currently have a direct financial interest (mutual funds and exchange-traded funds excluded) in the Member's company in excess of \$5,000.

## **GHG Consultancy Services**

GHG consultancy services are defined as including any of the following activities:

1. Designing, developing, implementing, or maintaining a GHG emissions inventory
2. Designing or developing GHG information systems
3. Developing GHG emissions factors or other GHG-related engineering analysis
4. Designing energy efficiency, renewable power, or other projects which explicitly identify GHG reductions as a benefit
5. Preparing or producing GHG-related manuals, handbooks, or procedures specifically for the Member
6. Appraisal services of carbon or GHG liabilities or assets
7. Brokering in, advising on, or assisting in any way in carbon or GHG-related markets
8. Legal and expert services related to GHG emissions and/or Registry verification.

## **Additional High COI Non-Verification Services**

1. Any service related to information systems, unless those systems will not be part of the verification process and excluding third-party auditor or registration services;
2. Managing any health, environment or safety functions which explicitly identify greenhouse gas reductions as a benefit;
3. Bookkeeping or other services related to the accounting records or financial statements, unless those services limited to financial auditing;
4. Appraisal and valuation services, both tangible and intangible related to GHG emissions or reductions inventories;
5. Fairness opinions and contribution-in-kind reports in which the Verification Body has provided its opinion on the adequacy of consideration in a transaction, unless the resulting services shall not be part of the verification process;
6. Any actuarially oriented advisory service involving the determination of amounts recorded in financial statements and related accounts;
7. Any internal audit service related that has been outsourced by the Member that relates to the Member's GHG inventory, internal accounting controls, financial systems or financial statements, unless no consulting or advice was provided as part of the audit;
8. Acting as a broker-dealer (registered or unregistered), promoter or underwriter on behalf of the owner or operator;
9. Expert services to the Member or their legal representative for the purpose of advocating their interests in litigation or in a regulatory or administrative proceeding or investigation involving GHG emissions, unless providing factual testimony.

A Verification Body must determine whether any of the above conditions apply to the Verification Body or any of the staff it has proposed to conduct the verification activities.

*Note: While Verification Bodies may NOT conduct both GHG consultancy services and verification services for the same Member, Verification Bodies may offer both types of services to Members. Verification Bodies must choose which of the two services they want to offer to each Member as they are prohibited from providing both to the same Member.*

If unique circumstances exist that are not covered by the provisions above and might otherwise lead to a potential COI or the perception of a COI, a Verification Body must err on the side of caution and determine the risk of COI to be medium or high. If a Verification Body determines that it has a medium or high COI with a Member, it may mitigate the COI to a lower and acceptable level following the guidance below, or it may not proceed with the verification activities.

Verification Bodies must submit a Case Specific COI Assessment Form (Appendix A1) to The Registry prior to conducting any verification activities. The Registry will review each case-specific COI Assessment Form to ensure that any Verification Bodies with a medium or high potential for COI are prohibited from conducting verification activities for the Member to which the conflict applies. The purpose of The Registry's screening is to protect the integrity of the verification process and the quality of the Member's emissions report by identifying and avoiding situations in which a Verification Body may be viewed as having an impaired ability to objectively review a Member's GHG inventory, usually from a pre-existing business or personal relationship.

The Registry understands that complex relationships might exist between a Verification Body and a Member, and therefore, it may be difficult to make an obvious judgment regarding the risk of a COI. The Registry will conduct its evaluation process and review each relationship conservatively with the aim to not

only ensure the integrity of the emission reports submitted to The Registry, but also to avoid the perception of a conflict.<sup>13</sup>

The Registry will use objective criteria and professional judgment to review COI Assessment Forms and work with all interested parties to resolve risks that can be mitigated. If The Registry determines that a medium or high-risk COI might exist, it will request that the Verification Body demonstrate how it can avoid, eliminate, or otherwise mitigate the COI. As necessary, The Registry may request that the Verification Body provide additional information to assist in evaluating its COI Assessment Form.

Verification Bodies must maintain all COI assessment documentation with their verification paperwork. The Accreditation Body will assess the appropriateness of a Verification Body's COI determination during its regular surveillance audits to enforce the COI policies. If the Accreditation Body finds a Verification Body's COI assessment to be invalid, or otherwise non-compliant with The Registry's policies, the Accreditation Body may sanction the Verification Body, which could include rescinding its accreditation status.

Verification Bodies should refer to Annex B of ISO 14065<sup>14</sup> for additional guidance evaluating impartiality.

### **Case Specific COI Assessment Form**

To assist Verification Bodies in identifying and describing the nature and extent of their relationship with a Member, The Registry requires Verification Bodies to complete a COI Assessment Form. The COI Assessment Form prompts Verification Bodies to describe the following information:

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<sup>13</sup> Identifying situations that could lead to the perception of a conflict of interest is particularly difficult. Generally, the guiding principle is called "The Press Test"; it asks, would the Verification Body or the Member be uncomfortable if the nature of their relationship were reported in the press, or received public attention?

<sup>14</sup> ISO 14065: 2007 (E)

- Nature of its relationship with a Member and the Member's GHG inventory technical assistance provider, if one
- Prior and existing service agreements with a Member
- Financial magnitude of service agreements with a Member

If a Verification Body plans to utilize any subcontractors to complete the verification activities, the Verification Body must assess personal COI for all subcontractors.

### Cause for Automatic COI Rejection

Due to the inherent conflicts between a Verification Body and a Member, the following two situations may not be mitigated:

- **Preparation of a Member's GHG inventory.** The Registry prohibits Verification Bodies from verifying emissions inventories for Members for which they have consulted on or prepared any part of the GHG emissions inventory, regardless of the point in time that service may have occurred. A Verification Body must declare all of its previous, existing, and planned involvement with the Member's GHG monitoring, accounting, reporting, and reduction activities. This includes identifying the group(s)/department(s) of the respective organizations involved, and a description of the specific activities. For each activity identified, the Verification Body must clearly define the links with other parts of its organization, in particular the unit(s) that performs verification services.
- **Off-cycle applicants.** Verification Bodies may only provide verification services for a given Member for a maximum of six consecutive emissions years. After the sixth consecutive year of verification services, Members must contract with a different Verification Body. The original Verification Body may not provide verification services to that Member for the next three years.

### 3.2.2 Mitigating COI

If a Verification Body determines the risk of COI to be medium or high it may develop a mitigation plan to lower the risk of COI to an acceptable level in order to conduct verification activities. Verification Bodies must complete the COI Mitigation Form in Appendix A2 and submit it to The Registry to explain where it has identified the potential for COI and how it will mitigate it to an acceptable level.

At a minimum, a mitigation plan should include:

- Demonstration that any conflicted individuals (Verification Body or subcontractor staff) have been removed and insulated from the project, if applicable.
- Explanation of any changes to organizational structure or verification team, if applicable. For example, demonstration that any conflicted unit has been divested or moved into an independent entity or any conflicted subcontractor has been removed.
- Other circumstances that specifically address other sources for potential COI.

### Potential Mitigating Factors

The following are examples of factors that mitigate potentially conflicting relationships between a Verification Body and a Member. The Registry will consider these factors when evaluating COI assessments.

- **Time of Service.** The Registry will view most services delivered by the Verification Body to the Member that occurred more than three years before as a lower risk than those that occurred within the last three years. However, services rendered related to the design, development, implementation or maintenance of a GHG emissions inventory must be fully disclosed, regardless of the time of delivery, and will always constitute a high COI.



- **Location.** The Registry may consider verification services provided by a Verification Body to a Member's business unit, facility or office located outside of North America a lower risk than those conducted within North America.
- **Type of Services.** The Registry will consider services that do not appear in the text box outlining GHG Consultancy Services in Section 3.2.1 to be a lower risk than those that do.
- **Financial Value of Services.** The Registry will view the provision of other services by the Verification Body wherein the monetary value is small relative to the value of verification services as a low risk for COI. Instances where the total value of services provided to the Member is very small as a percentage of the Verification Body's revenue over the same period may also be less cause of concern.

### Response to COI Assessments

The Registry will screen all COI Assessments and provide its response and evaluation of a Verification Body's COI Assessment within 15 business days. As a part of this screening process, The Registry may also select COI Assessments to undergo a more thorough review. The Registry will inform a Verification Body within 15 business days if The Registry has selected their COI Assessment Form for further review. This review may take an additional 15 business days. If selected for further COI assessment review, Verification Bodies must not proceed with their contract or verification activities until The Registry completes its review and provides them with instruction to do so.

The Registry's response will be an e-mail to the Lead Verifier documenting The Registry's review of a Verification Body's COI Assessment Form. Verification Bodies may also request a printed version of The Registry's response. If The Registry has not initially responded to the Verification Body within 15 business days, the

Verification Body may begin to conduct verification activities.

If The Registry disagrees with a COI assessment, or finds fault with a Verification Body's mitigation plan, it will either reject the Verification Body's COI assessment or request an amendment to it (addition of a mitigation plan or modifications to an existing one). If after completing its COI assessment review, The Registry determines that the risk of potential for COI between a Member and a Verification Body is low and no mitigating measures are necessary, the Verification Body may initiate verification activities.

If The Registry rejects a Verification Body's COI assessment, a Verification Body can: 1) abandon the proposed contract; 2) work with the Member and The Registry to identify measures to alleviate the COI risk; or 3) appeal the decision to The Registry.

### COI Appeal Process

Verification Bodies and/or Members may dispute and appeal The Registry's COI review by e-mailing the Verification Program at [oversight@theclimateregistry.org](mailto:oversight@theclimateregistry.org).

The Verification Program staff and the Audit & Verification Oversight Committee may consult with the Verification Advisory Group and/or experts to assess the dispute, but such experts will not have a vote in the final decision. All information will be kept confidential. The Audit & Verification Oversight Committee will provide a final answer based on a majority vote. Their decision will be binding.

### Corrective Action

The Accreditation Body will review a Verification Body's COI assessment documentation during their surveillance audits. If the Accreditation Body or The Registry finds that a Verification Body has intentionally violated its COI policies, The Registry and the Accreditation Body reserve the right to rescind a Verification Body's accreditation status or annul the Verification Statement. If a Verification Statement is



annulled or if accreditation is rescinded, the Verification Body will be responsible for reimbursing the Member for the cost of the Verification Body's effort. Please refer to the *Guidance on Accreditation* for more information relating to sanctioning activities.

### 3.2.3 Emerging COI

To help avoid a *quid pro quo*, Verification Bodies must monitor their activities (as well as the activities of any related companies) beginning with the signing of the contract, and continuing until one year after the close of the contract. During this period, the Verification Body must avoid entering into arrangements or relationships that may present a COI.

A Verification Body must immediately disclose any potentially emerging COI, either at the staff or board level or those that result from organizational changes (e.g., mergers and acquisitions, partnerships, joint ventures) to The Registry. If, for any reason, The Registry determines that a new relationship constitutes a COI that cannot be mitigated, The Registry will require the Member to contract with a new Verification Body going forward. The Registry or the Accreditation Body may also invalidate any verification results from the time at which such a conflict of interest arose and could not be mitigated.

### 3.2.4 Evaluating COI in Subsequent Years

The Registry permits Verification Bodies to contract with Members for a maximum of six consecutive years. A Verification Body must complete a COI Assessment Form each year prior to commencing its verification activities. Following The Registry's review and acceptance of the COI Assessment Form in the first year of the Member/Verification Body relationship, a Verification Body's subsequent COI Assessment Forms should focus on any changes in the relationship between a Verification Body and a Member, or between the verification team staff and the Member. If a Verification Body and Member have a relationship for six years, The Registry prohibits

the Verification Body from contracting with the Member for the next three calendar years. After no relationship has existed for three years, the Verification Body may again contract with the Member for up to six years.

This cycling of Verification Bodies will help to avoid potential COI situations due to lengthy and ongoing relationships. Also, this guarantees that another Verification Body will review material previously reviewed by the initial Verification Body, thus providing another check on the consistency and appropriateness of professional judgments made.

## 3.3 Assembling the Verification Team

During the accreditation process, Verification Bodies must identify all staff members who will participate in their verification team. Verification Bodies must also identify proposed Lead Verifiers. Upon becoming an accredited Verification Body, a firm may add or delete verification staff to its roster, but must maintain The Registry's minimum staffing requirements. Additionally, new verification staff must demonstrate all necessary competencies.

Verification Bodies must meet the requirements regarding verification team competencies set forth in ISO 14064-3: A.2.2.3, ISO 14065: 6.2., and the IAF Mandatory Document for the Application of ISO 14065 (IAF MD 6:2009).

*Note: While neither The Registry nor the Accreditation Body provides specific technical training to teach Verifiers core verification skills, outside training opportunities do exist. As a reference, currently, the following organizations offer rigorous training courses on a variety of GHG accounting and verification activities:*

- **Canadian Standards Association** ([https://learningcentre.csa.ca/lc\\_site/bet.asp?qid=50036389](https://learningcentre.csa.ca/lc_site/bet.asp?qid=50036389))
- **The GHG Management Institute** ([www.ghginstitute.org](http://www.ghginstitute.org)) and

- **Future Perfect**  
([www.fpsustainability.com](http://www.fpsustainability.com))

In addition to the ISO requirements, The Registry requires Verification Bodies to meet the following requirements when assembling their verification team:

1. A verification team must be assembled prior to the commencement of a verification engagement. The Verification Body must notify The Registry of the verification team prior to initiating verification activities by submitting the COI Assessment Form to [COI@theclimateregistry.org](mailto:COI@theclimateregistry.org).
2. A Verification Body must assign a Lead Verifier to the verification team.
3. All verification team members, including subcontractors, must be on the Verification Body's roster of designated Verifiers for The Registry.
4. All verification team members must be clearly identified in the Verification Body's documentation of the engagement, including the Verification Report.
5. At least one verification team member must have competencies in evaluating GHG inventories. In addition, an appropriate number of team members must also possess relevant industry experience, if needed.
6. The work of the verification team must be reviewed by an Independent Peer Reviewer who has not participated in the verification activities. The Independent Peer Reviewer must be qualified as a Lead Verifier.

### 3.3.1 Using Experts or Subcontractors

In some cases, Verification Bodies may not have the in-house expertise needed to verify emissions from some of the types of sources owned or controlled by a particular Member. In these cases, Verification Bodies may add expert subcontractors to the verification team.

Verification Bodies must ensure that any use of subcontractors meets the following requirements:

- Subcontractor(s) must work under the supervision of the Verification Body's Lead Verifier for the verification effort; in the case where a subcontractor IS the Lead Verifier or the Independent Peer Reviewer, the Verification Body's contract with the subcontractor must acknowledge the Verification Body's liability for the Lead Verifier's and/or Independent Peer Reviewer's findings.
- Only one level of subcontracting is allowed.
- Experts and subcontractors hired for specific verification efforts should possess the competence and expertise needed to perform their specific assignments;
- Experts and subcontractors must be characterized by integrity, objectivity, and freedom from any COI with the Member.<sup>15</sup> These verification team members are subject to the same COI provisions as the verification team members that are employees of a Verification Body; and
- Verification Bodies must clearly identify any subcontractors that are part of the verification team in all documentation related to the engagement, including the Verification Report.

## 3.4 Kick-off Meeting with the Member

After a Verification Body and a Member have completed contract terms, the Verification Body must conduct a kick-off meeting with the Member either in person or via phone. At a minimum, the agenda for that meeting should include:

<sup>15</sup> ISO 14064-3:2006 (E) Section A.2.2.4

1. Introduction of the verification team;
2. Review of verification activities and scope;
3. Transfer of background information (See Table 4.1); and
4. Review and confirmation of the verification process schedule.

After completing the kick-off meeting, Verification Bodies should determine the most effective, efficient, and credible approach to the verification activities and then tailor their verification plan to address a Member's particular characteristics.

# PART 4: CONDUCTING VERIFICATION ACTIVITIES

## 4.1 Overview

The heart of the verification process lies in conducting the verification activities. Part 4 of this GVP lays out the necessary actions Verification Bodies must take when they conduct verification activities, including:

- Develop a verification plan
- Implement the verification plan
- Conduct the core verification activities

## 4.2 Developing a Verification Plan

Verification Bodies must verify that Members' stated GHG emissions in CRIS meet the standards of The Registry's *General Reporting Protocol*<sup>16</sup>. Verification Bodies must develop a plan outlining the specific activities to be conducted as part of a verification effort. There are a number of factors that Verification Bodies must consider in developing this plan, including:

**Contract Terms & Objectives:** The terms of the contract between the Verification Body and the Member, the scope of the work, and the deadlines associated with the verification activities.

**Team Capabilities:** The number, skills, roles and responsibilities of the verification team members (including outside experts and subcontractors).

**Verification Documentation:** The documentation required to be delivered to the Member and The Registry, and any conditions requiring special attention, such as joint ventures and outsourcing.

Based on these factors, the verification planning effort consists of:

1. A preliminary assessment to identify the root causes of actual or potential errors and control system weaknesses;
2. An assessment of past verifications either of the Member or of similar organizations in the same industry;
3. An identification of specific risks and types of material discrepancies to which the Member is exposed; and, finally,
4. The design of appropriate sampling plan to detect material discrepancies.

The verification plan should be viewed as dynamic; as new evidence of actual or potential misstatements are discovered, the Verification Body may need to revise the verification plan to further assess these errors and any underlying weaknesses that may be contributing to them.<sup>17</sup>

The verification plan should describe the rationale for selecting documents to be reviewed and facilities to be visited and describe a plan to perform data checks and recalculate emission estimates based on underlying activity data. It is not necessary for the Verifier to visit all facilities and sources included in the Sampling Plan (i.e. the Sampling Plan can include a desktop review of supporting documents for sampled emission sources). Table 4.1 provides a list of documents that Verifiers may review during their assessment of a Member's emissions.

<sup>16</sup> Including approved Member-Developed Methodologies and General Reporting Protocol Updates and Clarifications published by The Registry on its website

<sup>17</sup> ISO 14064-3:2006 (E) Section A.2.4.5.

**Table 4.1 Documents that may be Reviewed During Verification Activities**

Activity or Emissions Source	Documents
<b>Assessing Conformance with The Registry's Requirements</b>	
<b>General Conformance Assessment</b>	Emission Report, The Registry's <i>General Reporting Protocol</i> , including approved Member-Developed Methodologies and General Reporting Protocol Updates and Clarifications published by The Registry on its website
<b>Mergers, Acquisitions, Divestitures</b>	Annual Report to Shareholders, SEC Filings
<b>Assessing Completeness of Emissions Report</b>	
<b>Comprehensive Coverage of Facilities</b>	Facility inventory
<b>Comprehensive Coverage of Emission Sources</b>	Emission source inventory <ul style="list-style-type: none"> <li>• Stationary source inventory</li> <li>• Mobile source inventory</li> <li>• Fuel inventory</li> <li>• Air emissions permits</li> </ul>
<b>Performing Risk Assessment Based on Review of Information Systems and Controls</b>	
<b>Responsibilities for Implementing GHG Management Plan</b>	Organization chart, GHG inventory management plan, GHG management documentation and retention Plan
<b>Training</b>	Training manual, procedures manual, consultant qualifications statement
<b>Methodologies</b>	Control systems documentation, software/program documentation and users' guides, any other protocol's used (in addition to The Registry's General Reporting Protocol)
<b>Selecting a Sample</b>	
<b>Sample Size and Selection</b>	Facility inventory, emission source inventory, description of operations
<b>Verifying Emission Estimates Against Verification Criteria</b>	
<b>Indirect Emissions from Electricity Use</b>	Monthly electric utility bills, emission factors (if not default)
<b>Direct Emissions from Mobile Combustion</b>	Fuel purchase records, fuel in stock, vehicle miles traveled, inventory of vehicles, emission factors (if not default), combustion efficiency, oxidation factors, GWPs, meter calibration information
<b>Direct Emissions from Stationary Combustion</b>	Monthly utility bills, fuel purchase records, CEMs data, inventory of stationary combustion facilities, emission factors (if not default), combustion efficiency, oxidation factors, meter calibration information
<b>Indirect Emissions from Cogeneration</b>	Monthly utility bills, fuel and efficiency data from supplier, emission factors (if not default)

<b>Indirect Emissions from Imported Steam</b>	Monthly utility bills, fuel and efficiency data from supplier, emission factors (if not default)
<b>Indirect Emissions from District Heating</b>	Monthly utility bills, fuel and efficiency data from supplier, emission factors (if not default)
<b>Indirect Emissions from District Cooling</b>	Monthly utility bills, fuel and efficiency data from supplier, emission factors (if not default)
<b>Direct Emissions from Process Activities</b>	Raw material inputs, production output or hours of operation, calculation methodology, emission factors, control equipment efficiency and reliability, uncontrolled GHG emissions measurements, chemical analyses and methods, CEMs data
<b>Biogenic CO<sub>2</sub> Emissions from Mobile Combustion</b>	Fuel purchase records, fuel in stock, vehicle miles traveled, inventory of vehicles, emission factors (if not default), combustion efficiency, oxidation factors, meter calibration information
<b>Biogenic CO<sub>2</sub> Emissions from Stationary Combustion</b>	Monthly utility bills, fuel purchase records, CEMs data, inventory of stationary combustion facilities, emission factors (if not default), combustion efficiency, oxidation factors, meter calibration information
<b>Direct Fugitive Emissions</b>	
Refrigeration Systems	Refrigerant purchase records, refrigerant sales records, leak test results or maintenance practices, numbers and types of equipment, emissions history, calculation methodology, emission factors
Landfills	Waste-in-place data, waste landfilled, calculation methodology, emission factors, emissions history
Coal Mines	Coal production data submitted to EIA, quarterly MSHA Reports, calculation methodology, emission factors
Natural Gas Pipelines	Gas throughput data, leak test results or maintenance practices, numbers and types of equipment, emissions history, calculation methodology, emission factors
Electric Transmission and Distribution	Sulfur hexafluoride purchase records, leak test results or maintenances practices, numbers and types of equipment, emissions history, calculation methodology, emission factors



## 4.3 Core Verification Activities

The following sections, 4.3.1- 4.3.5, describe the five core verification activities involved in the verification effort. The actions are:

1. Assessing conformance with The Registry's requirements
2. Assessing completeness of emission report
3. Performing risk assessment based on review of information systems and controls
4. Selecting a sample/developing a sampling plan
5. Evaluating GHG information systems and controls and emission estimates against verification criteria

In conducting the core verification activities Verification Bodies should consider the issues highlighted in the following sections. Given the diversity of Members, it is impossible for The Registry to predict all of the questions that should be asked and the checks that should be made during a verification effort; however, The Registry has outlined below many of the key issues that Verification Bodies should consider when conducting core verification activities. The Registry relies on Verification Bodies to use their skills and training to determine how to assess if a Member's emissions have been reported accurately.

### 4.3.1 Assessing Conformance with The Registry's Requirements

Verification Bodies must determine whether the basic rules governing eligibility to report and data to be reported have been followed. At a minimum, Verification Bodies should consider the following:

- Eligibility requirements
- Geographic boundaries
- Organizational boundaries

- Transitional/Complete Member requirements
- Appropriate use of simplified emission estimation methods
- Historical reporting requirements

### 4.3.2 Assessing Completeness of the Emission Report

Verification Bodies must assess and sample a Member's emission inventory (facility, source, and fuel) to ensure that the emission sources are accurately identified. In the Verification Body's assessment it must determine that a Member's stated emissions inventory reflects the appropriate:

- Geographic boundaries
- Organizational boundaries
- Operational boundaries
- Consolidation methodology requirements
- GHG emissions

After a Verification Body has considered these and other issues, it will be able to determine if an emission report is complete. Verification Bodies must also determine if any detected reporting errors will significantly affect a Member's reported emissions.

### 4.3.3 Performing Risk Assessment Based on Review of Information Systems and Controls

A Verification Body must assess the level of uncertainty (excluding inherent uncertainty) associated with each emissions source in the Member's inventory to identify the particular facilities, emission sources, and GHGs that pose the greatest risk of material misstatements.

Verification Bodies must review the methodologies and control systems that a

Member uses to calculate their emissions. This is principally a risk assessment exercise in which the Verification Body must weigh the following factors:

- The relative complexity of the scope of the Member's emissions;
- The Member's data collection and control systems used to prepare the GHG emission report; and
- The risk of calculation error as a result of reporting uncertainty or misstatement.

Through these assessments, the Verification Body must determine the capability of the control systems to provide accurate required data to The Registry. For example, the absence of a comprehensive GHG control system for a Member with a single retail outlet and solely indirect emissions from electricity purchases may not add significant risk of material misstatement (although there must at a minimum be a system in place to ensure adequate retention of information and documents). In contrast, a large vertically-integrated manufacturing company with facilities in multiple states would require a much more robust information and control system for tracking and reporting its GHG emissions.

A Verification Body must review information systems and controls at the broad organizational level and may perform analytical tests on initial emission estimates, with a goal towards identifying potential areas of significant risk during the verification effort.

A Verification Body's general review of a Member's GHG control systems should consider, at a minimum the following components (Also refer to ISO 14064-3:2006(E), Section A.2.5.2):

- Calculation methodologies/procedures used
- Management systems
- IT systems
- Staff competency

- Document management systems
- Design of information and control systems to support required reporting at the facility level
- The existence and adequacy of processes for the periodic comparisons and reconciliation of emissions data with other Member data (e.g., are the emission estimates as expected given production and capacity utilization data?)
- The existence and adequacy of internal audits and management reviews
- The existence and adequacy of input, output, and transformation error checking routines

ISO 14064-3:2006 (E), Annex A contains additional guidance on error checking tests and controls that Verification Bodies might use.

Once the Verification Body has assessed the overall risk associated with the GHG information and control systems, it must assess these risks in conjunction with the preliminary emission and uncertainty estimates it derived when it assessed the completeness of the emission report. Verification Bodies must then identify the areas with the greatest potential for material misstatements (either based on volume of emissions, lack of control systems, or both) to determine the best risk-based strategy to identify a representative sample of emissions to recalculate.

#### **4.3.4 Selecting a Sample / Developing a Sampling Plan**

The core verification activities pertain to reviewing emissions data for all Members. However, it is not cost-effective to attempt to verify ALL of the emissions data provided in an emission report. Rather, a Verification Body must choose a sample of the data for detailed evaluation. This risk-based approach to verification involves focusing on those emission sources, facilities, data systems and processes that pose the greatest risks as sources of

material discrepancies. Thus while the general approach to verification activities must be the same across Members, Verification Bodies must tailor a specific verification sampling plan to each individual Member. This plan should be based on a review designed to identify the specific sources of potential errors for a given Member, and an assessment of the risk of material discrepancies arising from each identified potential error source.

ISO14064-3:2006 (E), Section A.2.4.6 identifies the typical actions involved in the development of a risk-based sampling plan as follows:

- Review and assess the scale, complexity and nature of the reporting organization
- Identify the key risks, including:
  - Incompleteness (e.g., failure to account for all emission sources, inaccurate delineation of organizational boundaries, etc.);
  - Inaccuracies (e.g., incorrect emission factors, data transfer errors)
  - Inconsistencies (e.g., failure to document changes in emission calculation methodologies from one year to the next); and
  - Data management and control weaknesses (e.g. no internal audit or review process).
- Review and assess the control risks which arise from weaknesses in a Member's control system in place for preventing and detecting errors. Control risks may include:
  - Insufficient checking of manual data transfers;
  - Lack of internal audit processes;
  - Inconsistent monitoring; and
  - Failure to keep meters calibrated and maintained.

- Identify residual risks
- Include residual risks in the sampling plan for audit investigation

Based on the above review of risks, sampling should focus on those areas of the organization subject to the greatest inherent, control, and detection risks (the latter being the risks that the Verification Body will fail to identify an error. Samples may be selected based on one or more of the following:

- Organizations (e.g., subsidiaries);
- Facilities;
- Sources; and
- GHG types.

Sampling methods that may be considered in the sampling plan include both statistical and non-statistical methods (e.g., random sampling, stratified sampling, purposive sampling, etc.). The sampling plan should be viewed as dynamic rather than static, to be revised based on early feedback. For example, if early verification findings indicate that inherent and control risks (and hence residual risk) are particularly significant at one subsidiary, this may indicate a need to increase the number of facilities sampled for that particular subsidiary. Also refer to ISO 14064-3: 2006 (E), Section A.2.4.6.

Sampling procedures generally entail conducting facility visits. While Verification Bodies may determine what type of sampling and visits are appropriate to confirm a Member's emissions usually such activities include:

- Assessing data control systems at the facility level;
- Reviewing documents such as utility bills or emissions monitor results;
- Recalculating emission estimates based on underlying activity data; and

- Generally attempting to detect material discrepancies by gathering different types of evidence.

Verification Bodies must use the appropriate methodology when determining the minimum number of facilities to visit. In determining the number and location of facilities to visit, the Verification Body must consider the nature and homogeneity of the different facilities and document its evaluation of whether it is necessary to exceed the minimum number indicated by the methodology (refer below to “*When is it Necessary to Exceed the Minimum Requirement?*”).

## Determining Minimum Number of Facilities to Visit

In order to determine the minimum number of facility visits required for compliance with The Registry's voluntary program, the Verification Body must complete the following steps:

1. Conduct a risk assessment as described in Section 4.3.3.
2. Evaluate the completeness of the Members inventory.
3. Evaluate the reasonableness of the emissions source types and emissions quantities reported for each facility given the scale and nature of the operations.
4. Determine the total number of facilities in the Member's inventory.
  - a. This number must be based on the definition of a facility (installation or establishment located on a single site or on contiguous adjacent sites that are owned or operated by an entity, plus any mobile sources such as on-road vehicles and fleets, also taking into account industry-specific rules for facilities such as oil fields). This number must not be based on aggregation of any facility types.
  - b. Identify the number of non-commercial facilities (X) and the number of commercial facilities (Y). For the purpose of this evaluation, commercial facilities are defined as office-based or retail facilities that do not conduct industrial operations and for which emission sources are limited to:
    - i. Purchased or acquired electricity, heating or cooling
    - ii. Stationary combustion of fuel for building heating
    - iii. Refrigerants for building air conditioning;
    - iv. Standard fire extinguishers (as opposed to more complex PFC systems)
    - v. Non-commercial refrigeration;
    - vi. Emergency generators; and,
    - vii. Off-road equipment limited to building and landscape maintenance.

Other sources powered by purchased electricity such as transportation, pump stations, parking lot lighting, or traffic signals can be considered a commercial facility for purposes of this methodology.

Non-commercial facilities are defined as all other facilities not meeting the criteria of a commercial facility (e.g. facilities that are used for manufacturing or other industrial operations, warehouses, mobile sources, etc.).

Pipelines and transmission and distribution systems can be treated as single facilities as provided in the General Reporting Protocol.

- c. If applicable, identify the number of North American facilities ( $X_{NA}$ ,  $Y_{NA}$ ) and the number of worldwide facilities, including North America ( $X_{WW}$ ,  $Y_{WW}$ )
5. Use either Method A or Method B below as appropriate to determine the minimum number of North American, and worldwide if applicable, non-commercial facilities to be visited.
6. Use Method C to determine the minimum number of North American, and worldwide if applicable, commercial facilities to be visited.

## Method A: Based on Number of Non-Commercial Facilities and Risk Assessment Findings

When to Use Method A: This method is most appropriate when emissions generated are fairly evenly distributed amongst several facilities in the Member's inventory.

### 1. North American inventory:

- a. Apply the total number of North American non-commercial facilities ( $X_{NA}$ ) to Equation 4.2:

Minimum number of North American facility visits =  $0.6\sqrt{X_{NA}}$  (round up to nearest whole number, as shown in Table 4.2 below)

### 2. Worldwide inventory:

- a. Apply  $X_{NA}$  to Equation 4.2. to determine the number of facility visits for North America as instructed above.
- b. Apply  $X_{WW}$  to Equation 4.2. and subtract from this result the number of facility visits already determined for North America to arrive at the minimum number of facility visits to be conducted outside North America.

Total Number of Facilities (X)	Minimum Number of Facility Visits ( $0.6\sqrt{X}$ )
1	0.6 = 1
3	1.04 = 2
5	1.34 = 2
10	1.90 = 2
50	4.24 = 5
51	4.28 = 5
100	6.00 = 6
101	6.03 = 7
250	9.49 = 10
251	9.51 = 10
501	13.43 = 14
1000	18.97 = 19
1001	18.98 = 19
5000	42.43 = 43



## Method B: Based on Ranking Distribution of Generation of Direct Emissions

When to Use Method B: This method is most appropriate for Members that have a large number of facilities in their inventory with a majority of direct emissions generated by a small percentage of the facilities in the Member's inventory.

1. North American inventory:
  - a. Rank all North American non-commercial facilities in decreasing order of quantity of Scope 1 emissions generated.
  - b. Determine the lesser of
    - i. The minimum number of facilities that are able to constitute 75 percent or more of the overall North American Scope 1 emissions.
    - ii. The number of facilities that individually constitute greater than 5 percent of the North American Scope 1 emissions. These facilities must comprise at least 40 percent of overall North American Scope 1 emissions; otherwise, Method B.1.b.i. or Method A must be used.
  - c. All of these facilities must be visited under this method, even if the facilities are not identified through the worldwide analysis described below.
2. Worldwide inventory:
  - a. Rank all worldwide (including North American) non-commercial facilities in decreasing order of quantity of Scope 1 emissions generated.
  - b. Determine the lesser of
    - i. The minimum number of facilities that are able to constitute 75 percent or more of the worldwide Scope 1 emissions.
    - ii. The number of facilities that individually constitute greater than 5 percent of the worldwide Scope 1 emissions. These facilities must comprise at least 40 percent of overall worldwide Scope 1 emissions; otherwise, Method B.2.b.i. or Method A must be used.
  - c. All of these facilities must be visited under this method, even if the facilities are not identified through the North American analysis described above.

As noted in below under "***When is it Necessary to Exceed the Minimum Requirement***" Verification Bodies must evaluate the need to exceed the minimum number of facility visits and potential appropriateness of random or stratified sampling. This evaluation is particularly critical when using Method B for determining the minimum number of facility visits.

## Method C: Commercial Facilities

When to Use Method C: This method is permitted only for commercial facilities as previously defined.

1. Determine whether Member has a centralized inventory management system, more than one inventory management system, or no inventory management system. For the purposes of this evaluation, a centralized inventory management system is considered to be a system that is developed, maintained and managed at a central location or through a central network or web-based system.
2. For Members with a centralized inventory management system, at minimum, a facility visit must be conducted at the office location responsible for overseeing the development and implementation of the inventory management system.
3. Even if the Member has a centralized inventory management system, if more than one person is responsible for final quality assurance of reported data, then the Verification Body must interview a subset of these responsible personnel to inform their risk assessment and sampling plan. The interviews may be conducted in person or by phone.
4. For Members with a decentralized inventory management system or no inventory management system, facility visits must be conducted at a representative number of office locations to be determined by either:
  - a. Each facility that is responsible for overseeing a particular inventory management system.
  - b. A sample of facilities to be determined based on Equation 4.3:  
Minimum number of North American facility visits =  $0.6\sqrt{Y_{NA}}$  (round up to nearest whole number)  
If applicable, apply the same approach detailed in Method A.2 to determine the minimum number of worldwide facility visits.

### When is it Necessary to Exceed the Minimum Requirement?

Verification Bodies must conduct additional facility visits if the minimum number of facility visits, in combination with desktop sampling of supporting documentation, is not adequate to deliver reasonable assurance that the inventory is free from material misstatements. At minimum, Verification Bodies must evaluate the following considerations that may result in the need to exceed the minimum number of facility visits:

1. The nature and diversity of facilities in the inventory.
2. The complexity of quantifying emissions sources generated at facilities;
3. The quality and centralization of the GHG data management system and potential appropriateness of random or stratified sampling;
4. The need to address other risks identified through the risk assessment; and,
5. Misstatements identified through the course of verification activities that may necessitate changes to the verification and sampling plan.

In general, the more complex the Member's organization, the more facility visits may be needed. In cases where a Member is characterized by a set of homogeneous facilities (e.g., a large retail operation), the minimum number of facility visits may suffice. On the other hand, if the Member's facilities are more complex and differ substantially from each other, additional facility visits beyond the minimum may be necessary. For example, the number of facility visits required for an integrated concrete producer with 30 facilities including quarries, treatment plants and cement plants may be significantly larger than the number of visits for a Member consisting of 30 manufacturing facilities that all conduct the same operations.

Once the Verification Body has determined the sample size, it must independently select the specific facilities to be visited, without recommendation or input from the Member. The Verification Body should not necessarily visit the largest facilities (i.e. rely solely on Method B), but should rather select facility visits on the basis of the Verification Body's risk assessment findings regarding potential for material misstatement associated with the facility.

The Registry relies on a Verification Body's discretion in determining how many facilities is appropriate and necessary to visit; however, The Registry will not accept verifications that do

not incorporate at least the minimum number of facility visits as determined through the methodologies provided herein. Given the flexibility in these methodologies and the need to ensure consistency amongst Verification Bodies, The Registry will not entertain justifications for fewer facility visits.

The Verification Body should inform the Member of the number of facilities it will visit during the verification scope discussion between the Member and the Verification Body. The number of facilities to be visited should be amended as appropriate as part of the dynamic sampling plan.

The following examples illustrate the application of Methods A, B, and C for determining the minimum number of facility visits that the Verification Body must conduct.

#### Example 4.1: Using Method A to Determine Number of Non-Commercial Facility Visits

After conducting the risk assessment for a waste-to-energy company, the Verification Body determines the Member has 40 non-commercial facilities, all waste-to-energy facilities. The emissions are fairly evenly distributed among the 40 facilities. Utilizing the equation for Method A, the Verification Body calculates that the minimum number of facility visits for the non-commercial facilities would be:  $0.6\sqrt{40} = 3.79$ , which rounds up to 4.

In addition, the Member has one headquarters and 5 other office locations. The Verification Body then applies Method C to determine the minimum number of commercial facility visits.

#### Example 4.2: Using Method B to Determine Number of Non-Commercial Facility Visits

After conducting the risk assessment for a manufacturing company, the Verification Body determines that the Member has 21 non-commercial facilities, 1 manufacturing plant that generates power onsite, 5 other manufacturing plants, 5 warehouses, and 10 fleets of trucks. The majority of the Scope 1 emissions from these non-commercial facilities come from the manufacturing plant with onsite power generation. The Verification Body determines that Method B is most appropriate for determining the number of facilities to visit and ranks the facilities as shown in the table below:

Facility ID	Facility Type	% Scope 1 CO <sub>2</sub> -e
1	Manufacturing plant with onsite power generation	70%
2	Manufacturing Plant	12%
3 through 6	Manufacturing Plant	10% combined
7 through 17	Truck fleet	6% combined
18 through 21	Warehouse	2% combined

The Verification Body concludes that since the manufacturing plant with the onsite power generation and the next largest manufacturing plant contribute over 75 percent of Scope 1 CO<sub>2</sub>-e emissions, that Method B.1.b.i would minimally require visits to these two facilities.

#### Example 4.3: Using Method C to Determine Number of Commercial Facility Visits

After conducting the risk assessment for a national bank, the Verification Body determines that the Member has 215 commercial facilities, including its headquarters, regional offices, and branch locations. On a quarterly basis, each of the regional office managers is responsible for populating a central database with the energy consumption of the branch locations within their region and for maintaining electronic records of associated invoices for purchased electricity and natural gas on the central network. The GHG inventory manager based at headquarters extracts the necessary information from the database, cross checks a sampling of the data against the invoices, and enters the data into CRIS.

The Verification Body concludes that Method C would minimally require a visit to the headquarters and phone interviews with a subset of regional office managers.

## Notification of Planned Verification Activities

After Verification Bodies develop their sampling plan for a Member, they must notify The Registry by submitting the *Notification of Verification Activities* Form at least 15 business days prior to the beginning of facility visits. A copy of this form is provided in Appendix A3; in addition, Verification Bodies may obtain an electronic version of this form from The Registry's website ([www.theclimateregistry.org](http://www.theclimateregistry.org)).

Notification should be sent by e-mail to [notification@theclimateregistry.org](mailto:notification@theclimateregistry.org). This notification period is necessary to allow The Registry the opportunity to periodically accompany Verification Bodies on visits to Members' facilities. The Accreditation Body is responsible for observing, evaluating, and reporting on the quality and consistency of verification activities to The Registry. However, Registry staff members also have the authority to participate directly in such observation. A Verification Body that does not provide proper notification to The Registry may be disqualified as a Registry-recognized Verification Body.

### 4.3.5 Verifying Emission Estimates Against Verification Criteria

The Registry does not expect nor require Verification Bodies to review all of the Members' documents and recheck all their calculations. To ensure that data meet a minimum quality standard on an entity-wide basis, Verification Bodies should concentrate their activities in the areas that have the greatest uncertainty and amount of emissions. Verification Bodies must calculate emissions for these sources and compare those calculations to emission levels reported by the Member. If they are free of material misstatement (have a difference of less than five percent), the Verification Body will declare that the Member's report conforms to The Registry's Protocols.

The verification of emission estimates involve several parts, including:

**Gathering of Evidence.** The Verification Body must begin the emission estimate verification process by gathering all of the evidence that it will use to check the emission estimates. Specific evidence to be gathered generally falls into three separate categories:

- Physical evidence, which can be gathered through direct observation of equipment (e.g., fuel meters, CEMs, and calibration equipment during facility visits);
- Documentary evidence (e.g., control and procedures manuals, invoices, log books, and laboratory test results, etc.); and
- Testimonial evidence gathered through interviews with Member personnel.

**Detailed Review of GHG Data.** Once the Verification Body has collected the necessary evidence, it can begin the detailed reviews of the GHG data. The Verification Body should undertake these reviews with the goal of identifying material discrepancies.

The Verification Body should employ a variety of verification tests to detect material discrepancies, including:

- Retracing data from spreadsheets back to their sources;
- Re-computing emission estimates to check original calculations; and
- Reviewing documentary evidence to check that inspections, calibrations, etc., were completed.

**Crosschecking of GHG Calculations.** The Verification Body must crosscheck GHG calculations whenever the Member used more than one computational approach or raw data source. Refer to ISO 14064-3:2006 (E) A.2.6.3. Types of crosschecks that may be employed include:

- Internal checks within a process;
- Internal checks within an organization;

- Checks within an industry or sector;
- Checks against international information; and
- Checks against quantities of emissions reported for previous emissions years.<sup>18</sup>

**Evaluating Material Discrepancy.** In order to assess whether individual identified discrepancies rise to the level of a material discrepancy, the Verification Body must convert its emission estimates for different GHGs to a CO<sub>2</sub>-e basis. When the Verifier's estimate of emissions (for a particular source) does not compare well with that included in the Member's emissions report, the Verifier should assess whether the error is a systemic issue that implies there is the same degree of uncertainty in all similar sources. The Verifier may expand the sample size as appropriate to determine if the same inconsistency is evident in a broader sample of data and may request that the Member provide evidence of correction of systemic errors. In arriving at its estimate, the Verifier must consider the impact of extrapolation of systemic errors identified in the sample to the entire dataset. The Verification Body must compare its estimated GHG emissions to those in the reported inventory to determine if there are any material misstatements. If the Verifier's emission totals differ by more than five percent from the originally reported totals, then the discrepancies are material.

**Assess Reported Emissions and Document Findings.** Once Verification Bodies have evaluated all emission estimates for all facilities and emission sources included in the sample, they must determine if any individual material errors are identified, consider if these errors are systemic and compare these results with the entity-level emissions in the Member's emission report. If several non-material errors are found, a compilation of these errors should be compared against the original reported emission estimates to determine if the

aggregate errors exceed the materiality threshold. Differences may be classified as either material (significant) or immaterial (insignificant). The Registry considers a discrepancy to be material if the overall reported emissions differ from the overall emissions estimated by the Verification Body by five percent or more. A difference is immaterial if this difference is less than five percent.

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<sup>18</sup> The Registry intends to incorporate automated data checks against previous year emissions into CRIS.



## Online Reporting and Verification

All Members must *report* their emissions using The Registry's on-line calculation tool (CRIS). Members may also opt to use CRIS to *calculate* their emissions from various types of indirect emissions and direct emissions from stationary and mobile combustion. Where Members have used CRIS to calculate their emissions, a Verification Body must verify that the Member collected input data properly and entered it accurately into CRIS. Verification Bodies should assume CRIS' calculations are correct. Therefore, there is no need for Verification Bodies to re-calculate the emissions reported in CRIS. Due to the time savings, Members can reduce the costs and time required to complete the verification process by calculating its emissions in CRIS.

It is the Member's responsibility to provide the Verification Body with access to CRIS. A Verification Body will have read-only access to the Member's Entity Emissions Detail Report (Private), which provides a detailed summary of all the information that the Member has reported.

Additional instructions for navigating and using CRIS are provided on The Registry's website. For questions about CRIS, contact The Registry at **(866) 523-0764** or **info@theclimateregistry.org**. Verification Bodies may also request temporary access to CRIS for training purposes by contacting The Registry.

## PART 5: COMPLETING THE VERIFICATION PROCESS

### 5.1 Overview

Once a Verification Body has completed reviewing a Member's annual GHG emission report, they must do the following to complete the verification process:

1. Complete a detailed Verification Report and deliver it to the Member;
2. Prepare a Verification Statement and deliver it to the Member;
3. Conduct an Exit Meeting with the Member to discuss and finalize the Verification Report and Verification Statement.
4. Indicate Member's verified status in CRIS; and
5. Securely file electronic and hardcopy versions of records and documents needed to support the Verification Statement for retention (for a minimum of five years).

The following subsections outline how a Verification Body must complete each of these steps.

### 5.2 Preparing a Verification Report

A Verification Report is typically shared only between a Verification Body and a Member. In some cases the Accreditation Body and The Registry may request to review the Verification Report. In these cases, the Verification Report will be treated as a confidential document. No part of it will be made available to the public or to any person or organization outside of the Accreditation Body or The Registry.

At a minimum, a Verification Report must include the following elements:

- The scope, objectives, criteria, and level of assurance of the verification process undertaken and description of the verification plan employed for the Member;

- The standard used to verify emissions (this is The Registry's *General Reporting Protocol*, but may also include other protocols or methodologies for those sources for which The Registry has yet to provide detailed guidance);
- A description of the verification plan, based on the size and complexity of the Member's operations;
- A list of facilities and/or emissions sources using calculation methods not prescribed in the *General Reporting Protocol*;
- A description of the sampling plan as well as techniques and risk assessment methodologies employed for each source identified to be sampled;
- An evaluation of whether the Member's annual GHG emission report is in compliance with The Registry's reporting requirements (as described in the *General Reporting Protocol*);
- The total discrepancy (in tonnes of CO<sub>2</sub>-e) between the Verification Body's emissions estimate and the Member's reported emissions as well as a percentage of the material discrepancies within a Member's total reported emissions at the entity level (separate totals and percentages must be provided for Scope 1 and Scope 2 emissions).
- A list of all of the discovered discrepancies, including each discrepancy's estimated magnitude as a percentage of the total emissions (Scope 1 or Scope 2, as appropriate) reported at the entity level.

The Registry developed a "Standard Verification Report Template" to guide Verification Bodies in preparing their Verification Report. This template is Appendix B2. Use of this template is optional; Verification Bodies may instead use their own format for

the report as long as the resulting Verification Reports include all of the above-listed information required by The Registry. Electronic versions of the Verification Report Template, and all other forms, are available on The Registry's website ([www.theclimateregistry.org](http://www.theclimateregistry.org)).

### 5.3 Preparing a Verification Statement

Verification Bodies must prepare a Verification Statement for each Member using the form in Appendix A4. A Verification Statement documents the verification activities and outcomes. The Registry makes this document available to all stakeholders (Members, Verification Bodies, The Registry, and the public), upon completion of the verification process.

While Members are required to report all GHG emissions sources within the defined inventory boundary and are required to correct as many misstatements as is possible, The Registry allows immaterial misstatements to remain in a Member's emissions report. As such, Verification Bodies are not expected to withhold a positive verification statement due to immaterial misstatements or omission of immaterial sources.

### 5.4 Quality Assurance Check

When a Lead Verifier prepares a Verification Report and Verification Statement for a Member, they must forward the documents to their Independent Peer Reviewer for review and confirmation of its findings before sharing the documents with a Member. Lead Verifiers must provide the following information to their Independent Peer Reviewer (at a minimum):

- a copy of the Member's emission report,
- a copy of the Verification Report,
- a copy of the Verification Statement, and

- any additional information that the Independent Peer Reviewer may need to assess the quality of the verification activities and the accuracy of the Verification Statement

All Verification Reports and Verification Statements must undergo independent internal review before they are forwarded as final documents to Members.

### 5.5 Finalizing Verification Activities

After a Lead Verifier prepares and an Independent Peer Reviewer reviews a Verification Report and Verification Statement, the Verification Body must share these documents with the Member and schedule a time to discuss and finalize these documents. This meeting may be conducted in person or over the phone.

The goals of the Verification Meeting are for the Verification Body to:

- Review the verification activities with the Member and answer any questions about the verification process. Verification Bodies must not provide any GHG consultancy services when answering a Member's questions.
- Seek the Member's acceptance of the Verification Report and Verification Statement
- Obtain the Member's authorization to input its verification findings in CRIS
- Exchange lessons learned about the verification process, and consider providing useful feedback to The Registry
- Discuss schedule for next year's verification activities, if the Verification Body is under contract to provide verification services to the Member in future years

### 5.5.1 Procedure in the Event of a Negative Verification Statement

If a Member's emission report is not verifiable due to material misstatements, the Member must correct the report and have it re-verified. As stated in Section 2.5.1, **Verification Bodies must NOT remediate the identified misstatement(s), or explain how the misstatement(s) might be corrected.** Such guidance would be considered a consulting activity and therefore, a conflict of interest. However, *this prohibition does not preclude a Verification Body from explaining the identified error(s) to the Member.* Verification Bodies must always fully explain the nature of the error(s) to the Member.

Furthermore, Verification Bodies may provide any existing documentation that may be useful to Members in preparing remediation plans. Verification Bodies should also enumerate any shortcomings in Members' GHG tracking and management systems.

The Registry will retain a Member's unverified emission report in the CRIS for up to one year pending correction by the Member and re-verification of the revised report (either by the original Verification Body or a new Verification Body). The Member must pass the re-verification process by December 15<sup>th</sup> of the following year to remain an active Member in The Registry. Upon completion of a successful re-verification, The Registry will formally accept the revised emission report into CRIS for release to the public.

### 5.5.2 Dispute Resolution Process

There may be instances where Verification Bodies and Members cannot agree on the verification findings as expressed in the Verification Report and/or Verification Statement. In such instances, the Member and Verification Body should attempt to reach a resolution, relying first on the Verification Body's internal dispute resolution process (as required by ISO 14065).

In the event that a resolution cannot be reached, Verification Bodies can request a resolution from the Accreditation Body by submitting a request to them as instructed by the Accreditation Body when they received their accreditation.

Additionally, Members or Verification Bodies may e-mail The Registry directly ([verification@theclimateregistry.org](mailto:verification@theclimateregistry.org)) if they have any questions regarding resolving disputes.

The Accreditation Body will review the area of dispute and reach a unanimous, binding decision concerning verifiability. In doing so it may interview the Member and the Verification Body and/or request documentation related to the dispute. The Accreditation Body will notify the Verification Body and Member of its decision.

In the event that the Accreditation Body overturns the Verification Body's original Verification Statement, the reasons for this finding will be discussed with the Verification Body and Member. If, at the conclusion of this discussion, the Verification Body indicates that it is in agreement with the Accreditation Body, it will be provided with an opportunity to issue a new Verification Statement reversing the original Verification Statement.

The decision to issue a new Verification Statement is up to the Verification Body. If for any reason the Verification Body chooses not to issue a new Verification Statement, the Accreditation Body will complete the "Dispute Resolution" addendum to the Verification Statement, indicating that the original finding of the Verification Body has been overturned upon review by the Accreditation Body.

Verification Bodies are free to disagree with the findings of the Accreditation Body, and will not be instructed or in any way pressured to issue a new Verification Statement. The purpose of the above-outlined procedure is merely to provide a Verification Body with an opportunity to revise its Verification Statement during the dispute resolution process if, on the basis of the

evidence and reasons cited by the Accreditation Body, the Verification Body changes its original judgment and wishes to issue a new judgment. However, while the Verification Body (or the Member) is free to disagree with the findings of the Accreditation Body, those findings are nonetheless binding on both parties once the dispute resolution process has been completed.

In the event that the Accreditation Body finds that the original Verification Statement was correct, they will complete the “Dispute Resolution” addendum to the Verification Statement to indicate that the original Verification Statement has been upheld upon review by the Accreditation Body.

## 5.6 Completing the Verification Process

Once a Verification Statement has been authorized by the Member, Verification Bodies must input their findings into CRIS.

Upon receipt of the communications from a Verification Body (and receipt of the signed Verification Statement from the Member), The Registry will perform a final review of the reported emissions data. The Registry will not accept a Member’s emission report until it receives a signed positive Verification Statement indicating ‘verified’.

Verification Bodies must use the most current Verification Statement form that is posted on The Registry’s website.

The Registry will review the Verification Statement and a Member’s emission report for completeness. In doing so, The Registry may request additional information from Verification Bodies and/or Members. If The Registry agrees that the emission report is correct and the Verification Statement indicates that no material misstatements have occurred, The Registry will formally accept the Verification Statement.

Once The Registry accepts a Member’s verified emissions report and Verification Statement, the data will become available to the public through CRIS.

## 5.7 Record Keeping and Retention

While The Registry views the verification process as a private exchange between a Verification Body and a Member, Verification Bodies must keep detailed records related to every verification process.<sup>19</sup> The Registry requires that the following records be retained for a minimum of five years<sup>20</sup> as specified by contract with the Member.

Verification Bodies should, at a minimum, retain hard and electronic copies, as applicable, of:

- The Member’s GHG emission report (printable from CRIS)
- Verification Plan and notes
- Sampling Plan and notes, including copies of original activity data records and other data necessary to perform an ex-post assessment of the verification activities.
- Verification Report
- Verification Statement
- Backup documentation, verification notes, etc.

## 5.8 Facts Discovered After Verification Process is Complete

In some cases, errors in an emission report or Verification Statement may be discovered after the completion of the verification process, either by the Member, the Verification Body, the Accreditation Body, The Registry, or another party (e.g., a user of the data).

If such errors result in a cumulative change in total reported emissions of less than five percent, The Registry will encourage the appropriate party to correct the error. However,

<sup>19</sup> The Verification Body should also consult ISO 14064-3 for a discussion of documentation and retention.

<sup>20</sup> The minimum five-year document retention period is measured from the date that a Verification Statement is accepted by The Registry.

if the errors cause a material misstatement of the reported emissions or their accuracy, The Registry requires that the appropriate party corrects the error(s) and re-verify the affected emission report.

Stakeholders discovering any reporting or verification errors after the fact should contact The Registry via e-mail ([verification@theclimateregistry.org](mailto:verification@theclimateregistry.org)). The Registry will evaluate the error and contact the appropriate parties. If The Registry determines that the reported error constitutes a material misstatement, it will direct The Registry to change the verification status of the affected emission report to become “unverified”. The Registry requires that the Member correct their emission report and have it re-verified (either by the original Verification Body or a new Verification Body) within one year from the time The Registry informs the Member of the error.

Upon completion of a successful re-verification, The Registry will formally accept the revised emission report into The Registry database.

All material misstatements discovered after a verification process is complete will be reported to both the Verification Body and the

Accreditation Body. The Verification Body may want to perform a root cause analysis to determine why the error was not discovered during the verification process and to identify “lessons learned” that may help the Verification Body to reduce the risk of future undiscovered material misstatements. While The Registry recognizes that material misstatements may occasionally be missed during the verification process, a pattern of undiscovered material misstatements on the part of a Verification Body will be considered by the Accreditation Body as cause for review and, if necessary, revocation of the Verification Body’s accreditation status.

## 5.9 Questions or Comments?

The Registry encourages Verification Bodies to contact The Registry whenever they have any questions or need assistance interpreting requirements for verification. Verification Bodies may contact The Registry by phone or e-mail as indicated below:

<p style="text-align: center;"><b>866-523-0764</b> or <a href="mailto:verification@theclimateregistry.org">verification@theclimateregistry.org</a></p>
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# GLOSSARY OF TERMS

<b>Term</b>	<b>Definition</b>
Applicant	A firm, or lead firm (if part of a team), responding to an RFA for Verification Bodies.
Batch Verification	Verification process arranged by The Registry for multiple Members with relatively simple GHG emissions (less than 1000 tonnes of CO <sub>2</sub> -e emissions, and no significant process or fugitive emissions).
Case-Specific Conflict of Interest	Instances where the ability of a specific Verification Body to render objective GHG verification services to a Member may be affected by the nature of other business services provided to the Member by the Verification Body or a related organization, shared management and/or financial resources between the Member and the Verification Body or a related organization, or other situations created by the Verification Body or another related entity.
Calculation-Based	Any of various emission quantification methodologies that involve the calculation of emissions based on emission factors and activity data such as input material flow, fuel consumption, or produced output.
Centralized Inventory Management System	A system that is developed, maintained and managed at a central location or through a central network or web-based system.
Control Approach	An emission accounting approach for defining organizational boundaries in which a company reports 100 percent of the GHG emissions from operations under its financial or operational control.
CO <sub>2</sub> equivalent*	(CO <sub>2</sub> -e) The quantity of a given GHG multiplied by its total global warming potential. This is the standard unit for comparing emissions of different GHGs.
Conflict of Interest	(COI) A situation in which, because of other activities or relationships with a potential client, a person or firm is unable or potentially unable to render an impartial Verification Statement of the potential client's greenhouse gas (GHG) emissions, or the person or firm's objectivity in performing verification activities is or might be otherwise compromised.
Datum	A reference or starting point.
Direct Emissions	Emissions from sources that are owned or controlled by the reporting organization.
Emerging Conflict of Interest	A potential or actual COI situation that arises, or becomes known, during verification or for a period of one year after the completion of verification activities.

Emissions Factor*	GHG emissions expressed on a per unit activity basis (for example tonnes of CO <sub>2</sub> emitted per million Btus of coal combusted, or tonnes of CO <sub>2</sub> emitted per kWh of electricity consumed).
Emissions year	The year in which the emissions being reported to The Registry occurred. For example, if it is 2010 and emissions that occurred in 2009 are being reported, the emissions year is 2009.
Entity	Any corporation, institution, or organization recognized under U.S., Canadian, or Mexican law, and therefore qualified to report emissions to The Registry. A reporting entity is comprised of all the facilities and emission sources delimited by the organizational boundary developed by the entity, taken in their entirety.
Equity Share Approach	An emissions accounting approach for defining organizational boundaries in which a company accounts for GHG emissions from each operation according to its share of economic interest in the operation, which is the extent of rights a company has to the risks and rewards flowing from an operation.
Facility	Any installation or establishment located on a single site or on contiguous or adjacent sites that are owned and operated by an entity. A facility includes not only all of the stationary installations and equipment located at the site, but all transportation equipment that is under the control of the reporting entity and operates on a particular facility's premises. Mobile sources, such as vehicle fleets which operate outside of the physical boundaries of a facility are considered discrete facilities. Similarly, a pipeline, pipeline system, or electricity T&D system is considered a discrete facility for reporting purposes.
Financial Control	The ability to direct the financial and operating policies of an operation with an interest in gaining economic benefits from its activities. Financial control is one of two ways to define the control approach.
Fugitive Emissions*	Intentional and unintentional releases of GHGs from joints, seals, gaskets, etc.
Global Warming Potential*	(GWP) The ratio of radiative forcing (degree of harm to the atmosphere) that would result from the emission of one unit of a given GHG to one unit of CO <sub>2</sub> .
Greenhouse Gases	(GHG) For the purposes of The Registry, GHGs are the six gases identified in the Kyoto Protocol: Carbon Dioxide (CO <sub>2</sub> ), Nitrous Oxide (N <sub>2</sub> O), Methane (CH <sub>4</sub> ), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur Hexafluoride (SF <sub>6</sub> ).
Greenhouse Gas Activity Data**	Quantitative measure of activity that results in a GHG emission removal.

Greenhouse Gas Emission**	Total mass of a GHG released to the atmosphere over a specified period of time.
Greenhouse Gas Information System**	Policies, processes and procedures to establish, manage and maintain GHG information.
Greenhouse Gas Source**	Physical unit or process that releases a GHG into the atmosphere.
Indirect Emissions	Emissions that are a consequence of the actions of a reporting entity, but are produced by sources owned or controlled by another entity. For example, emissions that occur at a utility's power plant as a result of electricity purchased by a manufacturing company represent the manufacturer's indirect emissions.
Inherent Uncertainty	The scientific uncertainty associated with measuring GHG emissions due to limitations on monitoring equipment or measurement methodologies.
Lead Verifier	An employee of an accredited Verification Body that is qualified by that Verification Body to lead a verification team.
Level of Assurance**	Degree of assurance the intended user requires in a validation or verification. There are two levels of assurance, reasonable or limited, which result in differently worded validation or verification statements.
Materiality**	Concept that individual or the aggregation of errors, omissions and misrepresentations could affect the greenhouse gas assertion and could influence the intended users' decisions.
Material Discrepancy**	Individual or the aggregate of actual errors, omissions and misrepresentations in the greenhouse gas assertion that could affect the decisions of the intended users.
Measurement-Based	Any of various emission quantification methodologies that involve the determination of emissions by means of continuous measurement of the flue gas flow, as well as the concentration of the relevant GHG(s) in the flue gas.
Minimum Quality Standard	Data that is free of material misstatements, and meets The Registry's minimum level of accuracy of at least 95 percent.
Mobile Combustion	Emissions from the combustion of fuels in transportation sources (e.g., cars, trucks, buses, trains, airplanes, and marine vessels), emissions from non-road equipment such as equipment used in construction, agriculture, and forestry and other sources that emit GHG emissions while moving. A piece of equipment that can be moved from site to site but does not combust fuel while it is being moved (e.g., an emergency generator) is a stationary, not a mobile, combustion source.

Operational Control	Full authority to introduce and implement operating policies at an operation. Operational control is one of two ways to define the control approach.
Organization**	Company, corporation, firm, enterprise, authority or institution, or part or combination thereof, whether incorporated or not, public or private, that has its own functions and administration.
Organizational Boundaries	The boundaries that determine the operations owned or controlled by the reporting company, depending on the consolidation approach taken (either equity share or control approach).
Outsourcing*	The contracting out of activities to other businesses.
Personal Conflict of Interest	A relationship of an individual member of a verification team that may impair the objectivity of the member in performing verification activities.
Process Emissions*	Emissions from physical or chemical processing rather than from combustion (e.g., emissions of CO <sub>2</sub> from cement manufacturing, emissions of perfluorocarbons (PFCs) from aluminum smelting, etc.
Reasonable Assurance**	A reasonable, but not absolute, level of assurance that the responsible party's GHG assertion is materially correct.
Related Entity	An organization that is linked to the Verification Body by: common ownership or directors, contractual arrangement, a common name, informal understanding, or other means such that the related organization has a vested interest in the outcome of an assessment or has a potential ability to influence the outcome of an accredited management system assessment, or greenhouse gas verification effort.
Reporting Uncertainty	The errors made in identifying emissions sources and managing and calculating GHG emissions. This differs from inherent uncertainty due to incomplete understanding of climate science or a lack of ability to measure greenhouse gas emissions.
Scope 1 Emissions	All direct GHG emissions, with the exception of direct CO <sub>2</sub> emissions from biogenic sources.
Scope 2 Emissions	Indirect GHG emissions associated with the consumption of purchased electricity, heating, cooling, or steam.
Scope 3 Emissions	All indirect emissions not covered in Scope 2, including, e.g., upstream and downstream emissions, emissions resulting from the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, use of sold products and services, outsourced activities, waste disposal, etc.
Stationary Combustion*	Combustion of fuels in any stationary equipment including boilers, furnaces, burners, turbines, heaters, incinerators, engines, flares, etc.

Streamlined Verification	Verification services provided in interim years between full verifications. The Verification Body must perform the minimum set of activities that will allow it to conduct a risk-based assessment of materiality and to attain reasonable assurance in the findings presented in its Verification Statement. The minimum required activities include the risk-based assessment and the verification of emission estimates against the verification criteria.
Transitional Member	A Registry Member that opts to provide a partially complete emission report, covering fewer than the six internationally recognized GHGs (but CO <sub>2</sub> from stationary combustion at a minimum) and/or one or more states, provinces, territories, or Native Sovereign Nations. The transitional reporting option is available only during a Reporter's/Member's first two emissions years.
Tonnes (t)	Metric tons.
Verification	The process used to ensure that a given Member's greenhouse gas emissions inventory has met a minimum quality standard and complied with The Registry's procedures and protocols for calculating and reporting GHG emissions.
Verification Activities	Activities undertaken during the third-party verification that include reviewing reported emissions, verifying their accuracy according to standards specified in The Registry's GVP, and submitting a Verification Statement to The Registry.
Verification Body	A firm that has been recognized by The Registry to conduct verification activities under The Registry program. The Registry recognizes only Verification Bodies that are accredited to ISO 14065 and meet the additional requirements set forth in The Registry's Guidance on Accreditation.
Verification Statement	A one-page document stating the Verification Body's findings that the Member's emission report is verifiable (or not).
Verification Report	A detailed report that a Verification Body prepares for a Member, describing the scope of the verification activities, standards used, emissions sources identified, sampling techniques, evaluation of Member's compliance with the General Reporting Protocol, assumptions, and a list of material and immaterial misstatements, if any.
Verification Team	Employees or subcontractors of a Verification Body, acting for the Verification Body to provide verification services for a Member.
Verified Emission Report	An annual GHG emission report that has been reviewed and approved by a third-party Verification Body and accepted by The Registry.

Verifier A single employee or member of a verification team assembled by a Registry-recognized firm (Verification Body) that conducts verification activities.

*\*Definitions from “The Greenhouse Gas Protocol, A Corporate Accounting and Reporting Standard,” World Business Council for Sustainable Development and World Resources Institute, Switzerland, September 2001.*

*\*\*Definitions from “ISO 14064-3, Greenhouse Gases, Part 3: Specification with Guidance for the Validation and Verification of Greenhouse Gas Assertions,” 2006.*



## APPENDIX A: REQUIRED FORMS

This appendix provides a sample set of forms and templates that Verification Bodies are required to use to document their COI and verification findings, and to notify The Registry of their verification activities.

Specifically, the appendix includes:

- Form COI-A: Case-Specific Conflict of Interest Assessment (see Appendix A1);
- Form COI-B: Mitigation Plan (see Appendix A2);
- Notification of Verification Activities Form (see Appendix A3); and
- Verification Statement template (see Appendix A4).

The Registry occasionally updates and improves its verification forms to ease the completion and submission of these forms. Thus, please always refer to the forms on The Registry's website rather than those included in this GVP, as these forms may become outdated.

Please note that The Registry can receive e-mails only up to 5 MB in size. To ensure receipt of your forms, all forms should be submitted to The Registry in pdf format to the e-mail addresses noted on the forms.

# Appendix A1: COI-A: Case-Specific Conflict of Interest Assessment Form



The Climate Registry

All accredited Verification Bodies must complete this form prior to conducting any verification activities for a Member. The Registry will screen all COI Assessments for completeness and evaluate submitted Assessment Forms within 15 business days. Periodically, the Registry will select assessment forms for a more thorough review. In this instance, The Registry will inform the Verification Body of the additional review. The Registry will provide its finding to the Verification Body within an additional 15 business days.

Please submit this completed form to [COI@theclimateregistry.org](mailto:COI@theclimateregistry.org).

Date: \_\_\_\_\_

Member Name: \_\_\_\_\_

Member Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Mailing address: \_\_\_\_\_

Verification Body Name: \_\_\_\_\_

Verification Body Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Mailing address: \_\_\_\_\_

To the best of my knowledge, I (printed name) attest that the information provided in support of this assessment is true and complete and that I have complied with the Registry's Conflict of Interest policies as described in its *General Verification Protocol*.

\_\_\_\_\_  
(Authorized signature)

For digital signature: By checking the "Digital Signature Acknowledgement" box, I agree that this Conflict of Interest Assessment Form shall be deemed to be "in writing" and to have been "signed" for all purposes and that any electronic record will be deemed to be in "writing." I will not contest the legally binding nature, validity, or enforceability of this Conflict of Interest Assessment Form and any corresponding documents based on the fact that they were entered and executed electronically, and expressly waive any and all rights I may have to assert any such claim.

Based on the information provided in the following pages, we believe that our risk of COI is:

High     Medium     Low

Please respond fully and in detail to all of the following questions. If you are using subcontractors to complete the proposed verification activities, you must also provide this information for all subcontractors. If you have no prior relationship with the Member, you may answer “No” or “Does Not Apply” to many of the following questions, but you must answer every question.

All confidential information should be so designated, and will be kept confidential by The Registry.

- Has your Verification Body ever provided GHG verification services for this Member (excluding the current proposed services)?

YES  NO

If yes, Emissions Year(s) verified: \_\_\_\_\_  
 Dates of service (month/date to month/date): \_\_\_\_\_

- Has your Verification Body at any time provided any GHG Consultancy Services or other High COI Non-Verification Services<sup>21</sup> to the Member?

YES  NO

Please declare all previous, existing, and planned involvement with the Member’s GHG monitoring, accounting, reporting, and reduction activities, regardless of date of service. For each activity, identify the group(s)/department(s) of the organizations involved, and a description of each activity. Please clearly define the links between organizations, in particular your company’s business unit(s) that performs certification and verification services. You may attach additional pages to this form as needed to respond fully.

**All GHG Consulting Services Performed for Member**

GHG Consultancy Services	Dates of Service (mo/yr-mo/yr)	Verification Body		Member		Description of Activities
		Business Unit	Location	Business Unit	Location	

Please provide any other relevant information that explains or describes any involvement with the Member’s GHG monitoring, accounting, reporting, and reduction activities, including a description of your firm’s relationship with the Member’s GHG inventory technical assistance provider, if one.

- Do you currently provide other non-GHG services to the Member?

YES  NO

<sup>21</sup> GHG Consultancy Services and High-COI Non-Verification Services are defined and described in Section 3.2.1 of the General Verification Protocol.

Have you done so in the past?

YES  NO

- a. List and describe any contracts or arrangements to perform work, other than GHG Consultancy Services or GHG verification work, you have, or had, with the Member in the past three years within North America. Please explain the purpose and nature of this work. Please also describe its geographic location and the business unit(s) within the organizational structure of the Member for which the services were performed. If no work has been performed, please fill in the field with "N/A."

**Work Performed in the Previous Three Years**

Non-GHG Services	Dates of Service (mo/year-mo/year)	Potential COI?	Verification Body		Member		Description of Activities
			Business Unit	Location	Business Unit	Location	
		<input type="checkbox"/>					
		<input type="checkbox"/>					
		<input type="checkbox"/>					
		<input type="checkbox"/>					
		<input type="checkbox"/>					
		<input type="checkbox"/>					

Please provide any other relevant information that explains or describes any of these prior and existing relationships with the Member.

4. What is, or was, the nature of the relationship between any part of your organization and the Member contracting for the work? Please describe.

- a. Do your organization and the Member share any formal affiliation or management?

YES  NO If yes, please describe.

- b. Are you and the Member currently engaged in any joint ventures or partnerships?

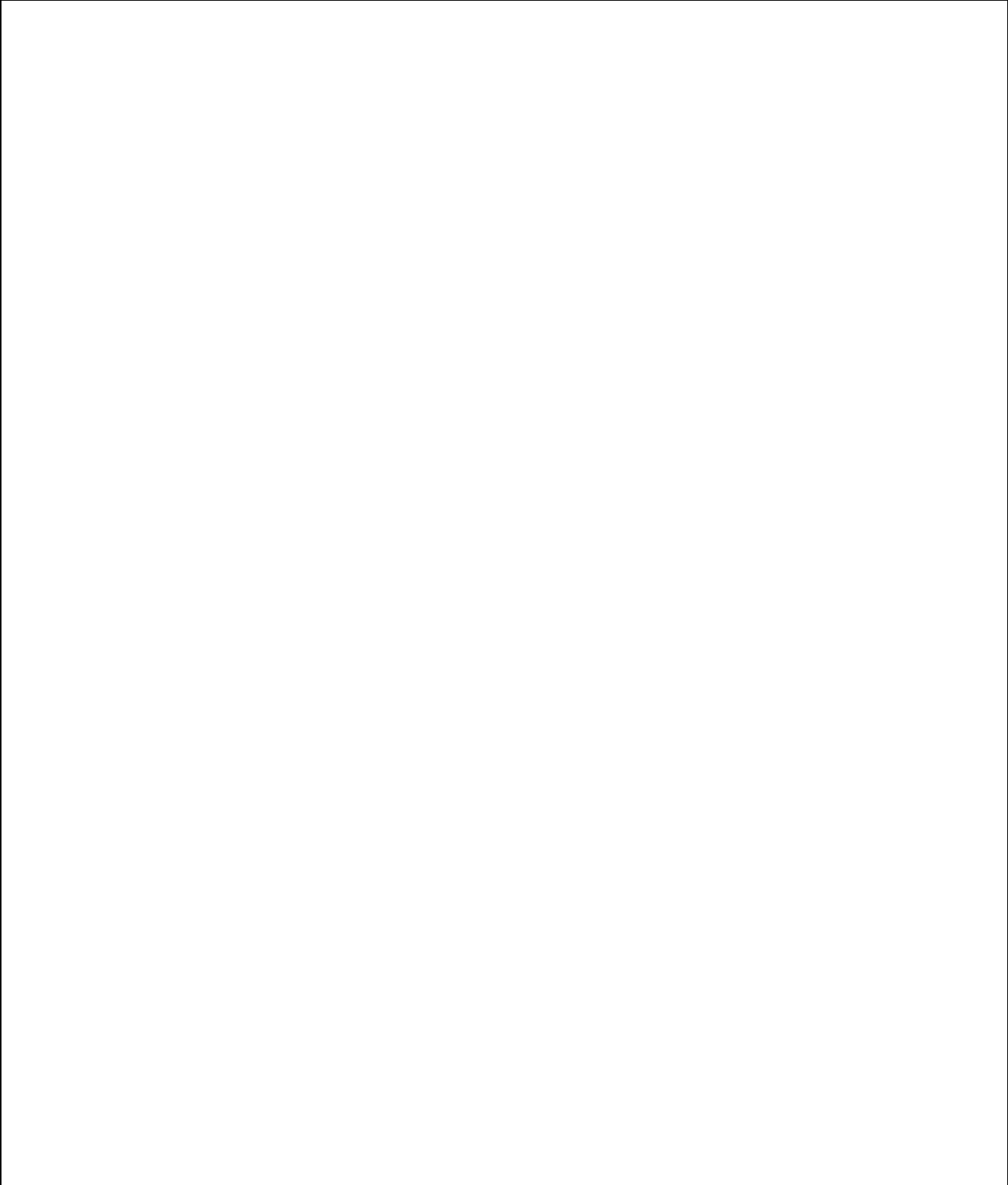
YES  NO If yes, please describe.

- c. List each staff member that will contribute to the proposed verification activities, identifying any previous work these individuals have conducted for the Member in the past three years including while in the employment of other organizations. Please attach additional pages to this form as needed to identify all staff who will be assigned to the verification activities.

<b>Name:</b>	
<b>Telephone number:</b>	
<b>E-mail address:</b>	
<b>Business location (city, state):</b>	
<b>Previous work for Registry Member (description of services):</b>	
<b>Date of Services (month/year to month/year):</b>	
<b>Employer at time of service:</b>	
<b>Direct Financial Investment of &gt;\$5,000?</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<b>Role(s) for Proposed Verification:</b>	<input type="checkbox"/> Lead Verifier <input type="checkbox"/> Verifier <input type="checkbox"/> Independent Peer Reviewer <input type="checkbox"/> Technical Expert <input type="checkbox"/> Subcontractor Responsibilities:

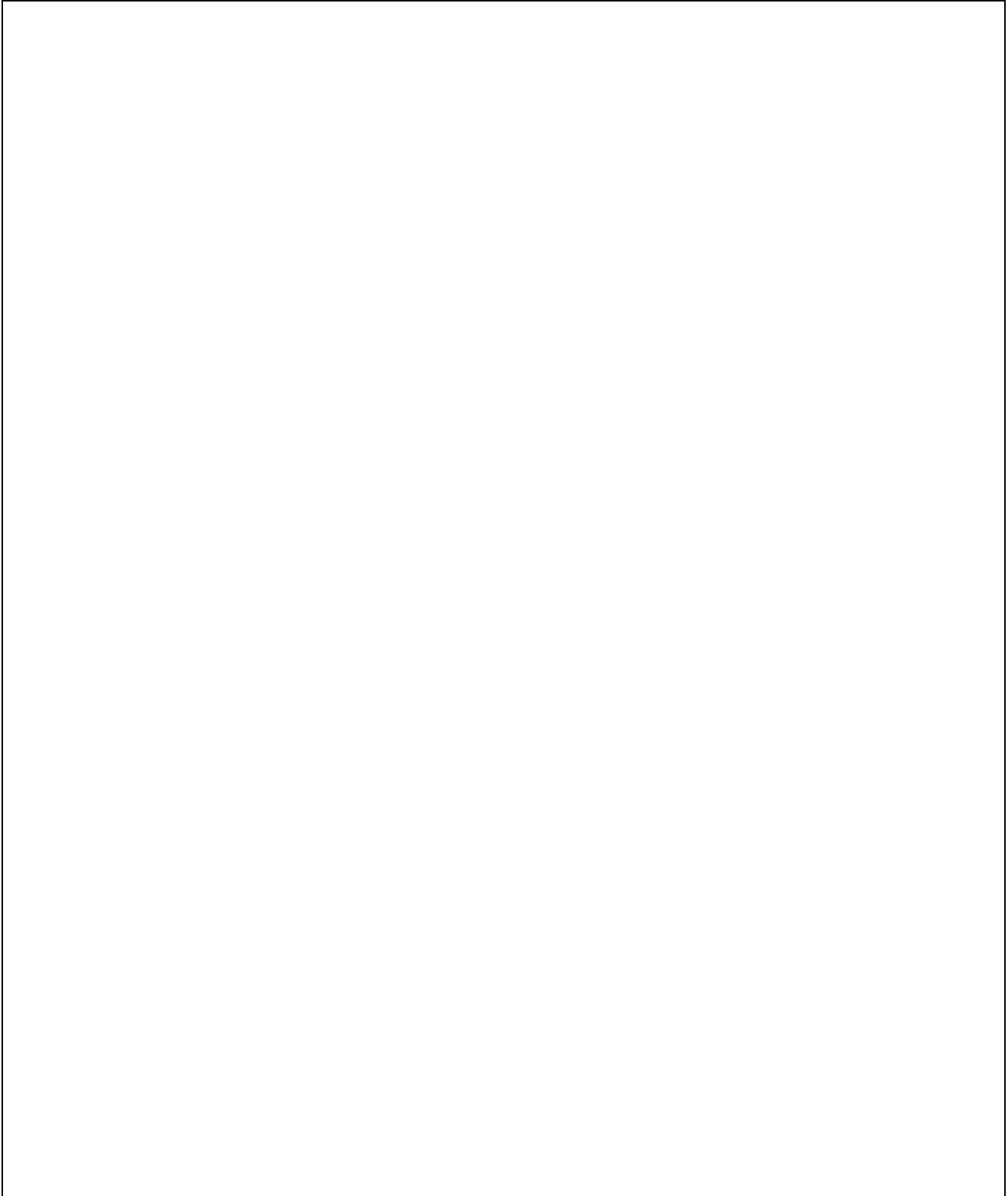
<b>Name:</b>	
<b>Telephone number:</b>	
<b>E-mail address:</b>	
<b>Business location (city, state):</b>	
<b>Previous work for Registry Member (description of services):</b>	
<b>Date of Services (month/year to month/year):</b>	
<b>Employer at time of service:</b>	
<b>Direct Financial Investment of &gt;\$5,000?</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<b>Role(s) for Proposed Verification:</b>	<input type="checkbox"/> Lead Verifier <input type="checkbox"/> Verifier <input type="checkbox"/> Independent Peer Reviewer <input type="checkbox"/> Technical Expert <input type="checkbox"/> Subcontractor Responsibilities:

d. Include an organizational chart for the Member, either in the space below or attached separately, that **identifies and highlights the division responsible for its GHG inventory management.**





- e. Include your organization's organization chart, either in the space below or attached separately, that **identifies and highlights the division responsible for conducting the verification activities.** The organization chart should explain if your company is organized by geographic regions, by business unit, or in another manner. Use this information to inform your answer to Question 5.



5. Please complete the table below to answer questions about the financial magnitude of service agreements. Add space as needed to respond fully. All confidential information should be so designated, and will be kept confidential by The Registry

### Financial Assessment of Related Services

<b>Member Reporting Boundary:</b>		<input type="checkbox"/> Transitional Boundary: Selected States/Provinces/Territories (specify) _____; GHGs (specify): _____ <input type="checkbox"/> North America <input type="checkbox"/> Worldwide	
<b>Duration of Proposed Registry Verification Services:</b>		<input type="checkbox"/> 1 Calendar Year <input type="checkbox"/> Multiple Calendar Years Emissions Year(s) (i.e. 2008, 2009): _____	
<b>Expected Value of Proposed Registry Verification Services:</b>		\$ _____ for current emissions years; \$ _____ for all emissions years listed above	
<b>Prior Registry Verification Services for Member in Reporting Boundary (calendar year)</b>	<b>Value of Prior Verification Services for Member</b>	<b>% of Your Total Revenue</b>	<b>Emissions Year(s) Verified</b>
2009	\$		
2008	\$		
2007	\$		
<b>Other Prior Services for Member in Reporting Boundary (calendar year)</b>	<b>Value of Other Services for Member</b>	<b>% of Your Revenue</b>	<b>Types of Services (excluding Registry Verification)</b>
2009	\$		
2008	\$		
2007	\$		
2006	\$		
<b>Value of Anticipated Future Services for the Member within the Reporting Boundary (excluding potential Registry Verification Services)</b>			<b>Types of Services (excluding Registry Verification)</b>
<b>Current Year: 2010</b>	\$		
2011	\$		

Please provide any relevant information about any of these services. If you have provided any GHG Consulting Services, please describe those in detail, including dollar value of services and percent of your total revenue.

6. Are there any extenuating circumstances that might cause your proposed GHG Verification Services to be considered sensitive or highly visible? Would you or the Member be uncomfortable if the nature of your relationship were reported in the press, or received public attention?

YES  NO If yes, please describe

Please submit this completed form to [COI@theclimater registry.org](mailto:COI@theclimater registry.org).





**SCHEDULE OF ACTIVITIES:**

For North America:

Within the Member's entity inventory, total number of:

Commercial Facilities:

Non-Commercial Facilities:

Number of North American facilities selected for visits during verification activities:

Percent of Scope 1 Emissions:

Covered by facility visits: \_\_\_\_\_ %

Covered by records sampled (not including emissions covered by facility visits): \_\_\_\_\_ %

Percent of Scope 2 Emissions:

Covered by facility visits: \_\_\_\_\_ %

Covered by records sampled (not including emissions covered by facility visits): \_\_\_\_\_ %

For non-North America:

Check this box if not applicable:

Within the Member's entity inventory, total number of:

Commercial Facilities:

Non-Commercial Facilities:

Number of non-North American facilities selected for visits during verification activities:

Percent of Scope 1 Emissions:

Covered by facility visits: \_\_\_\_\_ %

Covered by records sampled (not including emissions covered by facility visits): \_\_\_\_\_ %

Percent of Scope 2 Emissions:

Covered by facility visits: \_\_\_\_\_ %

Covered by records sampled (not including emissions covered by facility visits): \_\_\_\_\_ %

Please confirm that the number of facilities selected for visits is greater or equal to the minimum number of facilities to be visited based on as the methodologies established in GVP v 2.0 Section 4.3.4?

Yes

No (streamlined verification only)\*

\*Your verification plan must be in compliance with the facility visit requirements of GVP v. 2.0.

Number of facilities visited in previous verification work, if any (please specify the calendar year in which the facilities were visited):

☆ Please attach a list of facilities you plan to visit, including the facility address, facility contact, and anticipated date of visits.

Please indicate the date you anticipate completing all verification activities:

☆ Please attach your verification plan for the proposed verification services



## MEMBER ACKNOWLEDGEMENT OF POTENTIAL ACCREDITATION BODY AND REGISTRY VISITS

I, the official named below, am authorized to represent the Member to the provision listed below.

<i>Member (Organization to be verified)</i>	<i>Verification Body Name (Printed)</i>
<i>By (Authorized Signature of Member Representative)</i>	
<input type="checkbox"/> For digital signature: By checking the “Digital Signature Acknowledgement” box, I agree that this acknowledgement shall be deemed to be “in writing” and to have been “signed” for all purposes and that any electronic record will be deemed to be in “writing.” I will not contest the legally binding nature, validity, or enforceability of this acknowledgement and any corresponding documents based on the fact that they were entered and executed electronically, and expressly waive any and all rights I may have to assert any such claim.	
<i>Printed Name and Title of Person Signing</i>	
<i>Date</i>	

I [Name] of [Member] have been informed by [Verification Body] that a representative from The Registry, the Accreditation Body, or their contractors may accompany the Verification Body to our facilities during their verification work, and may request to see information necessary to ascertain the reasonableness of our reported GHG emissions results and our compliance with The Registry’s reporting requirements.

I understand that any information obtained by The Registry, the Accreditation Body, or their contractors will be used solely for purposes of evaluating the verification process, and will otherwise be kept confidential.

# Appendix A4: Verification Statement



The Climate Registry

**Name of Verification Body:** \_\_\_\_\_

This Verification Statement documents that [Verification Body] has conducted verification activities in compliance with ISO 14064-3 and The Registry's General Verification Protocol. This statement also attests to the fact that [Verification Body] provides [reasonable assurance/limited assurance] that [Member] reported greenhouse gas emissions from January 1, [Year] through December 31, [Year] are verifiable and meet the requirements of The Climate Registry's voluntary program.

**Reporting Classification:**  Transitional  Complete  Historical

**Type of Verification:**  Batch  Streamlined  Full

**GHG Reporting Protocols against which Verification was Conducted:**

- The Climate Registry's *General Reporting Protocol Version 1.1*, dated May 2008
- The Climate Registry's GRP Updates and Clarifications document dated \_\_\_\_\_
- Others (specify): \_\_\_\_\_

**GHG Verification Protocols used to Conduct the Verification:**

- The Climate Registry's *General Verification Protocol Version 2.0*, dated June 2010
- The Climate Registry's GVP Updates and Clarifications document dated \_\_\_\_\_
- Others (specify): \_\_\_\_\_

**Member's Organizational Boundaries:**

- Control Only: ( Financial **or**  Operational)
- Equity Share and Control ( Financial **or**  Operational)

**Geographic Scope of Verification:**

- Transitional or Historical, specify geographic boundary: \_\_\_\_\_; GHGs (specify): \_\_\_\_\_
- North American  Worldwide (including North America)  Worldwide (non-North America)

**Total Entity-Wide Emissions Verified (Control Criteria):**

Total Scope 1 Emissions: \_\_\_\_\_ tonnes CO<sub>2</sub>-e

Enter tonnes of each GHG: \_\_\_\_\_ CO<sub>2</sub> \_\_\_\_\_ CH<sub>4</sub> \_\_\_\_\_ N<sub>2</sub>O \_\_\_\_\_ HFCs \_\_\_\_\_ PFCs \_\_\_\_\_ SF<sub>6</sub>

Total Scope 2 Emissions: \_\_\_\_\_ tonnes CO<sub>2</sub>-e

Enter tonnes of each GHG: \_\_\_\_\_ CO<sub>2</sub> \_\_\_\_\_ CH<sub>4</sub> \_\_\_\_\_ N<sub>2</sub>O

Biogenic CO<sub>2</sub>: \_\_\_\_\_ tonnes CO<sub>2</sub>

**Total Entity-Wide Emissions Verified (Equity Share Criteria, if applicable):**

Total Scope 1 Emissions: \_\_\_\_\_ tonnes CO<sub>2</sub>-e

Enter tonnes of each GHG: \_\_\_\_\_ CO<sub>2</sub> \_\_\_\_\_ CH<sub>4</sub> \_\_\_\_\_ N<sub>2</sub>O \_\_\_\_\_ HFCs \_\_\_\_\_ PFCs \_\_\_\_\_ SF<sub>6</sub>

Total Scope 2 Emissions: \_\_\_\_\_ tonnes CO<sub>2</sub>-e

Enter tonnes of each GHG: \_\_\_\_\_ CO<sub>2</sub> \_\_\_\_\_ CH<sub>4</sub> \_\_\_\_\_ N<sub>2</sub>O

Biogenic CO<sub>2</sub>: \_\_\_\_\_ tonnes CO<sub>2</sub>

**Verification Statement:**

Verified

Unable to Verify (include reason, e.g., “due to data errors” or “due to non-compliance with The Registry’s reporting requirements): \_\_\_\_\_

Comment: \_\_\_\_\_

**Attestation:**

\_\_\_\_\_  
[Insert Name], Lead Verifier

\_\_\_\_\_  
Date

Digital Signature Acknowledgement\*

\_\_\_\_\_  
[Insert Name], Independent Peer Reviewer

\_\_\_\_\_  
Date

Digital Signature Acknowledgement\*

**Authorization:**

I [Name of Member Representative] accept the findings in this Verification Statement and authorize the submission of this Verification Statement to The Climate Registry on behalf of [Name of Member].

\_\_\_\_\_  
[Member Representative Signature]

\_\_\_\_\_  
Date

Digital Signature Acknowledgement\*

\*For digital signature: By checking the “Digital Signature Acknowledgement” box, I agree that this Verification Statement shall be deemed to be “in writing” and to have been “signed” for all purposes and that any electronic record will be deemed to be in “writing.” I will not contest the legally binding nature, validity, or enforceability of this Verification Statement and any corresponding documents based on the fact that they were entered and executed electronically, and expressly waive any and all rights I may have to assert any such claim.



The Climate Registry

## Verification Statement Dispute Resolution Addendum

This Verification Statement has been disputed and submitted to an Accreditation Body to conduct a dispute resolution process. Upon review, the Accreditation Body:

- Upholds the original Verification Statement
- Overturns the original Verification Statement and issues the following revised Verification Statement:
- Verified
  - Unable to Verify (include reason, e.g., “due to data errors” or “due to non-compliance with The Registry’s reporting requirements): \_\_\_\_\_
- Comment: \_\_\_\_\_

Accreditation Body Authorization:

\_\_\_\_\_  
[Manager of GHG Accreditation Program]

\_\_\_\_\_  
Date

Digital Signature Acknowledgement\*

The Climate Registry Authorization:

\_\_\_\_\_  
[Manager of Verification Services]

\_\_\_\_\_  
Date

Digital Signature Acknowledgement\*

\* For digital signature: By checking the “Digital Signature Acknowledgement” box, I agree that this Verification Statement shall be deemed to be “in writing” and to have been “signed” for all purposes and that any electronic record will be deemed to be in “writing.” I will not contest the legally binding nature, validity, or enforceability of this Verification Statement and any corresponding documents based on the fact that they were entered and executed electronically, and expressly waive any and all rights I may have to assert any such claim.

## APPENDIX B: OPTIONAL FORMS AND TEMPLATES

This appendix provides a set of forms and templates that Verification Bodies *may* use to document and/or guide their verification efforts. Specifically, the appendix provides a Verification Activities Checklist, which can be used to ensure that all of The Registry's verification requirements have been met, and a Standard Verification Report Template, which can be used by Verification Bodies as a

template or guideline to ensure the preparation of comprehensive Verification Reports. Use of these forms/templates is purely optional; Verification Bodies may instead choose to use their own internally-developed documentation forms and templates as long as they fully meet the requirements set forth in the GVP.

## Appendix B1: Guidance for Completing Verification Activities *(Optional)*

Verification Activities Check List		
<b>Preparing for Verification</b>		<b>Date Achieved</b>
<ol style="list-style-type: none"> <li>1. Bid on a Verification Contract</li> <li>2. Submit Case-Specific COI Assessment Form to Registry</li> <li>3. Negotiate Contract with Member</li> <li>4. Notify The Registry of Planned Verification Activities</li> <li>5. Conduct Kick-off Meeting With Member</li> <li>6. Develop Verification Plan</li> </ol>		
<b>Verification Activities</b>		
<b>Assessing Conformance with the Registry's Requirements</b>		<b>Yes      No</b>
<ol style="list-style-type: none"> <li>7. Is the Member a legal entity under U.S., Canadian or Mexican law?</li> <li>8. Is the Member a subsidiary of any other company, and if so is the parent company also reporting to the Registry?</li> <li>9. If the Member is submitting a transitional report, is the Member eligible to do so?</li> <li>10. Are all emissions calculated using simplified estimation methodologies included in the inventory and documented as such?</li> <li>11. If the answer to Question 10 is yes, are the simplified methods used appropriate, and are the results reasonable?</li> <li>12. If the answer to Question 10 is yes, do the emissions estimated using these methods constitute 5% or less of the sum of an entity's Scope 1, Scope 2, and biogenic emissions from stationary and mobile combustion?</li> <li>13. Have any mergers, acquisitions, or divestitures occurred during the current emissions year?</li> <li>14. Have any activities been outsourced or insourced in the current year?</li> <li>15. Has the Member provided all required emissions data?</li> <li>16. Have you performed data triangulations where reasonable?</li> <li>17. Are any discrepancies between your emissions estimates and the Member's material? If so, has the Member addressed those discrepancies and corrected the data in CRIS?</li> <li>18. Has the Member assigned emissions from on-road mobile sources to the correct geographic location? (i.e. Has the Member assigned the emissions to a state/province, nation or country as opposed to a single facility location?)</li> </ol>		
<b>Verification Activities</b>		
<b>Assessing Completeness of Emission Report</b>		<b>Date Achieved</b>
<ol style="list-style-type: none"> <li>19. Identify and list all Facilities in the Entity</li> <li>20. Identify and list all Emission Sources (of Scope 1 Mobile, Scope 1 Stationary, Scope 1 Process, Scope 1 Fugitive, Scope 2, Direct Biogenic CO<sub>2</sub> Mobile, and Direct Biogenic CO<sub>2</sub> Stationary Emissions)</li> <li>21. Identify and list all Fuel Types</li> <li>22. Rank All Sources by Magnitude on a CO<sub>2</sub>-e Basis</li> <li>23. Assess Any Changes in Geographic and Organizational Boundaries</li> </ol>		

- 24. [For Member’s using the equity share approach] Does the emission report include all processes and facilities for which the Member holds an equity share? If not, why?
- 25. [For Member’s using the financial control approach] Does the emission report include all processes and facilities under the financial control of the Member? If not, why?
- 26. [For Member’s using the operational control approach] Does the emission report include all processes and facilities under the operational control of the Member? If not, why?
- 27. Does the report include all facilities and sources of GHG emissions within the geographic boundaries of the Member? Or, if the Member is a Transitional Member, does the report include all facilities and sources within the states, provinces, and or native sovereign nations that the Transitional Member has chosen?
- 28. Does the report include all applicable types of GHGs from each facility and emission source within the geographic and organizational boundaries of the Member? Or, in the case of Transitional Members, does the report include all emissions of the GHGs that the Member has chosen to report (and, at a minimum, CO<sub>2</sub>) from each facility and emission source within the geographic and organizational boundaries of the transitional Member?
- 29. Has the reporting entity included all of its Scope 1 and Scope 2 emissions for each facility?
- 30. Have the Scope 1 emissions been broken down by source type (stationary combustion, mobile combustion, fugitive and process)?
- 31. Have biogenic CO<sub>2</sub> emissions been reported separately from the Scope 1 emissions?
- 32. What type of records were used as the basis for calculating emissions, and were these records appropriate?

**Performing Risk Assessment Based on Review of Information Systems and Controls** **Date Achieved**

- 33. Evaluate Procedures and Systems for Preparing Emission Report
- 34. Evaluate Personnel and Training - Does the Member’s management system define what is “qualified” and what constitutes “appropriate training”?
- 35. Assess if the uncertainty associated with methodologies and management systems is more than appropriate

- 36. Are the calculation methodologies/procedures used to compute GHG emissions at the source level among those described in the General Reporting Protocol? If not, why?
- 37. If a non-GRP methodology has been used because the General Reporting Protocol does not provide any methodology for the particular source(s) in question, is the methodology that was used an industry standard for this source type(s)?
- 38. If alternative emission factors were used, did the Member establish a basis for concluding that they were more accurate than the default factors?
- 39. Are appropriate methods used to manage and implement entity-wide GHG emissions reporting programs? If the Member has more than one facility, is the emissions data correctly monitored?



40. Is a qualified individual responsible for managing and reporting GHG emissions?
41. Is appropriate training provided to personnel assigned to GHG emissions reporting duties? If the Member relies on external staff to perform required activities, are the contractors' qualified to undertake such work?
42. Are appropriate documents created to support and/or substantiate activities related to GHG emissions reporting activities, and is such documentation retained appropriately? For example, is such documentation maintained through reporting plans or procedures, utility bills, etc.?
43. Are appropriate mechanisms used to measure and review the effectiveness of GHG emissions reporting programs? For example, are policies, procedures, and practices evaluated and updated at appropriate intervals?
44. Does the system account for the diversity of the sources that comprise each emission category? For example, are there multiple types of vehicles and other transportation devices that require different emission estimation methodologies?
45. Do you know the diversity of GHGs emitted from each emission source category?
46. When available, has the Member used the emission factors, GWPs and standardized estimation methods in the Registry's General Reporting Protocol to calculate emissions in each source category?
  - a. Are the methodologies, data sources and emission factors documented and explained appropriately?
47. Does the Member's GHG management system appropriately track emissions in all of the emission source categories?

<b>Developing a Sample Plan</b>	<b>Date Achieved</b>
---------------------------------	----------------------

48. Develop Sampling Procedures for Sources Based on Risk of Material Misstatement
49. Was the overall Verification Plan and the types of facilities and their materiality considered when developing the facility visit list?
50. Were direct and indirect emissions considered separately?

	<b>Yes</b>	<b>No</b>
--	------------	-----------

51. Based on the GVP v. 2.0 Section 4.3.4, have you visited an appropriate number of facilities?

<b>Verifying Emission Estimates Against Verification Criteria</b>	<b>Date Achieved</b>
---	----------------------

52. Confirm Total Fuel Consumption
53. Confirm Vehicle Miles Traveled
54. Confirm that appropriate Emission Factors are Used. If not Default Factors, ensure the Derivation and Explanation of increased Accuracy is properly Documented
55. Calculate Scope 1 (Mobile, Stationary, Process & Fugitive), Scope 2, and Direct Biogenic CO<sub>2</sub> (Mobile and Stationary) Based on Sampling Procedures
56. Compare Estimates from Sample Calculations to Reported Emissions
57. Determine if There are Any Discrepancies Between Sample Calculation and Reported Emissions
58. Determine if any reporting errors have caused material misstatements

	<b>Yes</b>	<b>No</b>
--	------------	-----------

59. Are the reported electricity, steam, and district heating and cooling use consistent with utility bills?
60. Is the reported total stationary fuel use by fuel type consistent with the fuel use records?
61. Is the reported total consumption of fuels in motor vehicles consistent with available documentation and by vehicle type? If the entity calculates transportation emissions based on vehicle mileage, is the reported vehicle mileage consistent with vehicle mileage records?
62. Is the reported process and fugitive emissions consistent with activity data or maintenance records?
63. Are the emission factors used by the Member appropriate?
  - a. If Registry default factors are not used, do the alternative emission factors provide increased accuracy?
  - b. Is the derivation and explanation of increased accuracy properly documented and reasonable?
64. Does a sample of the Member's calculations agree with your re-calculated Scope 1 (mobile, stationary, process & fugitive), Scope 2, and Direct Biogenic CO<sub>2</sub> (Mobile and Stationary) emissions estimates? Have you documented your process for determining the appropriate sampling plan?
65. Are all required GHG emissions included?
66. Are discrepancies between your emissions estimates and the Member's immaterial?

#### Completing the Verification Process

Date  
Achieved

- 67. Prepare a Detailed Verification Report & Submit to Member**
- 68. Prepare a Verification Statement & Submit to Member**
- 69. Conduct Verification Meeting with Member to Discuss & Finalize Verification Report & Statement**
- 70. Communicate Verification findings to The Registry through CRIS**
- 71. Retain Relevant Verification Documents & Records**

# Appendix B2: Standard Verification Report Template (Optional)



The Climate Registry

## Section 1: Overview

Date of Verification Report: \_\_\_\_\_

Member Name: \_\_\_\_\_

Emissions Year Report Verified: \_\_\_\_\_

Reporting Classification:  Transitional  Complete  Historical

Member's Organizational Boundaries:

Control Only: ( Financial **or**  Operational)

Equity Share and Control ( Financial **or**  Operational)

Geographic Scope of Emissions Report:

Transitional, specify geographic boundary: \_\_\_\_\_; specify GHGs: \_\_\_\_\_

North American

Worldwide (including North America)  Worldwide (non-North America)

Verification Body Name: \_\_\_\_\_

Verification Body Contact: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Subcontractors: \_\_\_\_\_

Verification Team Members:

Lead Verifier: \_\_\_\_\_

Other Verification Team Members: \_\_\_\_\_

**Independent Peer Reviewer:** \_\_\_\_\_

**Type of Verification:**  Batch  Streamlined  Full

**GHG Reporting Protocols against which Verification was Conducted:**

- The Climate Registry's *General Reporting Protocol Version 1.1*, dated May 2008
- The Climate Registry's GRP Updates and Clarifications document dated \_\_\_\_\_
- Others (specify): \_\_\_\_\_

**GHG Verification Protocols used to Conduct the Verification:**

- The Climate Registry's *General Verification Protocol Version 2.0*, dated June 2010
- The Climate Registry's GVP Updates and Clarifications document dated \_\_\_\_\_
- Others (specify): \_\_\_\_\_

**Total Entity-Wide Emissions Verified:**

Total Scope 1 Emissions: \_\_\_\_\_ CO<sub>2</sub>-e

\_\_\_\_\_ CO<sub>2</sub> \_\_\_\_\_ CH<sub>4</sub> \_\_\_\_\_ N<sub>2</sub>O \_\_\_\_\_ HFCs \_\_\_\_\_ PFCs \_\_\_\_\_ SF<sub>6</sub>

Total Scope 2 Emissions: \_\_\_\_\_ CO<sub>2</sub>-e

\_\_\_\_\_ CO<sub>2</sub> \_\_\_\_\_ CH<sub>4</sub> \_\_\_\_\_ N<sub>2</sub>O

Biogenic CO<sub>2</sub>: \_\_\_\_\_ tonnes CO<sub>2</sub>

**Summary of Verification Findings:**

- Verified
- Unable to Verify (include reason, e.g., "due to data errors" or "due to non-compliance with The Registry's reporting requirements): \_\_\_\_\_

Comment: \_\_\_\_\_

## Section 2: Verification Plan

Describe the verification plan, including the risk assessment methodologies employed and the sampling plan (either in the space below or attached separately):

## Section 3: Identification of Emission Sources

List all facilities/emission sources/GHG identified through verification activities within the geographic and organizational boundaries of the emissions report.

Facility Name/Identifier	Facility Location	Emission Source	GHG	Included in Emission Report?
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No

## Section 4: Verification Activities Log and Evaluation of Compliance

[Insert completed Verification Activities Checklist from GVP Appendix B-1]  
 [Attach sector-specific checklists from GVP Addenda as appropriate]

## Section 7: Findings

List all Scope 1 misstatements discovered during the verification and their magnitude at the entity level

Discrepancy	Magnitude as a Percent of Reported Scope 1 Entity-Level Emissions	Current Disposition of the Discrepancy
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected

Discrepancy	Magnitude as a Percent of Reported Scope 1 Entity-Level Emissions	Current Disposition of the Discrepancy
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected

Net sum of all Scope 1 discrepancies at the entity level: \_\_\_\_\_%

List all Scope 2 misstatements discovered during the verification and their magnitude at the entity level

Discrepancy	Magnitude as a Percent of Reported Scope 2 Entity-Level Emissions	Current Disposition of the Discrepancy
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected
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		<input type="checkbox"/> Corrected <input type="checkbox"/> Not Corrected

Net sum of all Scope 2 discrepancies at the entity level: \_\_\_\_\_%

# APPENDIX C: SECTOR-SPECIFIC GVP ADDENDA

## Appendix C1: Local Government Operations Addendum to the General Verification Protocol Version 1.0 (January 2010)

### Part 1: Introduction

#### 1.1 Background and Purpose

The Climate Registry's (The Registry's) General Verification Protocol (GVP) presents the verification requirements for The Registry's voluntary greenhouse gas (GHG) emissions reporting program for all Members. The GVP was developed to provide Registry-recognized Verification Bodies with clear instructions for executing a standardized approach to the independent verification of GHG emissions reported to The Registry.

For local government Members and Verification Bodies serving local government Members, the GVP remains the primary Verification Protocol. While the program-neutral Local Government Operations (LGO) Protocol, supplemented by Appendix D, The Climate Registry's Reporting Requirements specify some additional reporting requirements for local government Members not contained within the General Reporting Protocol, these additional requirements do not necessitate changes in the verification process, as the emissions sources are generally not unique to local governments.

This LGO Addendum to the General Verification Protocol is intended to serve as an aid to Verification Bodies conducting verification activities for local governments and to promote standard practices. To that end, the requirements and guidance in this document are primarily focused on the additional LGO-specific reporting elements that are included in the LGO Protocol.

The information contained in this document is structured in a way that mirrors the organization of the body of the GVP. Accordingly, this addendum is presented under five headings

that correspond to the core parts of the GVP. The section numbers and topics addressed in this document also parallel those of the GVP. However, for subsections with no additional or specific requirements for the LGO sector, those subsections and their headings are not included in this addendum.

#### 1.2 Overview of the LGO Verification Process

Part 1 of the GVP provides an overview of the verification process as it pertains to The Registry's voluntary reporting program. The accreditation requirements described in Part 1 of the GVP are extended here to the LGO.<sup>22</sup>

To undertake verification for a Registry Member reporting using the LGO, the Verification Body must be accredited to the organizational-level general scope by a Registry partner Accreditation Body<sup>23</sup>. If the local government has one or more EPS facilities, the Verification Body must additionally demonstrate competency within the EPS and attain accreditation to the industry sector-specific scope<sup>24</sup>. EPS and local government Members are required to report in accordance with the LGO and EPS Protocols starting with their emissions year 2010 data. Likewise, EPS Members must retain a Verification Body that is accredited to the relevant (power generation and/or electric power transactions) sector(s) to verify their emissions year 2010 reports (to be

<sup>22</sup> Accreditation is generally covered under Section 1.2.2 of the GVP.

<sup>23</sup> Currently the only Accreditation Body with which The Registry has an agreement to provide accreditation services is the American National Standards Institute (ANSI).

<sup>24</sup> ANSI's policy and assessment requirements for accrediting firms to industry sector scopes can be viewed through [ANSI's website](#).



verified in 2011) and subsequent emissions year reports. If an EPS Member chooses to report and verify in accordance with the EPS Protocol in advance their emissions year 2010 data, then the EPS Member must retain a Verification Body accredited to the relevant (power generation and/or electric power transactions) sector(s).

While The Registry does not explicitly require a Verification Body be accredited to other inventory-level scopes (for example, waste) in order to provide services for local government Members, the Verification Body must assemble a verification team with the necessary competence and an appropriate level of knowledge and understanding of source types in the local government Member's inventory.

## Part 2 – Summary of Verification Process and Requirements

### 2.4 Verification Standard

The verification standards applicable to the verification of local government Member's GHG emissions inventory are as follows:

- ISO 14063-3 – *Specification with Guidance for the Validation and Verification of Greenhouse Gas Assertions* (relevant to all Members)
- The Registry's General Verification Protocol (relevant to all Members)
- LGO Protocol (program-neutral)
- LGO Appendix D, The Climate Registry's Reporting Requirements
- The Registry's LGO Addendum to the GVP (this document, relevant to local government Members)
- The Registry's Electric Power Sector Protocol (relevant to local government Members with EPS facilities)
- The Registry's Electric Power Sector GVP Addendum (relevant to local government Members with EPS facilities)

The program-neutral LGO Protocol was designed to support several GHG reporting programs and the needs of many stakeholders. As a result, the program-neutral LGO Protocol contains some calculation methodologies for quantifying GHG emissions that are not appropriate and therefore not accepted by The Registry for its voluntary reporting program.

The Registry will accept GHG emission data calculated using all calculation methodologies contained within The Registry's GRP, Appendix D to the LGO Protocol and The Registry's other relevant industry-specific protocols (unless otherwise stated within the industry-specific protocol).

### 2.7 Scope of Verification

The LGO Protocol Section 4.2 provides a list of local government sectors (buildings, streetlights and traffic signals, water delivery facilities, port facilities, airport facilities, vehicle fleet, transit fleet, power generation facilities, solid waste facilities, wastewater facilities, other process and fugitive emissions). An important initial step in the verification process is to confirm that the local government Member's inventory is complete and includes all relevant sources of emissions that may occur as a result of the Member's operations.

In order to highlight the factors that may have an impact on a local government's GHG emissions, The Registry requires the reporting of the local government profile information listed below:

- Size (square miles)
- Population (based on best available data at the time of reporting)
- Annual Budget (can be based on either fiscal year or calendar year)
- Services Provided (checklist included in Appendix D)
- Employees (FTE)
- Climate Zone
- Heating and Cooling Degree Days

While The Registry requires reporting of these data, these data are not subject to verification.

Local government Members of The Registry are encouraged to report any applicable indicators found in Section 13.1.2.4 of the program-neutral LGO Protocol. Any indicators that are optionally reported are not subject to verification.

Table 2.1 summarizes some of the LGO-specific reporting and verification requirements.

**Table 2.1 Summary of Verification Requirements for LGO Inventory Reports**

<b>LGO Reporting Element</b>	<b>Required or Optional Reporting</b>	<b>Verification Required?</b>
Local Government Profile Information listed in Appendix D	Required	No
Biogenic CO <sub>2</sub> from biomass combustion	Required	Yes
Indicators listed in LGO Protocol Section 13.1.2.4 (e.g. gallons water treated, passengers boarded at airport, etc.)	Optional	No
Other Information Items (excluding biomass) listed in LGO Protocol Section 13.1.2.5 (e.g. carbon offsets retired and sold and renewable energy certificates)	Optional	No
Other Scope 3 Emissions	Optional	No

### Part 3 – Preparing for Verification

For Part 3, the GVP requirements are relevant and applicable to verifications for local government Members. This guidance makes one addition to Section 3.3 (Assembling the Verification team). If the local government has an EPS facility and is required to report in accordance with The Registry’s EPS Protocol, the Verification Body must be accredited to the relevant (power generation and/or electric power transactions) sector(s) and assemble a team that is competent to conduct verifications in the EPS.

Depending on the local government’s operations, the Member may be required to report emissions from more complex source

types such as landfills and wastewater treatment plants. As explained in Section 1.2 of this document, while The Registry does not explicitly require a Verification Body to be accredited to other inventory-level scopes (for example, waste) in order to provide services for local government Members, the Verification Body must assemble a verification team with the necessary competence and an appropriate level of knowledge and understanding of source types in the Member’s inventory.

Verification team members with source-specific experience need to be identified on the Designated Staff, Roles, & Responsibilities Form that the Verification Body must provide to The Registry before initiating verification activities.

## **Part 4 – Conducting Verification Activities**

### **Conformance and Completeness**

Attachment 1 includes a checklist of questions for the Verification Body to consider in assessing the Member's conformance with The Registry's requirements and completeness of the inventory. This checklist is provided as a guide for the Verifier, but it is not a requirement to complete this checklist as part of the verification documentation. The LGO verification checklist is a supplemental checklist to be used with the GVP checklists, rather than a stand-alone checklist for local government Members.

### **Selecting a Sample / Developing a Sampling Plan**

Based on the risk assessment, the Verifier should identify sources with the greatest potential for material misstatement (taking into account the volume of emissions, uncertainty in the measurement method, the degree of deficiencies in the management systems and also a random sampling). This approach should be used to identify a representative sample of emissions to recalculate.

## **Part 5 – Completing the Verification Process**

There are no specific LGO requirements for Part 5. The Verification Report and the Verification Statement will be prepared by the Verification Body in the same manner as for the general verification process.

Local government Members are likely to have a greater diversity in types of facilities, operations, and emissions sources than other Registry Members. For example, a local government Member may have emissions from wastewater treatment, landfills, airport operations, electricity generation, etc. In developing a sampling plan, the Verification Body must not only consider the minimum number of facility visits set forth in GVP Part 4, but also must ensure that the verification plan and selected facility visits adequately account for the diversity of sources in the local government Member's inventory.

While The Registry's GVP limits which type of facilities can be aggregated for reporting purposes, LGO Appendix D Section 4.6 indicates that, "Facilities of the same type can often optionally be aggregated." It is important to note that for purposes of conducting a risk assessment and for determining the type and number of facilities to visit, the Verification Body must understand and consider the total (disaggregated) facilities in the Member's inventory.

# Attachment 1: Questions to Consider in Verifying LGO Inventory Emissions Estimates

This list of questions is intended to address considerations specific to local government verifications and is additional to the general checklist included in GVP Appendix B.1. If the local government Member is also required report in accordance with the EPS Protocol, the Verification Body should also use the checklist provided in the EPS Addendum to the GVP.

## Preparing for Verification

1. Has the Member explained how common sources were consolidated and reported as single facilities in CRIS?

## Conformance

2. Did the Member report their emissions into The Registry's reporting software?
3. If the Member's inventory includes any EPS facilities, did they report these facilities in accordance with the EPS Protocol?
4. If the Member is part of a Joint Power Authority or Special District, or Community Choice Aggregation, did the Member treat the organization as a distinct entity separate from the local government and appropriately exclude Scope 1 and Scope 2 emissions from this distinct entity?
5. Did the Member report in accordance with the LGO Protocol and Registry-specific requirements set forth in Appendix D?
  - a. Excluding simplified estimation methods, did the Member use only calculation methodologies that are acceptable to The Registry as noted in Appendix D (i.e. did the Member avoid use of calculation methodologies included in the LGO Protocol that are not acceptable to The Registry)?

- b. Are emissions from solid waste disposal facilities reported in accordance with the LGO Protocol and Appendix D?
- c. Are emissions from wastewater treatment facilities reported in accordance with the LGO Protocol and Appendix D?
  - i. If site-specific information and calculation methodologies were used to calculate emissions from wastewater treatment facilities, are the site-specific methods verifiable?
- d. If the Member aggregated facilities, did they only aggregate similar facilities?

## Completeness

6. Did the Member report emissions from combustion of biomass (indicated as optional in the program-neutral LGO Protocol, but required by Appendix D)?
7. Did the Member report the Local Government Profile Information listed in Appendix D?
8. Did the Member identify all emissions sources (consider the local government sectors of buildings, streetlights and traffic signals, water delivery facilities, port facilities, airport facilities, vehicle fleet, transit fleet, power generation facilities, solid waste facilities, wastewater facilities, other process and fugitive emissions)?

## **Risk Assessment**

9. Does the Member's management system address the need for personnel who are knowledgeable of the diversity of emissions source types, when applicable?

## **Sampling Plan**

10. Did you consider the number (disaggregated), Type, and diversity of facilities in the Member's inventory in developing the sampling plan and determining the facility visits?

# Appendix C2: Electric Power Sector Addendum to the General Verification Protocol Version 1.0 (January 2010)

## Part 1 - Introduction

### 1.1 Background and Purpose

The Climate Registry's (The Registry's) General Verification Protocol (GVP) presents the verification requirements for The Registry's voluntary greenhouse gas (GHG) emissions reporting program for all Members. The GVP was developed to provide Registry-recognized Verification Bodies with clear instructions for executing a standardized approach to the independent verification of GHG emissions reported to The Registry.

For Electric Power Sector (EPS) Members and Verification Bodies serving this sector, the GVP remains the primary Verification Protocol. The EPS Protocol specifies additional reporting requirements for EPS Members not contained within the General Reporting Protocol. Therefore, Verification Bodies performing verifications of EPS emissions reports must verify conformance with the reporting requirements specified in both the GRP and the EPS Protocol.

This EPS Addendum to the General Verification Protocol is intended to serve as an aid to Verification Bodies conducting verification activities in the sector and to promote standard practices. To that end, the requirements and guidance in this document are primarily focused on the additional sector-specific reporting elements that are included in the EPS Protocol.

The information contained in this document is structured in a way that mirrors the organization of the body of the GVP. Accordingly, this addendum is presented under five headings that correspond to the core parts of the GVP. The section numbers and topics addressed in this document also parallel those of the GVP. However, for subsections with no additional or specific requirements for the EPS, those

subsections and their headings are not included in this addendum to the GVP.

### 1.2 Overview of the EPS Verification Process

Part 1 of the GVP provides an overview of the verification process as it pertains to The Registry's voluntary reporting program. Within Part 1 there is one sector-specific issue which extends to the EPS: the sector-specific accreditation needed to conduct EPS verifications.<sup>25</sup>

To undertake verification for a Registry Member within the EPS, the Verification Body must be accredited by a Registry partner Accreditation Body<sup>26</sup>. The Verification Body must then demonstrate competency within the EPS and attain accreditation to the industry sector-specific scope<sup>27</sup>. EPS Members are required to report in accordance with the EPS Protocol starting with their emissions year 2010 data (to be reported in 2011), and likewise, EPS Members must retain a Verification Body that is accredited to the relevant (power generation and/or electric power transactions) sector(s) to verify their emissions year 2010 reports (to be reported in 2011) and subsequent emissions year reports. If an EPS Member chooses to report and verify in accordance with the EPS Protocol in advance their emissions year 2010 data, then the EPS Member must retain a Verification Body accredited to the relevant (power generation and/or electric power transactions) sector(s).

<sup>25</sup> Accreditation is generally covered under Section 1.2.2 of the GVP.

<sup>26</sup> Currently the only Accreditation Body with which The Registry has an agreement to provide accreditation services is the American National Standards Institute (ANSI).

<sup>27</sup> ANSI's policy and assessment requirements for accrediting firms to industry sector scopes can be viewed through [ANSI's website](#).



## Part 2 – Summary of Verification Process and Requirements

### 2.4 Verification Standard

The verification standards applicable to the verification of EPS Member's GHG emissions inventory are as follows:

- The Registry's General Reporting Protocol (relevant to all Members)
- ISO 14063-3 – *Specification with Guidance for the Validation and Verification of Greenhouse Gas Assertions* (relevant to all Members)
- The Registry's General Verification Protocol (relevant to all Members)
- The Registry's Electric Power Sector Protocol (relevant to EPS Members)
- The Registry's Electric Power Sector GVP Addendum (this document, relevant to EPS Members)

Verification Bodies must confirm that EPS emissions sources are quantified using EPS Protocol approved calculation methodologies (or simplified estimation methodologies, if the sources represent less than five percent of the CO<sub>2</sub>-e emissions). Unless otherwise noted, calculation methodologies included in the GRP or EPS Protocols are *not* simplified methods, and hence emissions calculated using these Registry-approved methods do not count towards the five percent threshold for the use of simplified methods.

### 2.5 Materiality

Regarding Materiality (Section 2.5), the Verification Body will need to pay particular attention to the separation of Scope 1 and 2 emissions and the GVP's requirement that a five percent materiality threshold be applied to each category separately. For power generators there is an additional requirement to achieve the materiality threshold at the facility level. This requirement extends only to facilities with the primary purpose of power generation, not to other types of facilities within an EPS

Member's inventory. The EPS protocol also requires Member companies composed of subsidiaries that operate distinct electricity delivery systems (i.e. retail electricity providers with distinct customer bases) to report the emissions from such subsidiaries separately. In these cases Verifiers must apply the materiality threshold to each of the distinct subsidiaries and its constituent emissions. These distinct subsidiaries are also separately required to comply with the five percent threshold for use of simplified estimation methodologies.

Consistent with the requirements of the GVP, direct biogenic emissions must be separately reported, but grouped with Scope 1 emissions for the purposes of evaluating compliance with the five percent materiality threshold.

Since other Members of The Registry will use the metrics developed through the EPS sector-specific reporting, The Registry has established a materiality threshold of five percent for all metrics developed using the methods provided in the EPS Protocol. Each metric must meet this five percent materiality threshold, so the parameters that contribute to the metric will have to be of sufficient accuracy to meet this standard. This standard of verification must be met (and verified) for the power generation metrics (for each facility and entity-wide) and for the power deliveries metrics (for each T&D system and entity-wide).

### 2.7 Scope of Verification

In the EPS Protocol, Table 5.2 provides a detailed list of potential emission sources relevant to power generation and electric power transmission and distribution. An important initial step in the verification process is to confirm that the EPS Member inventory is complete and includes all relevant sources of emissions that may occur as a result of the Member's operations.



The Scope 3 emissions which contribute to the indirect emissions from transmission and distribution system losses must be verified. It is not necessary to verify other Scope 3 emissions.

In addition to these sources of emissions, other “non-emissions data” must be reported to provide the outputs which are used in developing the performance metrics. The metrics derived from the following non-emissions data must meet the five percent materiality threshold discussed above (Section 2.5):

- Net power generated (MWh) for power generators
- Equity share for power generating facilities (and units if they are shared at the unit level)
- Net electricity purchased (MWh), purchased wholesale and retail
- Power flows through transmission and distribution systems

- Net electricity (MWh) associated with the purchase of Renewable Energy Certificates (RECs) and/or other special power certificates

For RECs and special power certificates, the reporting requirements include several data items that are unique to the EPS protocol. These include the quantity purchased (MWh) and the generation/energy source used in producing the certificates. Eligibility requirements of special power certificates, articulated in the EPS Protocol are also subject to verification.

The EPS Protocol also has certain reporting elements which are optional, but once reported, are subject to verification. Other optional elements do not need to be verified. Table 2.1 (below) summarizes which sections of the EPS inventory report must be verified.

**Table 2.1 Summary of Verification Requirements for EPS Inventory Reports**

EPS Reporting Element	Required or Optional Reporting	Verification Required?
Direct Emissions (Chapters 12, 15 and 16)	Required	Yes
Scope 1 Hydropower Reservoir Fugitive Emissions (Chapter 15)	Optional	No
Scope 2 T&D Emissions (Chapter 14)	Required	Yes
Scope 3 Emissions Needed to Calculate T&D Scope 2 Emissions (Chapter 14)	Required	Yes
Generation Metrics (Chapter 18)	Required	Yes
Power Deliveries Metrics (Section 19.2)	Optional	Yes – if reported
Accounting for RECs (Section 19.3)	Optional	Yes – if reported
Other Scope 3 Emissions	Optional	No

## Part 3 – Preparing for Verification

For Part 3, the GVP requirements are relevant and applicable to verifications for EPS Members. This addendum makes one addition to Section 3.3 (Assembling the Verification team). The Verification Body must be accredited to the relevant (power generation and/or electric power transactions) sector(s) and assemble a team that is competent to conduct verifications in the EPS.

The verification team members with EPS experience need to be identified on the Designated Staff, Roles, & Responsibilities Form that the Verification Body must provide to The Registry before initiating verification activities.

## Part 4 – Conducting Verification Activities

### Developing a Verification Plan

The requirement to develop a Verification Plan and the elements that need to be in the plan are explained in the GVP, Sections 4.2 and 4.3, including the types of documents that should be reviewed as part of the verification process. The same requirements apply for EPS verifications. However, there are several additional EPS-specific documents and reports that a verifier may review during the verification of an EPS inventory report. Table 4.1 lists some of the documents that a verifier may refer to during the verification process for an EPS inventory.

These documents will help the verifier to assess conformance with the GRP and EPS protocol, assess the completeness of the inventory, and assess the risks of material misstatement associated with deficient internal controls. Also,

some of the documents listed in this table will provide useful information to help the verifier evaluate the EPS Member's emissions inventory against the verification criteria.

As shown in Table 4.1, there are several reports with information on assets, operations and financial data that the EPS Member may have submitted to local, state and federal agencies, including FERC, SEC, USEPA, Environment Canada, State and Provincial Utilities Commissions, and local air agencies. Where these reports are third-party audited and/or verified by the receiving agencies, then the verifier should factor that into the assessment of risk. Verifiers should check that the data have been transferred into the inventory correctly, and also review the EPS Member's operations to ensure that the meters, sensors and monitoring systems that collect data reported to these agencies are properly maintained and functioning.

As a general rule, the verifier should ensure that the data being used are applicable to the intended purpose in the inventory. For example, the verifier should confirm:

- Net generation data are used when specified (not gross generation);
- Power flows (MWh) onto the system are those power flows at the location where power is received into the system (and not adjusted to the point of delivery/sale);
- Emissions are expressed in metric tons (not short tons); and,
- Power flows (and emissions) are adjusted for equity share by unit when called for by the EPS Protocol.

## EPS Addendum to the GVP Table 4.1 Additional Documents to be Reviewed During Verification Activities for EPS Inventory Reports<sup>28</sup>

<i>Activity or Emissions Source</i>	<i>Documents</i>
<b>Emission Source Inventory</b>	<ul style="list-style-type: none"> <li>• <i>List of Facility Permits</i></li> <li>• <i>Facility Plot Plans Showing Direct Emission Sources</i></li> <li>• <i>Process Flow Diagrams</i></li> <li>• <i>Air Emission Inventory Reports</i></li> <li>• <i>EPA Acid Rain Reports</i></li> </ul>
<b>Organizational, Operational and Geographic Boundaries</b>	<ul style="list-style-type: none"> <li>• <i>SEC 10K Annual Shareholder Report</i></li> <li>• <i>Federal Energy Regulatory Commission (FERC) Form 1: Annual Report of Major Electric Utility</i></li> <li>• <i>Energy Information Administration: Forms 176, 191, 412, 423, 767, 857, 860, 861, 906, 920</i></li> <li>• <i>State Utility Commission Filings</i></li> <li>• <i>Operating Contracts and Power Purchase Agreements</i></li> </ul>
<b>Methodologies and Management Systems</b>	<ul style="list-style-type: none"> <li>• <i>Any Protocols and Emission Factors Used (in addition to the GRP and PUP)</i></li> <li>• <i>Quality Assurance/Quality Control Plans for Continuous Emissions Monitoring Systems</i></li> </ul>
<b>Verifying Emissions - Direct Emissions from Stationary Combustion</b>	<ul style="list-style-type: none"> <li>• <i>FERC Form 1</i></li> <li>• <i>EIA Forms</i></li> <li>• <i>Fuel Purchase Records</i></li> <li>• <i>EPA Electronic Data Reports for Acid Rain program</i></li> <li>• <i>Data Acquisition and Handling System</i></li> <li>• <i>Relative Accuracy Test Audit (RATA) results</i></li> <li>• <i>Basis Adjustment Factor (if any) applied to CEMS data</i></li> <li>• <i>Fuel Meter Data</i></li> <li>• <i>Fuel Flow Meter Calibration and Maintenance Records</i></li> <li>• <i>Electric Generation Data (MWh)</i></li> <li>• <i>Steam Generation Data (Mlbs)</i></li> </ul>
<b>Verifying Emissions - Direct Process Emissions</b>	<ul style="list-style-type: none"> <li>• <i>SO<sub>2</sub> Scrubber installation and operation records</i></li> <li>• <i>Sorbent Inventory and Purchase Records</i></li> <li>• <i>Documentation to support geothermal process emissions</i></li> <li>• <i>Documentation related to emissions of nitrous oxide from Selective Catalytic Reaction (SCR) systems used for post-combustion control of oxides of nitrogen (NO<sub>x</sub>)</i></li> <li>• <i>Records of venting of CO<sub>2</sub> during purge of hydrogen from electricity generators</i></li> <li>• <i>Records of venting CO<sub>2</sub>, HFCs and/or PFCs during the testing of fire suppression systems</i></li> <li>• <i>Records of venting natural gas (methane) during the start-up and/or shut-down for some gas-fired turbines used as compressors or prime movers in power generation.</i></li> </ul>

<sup>28</sup> The documents and reports to be reviewed during verification include the documents listed in this table *in addition* to those listed in Table 4.1 of the GVP. Note that this is not intended to be a complete list, nor does it imply that all of these documents must be reviewed during the verification process. It is left to the verifier to determine which documents are most useful to form a Verification Statement.

<i>Activity or Emissions Source</i>	<i>Documents</i>
<b>Verifying Emissions - Direct Fugitive Emissions</b>	<ul style="list-style-type: none"> <li>• EPA SF<sub>6</sub> Annual Reporting Form</li> <li>• Transmission/Substation Maintenance and Installation Logs for SF<sub>6</sub></li> <li>• SF<sub>6</sub> Purchase, Sales and Recycling Records,</li> <li>• SF<sub>6</sub> Activity Logs</li> <li>• Refrigerant Inventory and Purchase Records (for use in air intake chillers)</li> <li>• CO<sub>2</sub> compressed gas, HFC or PFC purchases for fire suppression systems associated with power generation</li> <li>• Coal Purchase Records</li> <li>• Biomass Purchase Records</li> <li>• Annual Coal Pile Assessment/Reconciliation/Audit Reports</li> <li>• Reservoir size and/or measured CO<sub>2</sub> and CH<sub>4</sub> fluxes above reservoir surfaces</li> <li>• Length of natural gas pipeline</li> </ul>
<b>Verifying Emissions - Indirect Emissions from Electricity Transmission and Distribution Losses</b>	<ul style="list-style-type: none"> <li>• <b>Wholesale Power Purchases and Sales Records including purchase agreements</b></li> <li>• <b>Special Power sales or deliveries (e.g. green power), and the power generation or power purchases assigned to those sales</b></li> <li>• <b>Records of Wheeled Power</b></li> <li>• <b>Direct Access Records</b></li> <li>• <b>Total Receipts and Delivery of Electricity to Consumers</b></li> <li>• <b>Emission Factors (if not default)</b></li> </ul>
<b>Verifying Emissions - Indirect Emissions Associated with Imported/Exported Electricity/Steam from CHP</b>	<ul style="list-style-type: none"> <li>• <b>Monthly Utility Bills</b></li> <li>• <b>Fuel and Efficiency Data from Supplier</b></li> <li>• <b>Emission Factors (if not default)</b></li> </ul>
<b>Verifying Metrics</b>	<ul style="list-style-type: none"> <li>• <b>Records of power generation (MWh)</b></li> <li>• <b>Records of heat delivered (MMBtu or J)</b></li> <li>• <b>Purchases and sales of special power certificates</b></li> </ul>

### Core Verification Activities

This section of the EPS Addendum to the GVP includes specific guidance for Verifiers to use as they proceed with the core verification activities for EPS inventories. This guidance is intended to help Verifiers determine the conformance of the inventory with The Registry's expectations and the degree of completeness of the emissions report. The next sections provide specific suggestions and recommendations for performing the risk assessment, developing a robust sampling plan and a relevant list of facilities to visit, how to cross-check the GHG emissions reported in the inventory.

### Conformance and Completeness

Attachment 1 includes a checklist of questions for the Verification Body to consider in assessing the Member's conformance with The Registry's requirements and completeness of the inventory. This checklist is provided as a guide for the Verifier, but it is not a requirement to complete this checklist as part of the verification documentation. The EPS verification checklist is a supplemental checklist to be used with the GVP checklists, rather than a stand-alone checklist for EPS Members.

## Performing Risk Assessment

The Verification Body's risk assessment needs to address direct and indirect emissions separately. Depending on the EPS Member's operational profile, it is possible for the Scope 1 total emissions quantity to be substantially different to Scope 2 total emissions, presenting certain verification challenges. For example, accuracy may be higher for some of the larger sources of direct emissions (for example, coal power generation with CEMS), and less accurate for relatively small sources, such as fugitive emissions of SF<sub>6</sub> from high voltage equipment. These factors should be factored in to the Risk Assessment on a case-by-case basis.

The emissions reported for each scope will influence the tolerance for error and factor into the sampling plan for each category. The assessment of risk needs to address this potential variation for each particular Member's emissions inventory. This consideration must often be balanced with the fact that often, among the largest sources of direct emissions in the EPS (i.e. electric generating units), there is a relatively high degree of precision in the measurement method, so the risk of material misstatement is reduced. Conversely, measurement or estimation of emissions from smaller sources may have more uncertainty and a higher risk of material misstatement if they are indirect emissions being evaluated against a much lower tolerance for error.

Biogenic emissions must also be accounted for in the Risk Assessment. The biogenic emissions sources should be considered separately from other sources of direct (anthropogenic) emissions. These sources are especially important in the Risk Assessment if

they are used to generate a large portion power.

## Selecting a Sample / Developing a Sampling Plan

Based on the risk assessment, the Verifier should identify sources with the greatest potential for material misstatement (taking into account the volume of emissions, uncertainty in the measurement method, the degree of deficiencies in the management systems and also a random sampling). This approach should be used to identify a representative sample of emissions to recalculate.

In the EPS, it is likely that electricity distribution systems, in which there may be hundreds of substations and thousands of electrical components, may be grouped into a single facility for reporting in CRIS.

This scenario is particularly relevant to SF<sub>6</sub> emissions, and how they are reported and verified. Even if the SF<sub>6</sub> emissions are included in a CRIS report or sampling plan as a single facility, the verifier should consider visiting a sample of substations and a sample of the central storage and maintenance locations where SF<sub>6</sub> cylinders are staged. During such visits, the verifier will have an opportunity to check the process used to maintain an inventory of SF<sub>6</sub> equipment and the data tracking systems used to calculate emissions.

## Verifying Emissions

When verifying emission calculations following Section 4.4.5 of the GVP, the following aspects of the EPS methodologies warrant specific guidance:

## Unique Reporting Requirements

Specific items – required by the EPS Protocol – that need to be verified (in addition to emissions) are listed below. The Verifier will need to determine which of these items are applicable to the EPS Member, based on the Member’s operations and activities, and verify that the reported data are within the standards for accuracy included in this guidance (based on the selected sample). The Verifier may use a risk-based sampling approach to verify that the following information has been accurately reported:

- Equity share for power generating facilities (and sub-facilities) included in the inventory. This requirement applies to generating units as well as combustion devices.
- Power Purchase Agreements (Contracts) and the power received (MWh) for the year, and an emission factor for each counterparty.
- Electricity trade data (scheduled and actual)
- Facility-specific and entity-level metrics (and unit metrics for shared units)
- Sales and purchases of registered RECs and other certificates (see below)
- Special Power sales or deliveries (e.g. green power), and the power generation or power purchases assigned to those sales

The Verifier should consider these in the verification sampling plan and implement appropriate activities to check the data as reported. The sampling plan must account for the requirement to provide reasonable assurance that all reported metrics individually comply with the five percent materiality threshold.

### Uses and Limitations of Existing Data Sets

EPS reporters, generators and distributors of power are required to submit a range of reports

to state and federal agencies, which often include data sets that can be used to cross-check the calculations of GHG emissions. When available, such reports can provide useful information for the Verifier to perform “triangulation” analyses as a way of confirming the emissions calculations. However, in many cases, the data in one report may not be consistent with data in another report, which can present a challenge to the Member and the Verifier if the differences cannot be readily explained.

In the EPS Protocol, several references are identified as examples of reports where an EPS Member or a Verifier can obtain activity data or emissions data that are helpful in calculating emissions and/or for documenting power generation. However, the EPS Protocol does not require EPS Members to use any particular source. Whether or not an existing data set is appropriate for calculating emissions is left to the discretion of the Member, and the Verifier has an important role assessing whether the dataset is indeed appropriate.

The comments in the preceding paragraphs apply to direct emissions calculation methods and indirect emissions calculations and for power generation data. For example, a Member may obtain fuel use data from several sources including reports to federal agencies (such as EIA), reports to local agencies (such as air agencies), or from various annual reports. When these reports show different figures for the fuel flow, it is important for the Verifier to understand whether there is an explanation for the differences, so that reasonable comparisons can be drawn. For example, when coal use is determined as the sum of coal tonnage delivered to a feed hopper from rail cars, one would expect that this sum would differ from the coal tonnage measured by a weigh scales on the conveyor belt to the boiler. In such cases, the verifier should use professional judgment in determining which data set is more accurate and appropriate.

Also, there may be a need for an EPS member to report preliminary data to an agency within a certain number of days of year-end, and then



report a final number for the same data item at a later date when quality control checks have been completed. There are many other examples where the Verifier is likely to encounter these apparent discrepancies. Since it is not possible to identify a full range of scenarios, this guidance simply calls attention to this issue, and recommends that Verifiers call in their more experienced team members to help resolve these apparent differences in a constructive and logical manner.

### **CEMS Data Verification**

For participants reporting CO<sub>2</sub> emissions from their stationary combustion sources using CEMS data obtained under a regulatory program (such as 40 CFR Part 75), the verifier should review sufficient data associated with the CEMS data submittal to provide reasonable assurance that reported data were complete. Documents that should be reviewed include CEMS-specific Monitoring Plans, CEMS specific QA/QC Plans, CEMS specific maintenance records, Data Acquisition and Handling System (DAHS), and Relative Accuracy Test Audits (RATA).

The verifier may look to a federal agency's online database (if available) to obtain the CEMS data from an independent source as a way to check the emissions reported by the EPS Member. Depending on the regulatory program and The Registry reporting deadlines, there may be a timing issue such that the agency's database may show preliminary data rather than final data during the time of the verification. The verifier will need to take that into consideration as part of the risk assessment when reviewing the quality of the reported data.

### **Heat Input Calculations**

When an EPS Member uses the fuel-based method for calculating emissions, the verifier should understand the details of the EPS Member's calculations to determine compliance with the methods provided in Chapter 12 of the EPS Protocol. The accuracy of the emissions will depend on whether Higher Heating Value

(HHV) is measured or default, and if measured, how often the fuel is analyzed. At times, a fuel-based measurement system that supports a CEMS system for reporting emissions may have the HHV value set to pre-determined default to satisfy a regulatory requirement (e.g., 1050 btu/scf for natural gas), and this may represent an overestimate of the actual HHV (typically about 1027 btu/scf for natural gas). The verifier should make every effort possible to obtain the original, measured data and calculate the inventory from those base measurements (such as fuel flows and HHV values), rather than to depend on derived data (such as heat inputs for the year).

The Verification Body should try to understand any differences between its estimate of the Member's emissions and the Member's emissions as reported to satisfy regulatory requirements. If the reason for the difference is not readily apparent, then further investigation may be required. If the difference can be explained and the Member reported emissions in compliance with the applicable regulation, the Verification Body should note the difference in the Verification Report; however, the difference should not be considered a misstatement, as the EPS Protocol specifically allows for the use of regulatory-approved CEMS data as part of an inventory.

### **CEMS versus Heat Input**

If the Verification Body is uncertain of the accuracy of the CO<sub>2</sub> emissions obtained from the CEMS data, you may cross-check these data with the CO<sub>2</sub> emissions based on fuel use calculations. In any instance where an EPS Member's CO<sub>2</sub> emissions reported from CEMS data differs significantly (greater than 10%) from that calculated from fuel use, this discrepancy should be noted in the Verification Report. However, these discrepancies should not be considered material misstatements without further review if the CEMS data has been otherwise verified to meet regulatory reporting requirements, as the EPS Protocol specifically allows for the use of regulatory-approved CEMS data as part of an inventory.



## Biogenic Emissions

There are some unique verification issues associated with the use of biomass, biogas and other fuels that may produce biogenic emissions through combustion. Some examples are as follows:

- Variability of moisture and carbon content of wood fuels
- Treatment of biogas that includes a substantial amount of carbon dioxide as well as methane
- The combination of biogenic and anthropogenic CO<sub>2</sub> emissions when multiple fuels are co-fired or from the combustion of Municipal Solid Waste for electric power generation

The GRP and the EPS Protocol provide methods for addressing these issues, but because of the complexity of some of the power generation configurations, the variability of the fuel sources, and the limitations of the measurement and analysis methods, there is often a higher degree of uncertainty in the emissions estimates which the Verifier must account for in its verification plan.

## Common Errors and Challenges of Consistency

Some common errors that verifier should watch for when reviewing emissions reports from EPS Members are as follows:

- Use of short tons instead of metric tons, especially when CEMS CO<sub>2</sub> emissions are taken from United States government databases
- Use of Gross Generation instead of Net Generation

- Use of delivered power flow data instead of power flows received
- Use of volumetric fuel data (scf or gallons) instead of heat input data (MMBtu) as required by the EPS Protocol.
- Use of scheduled power trades rather than actual power trades to assess power purchases and sales

A verifier is also likely to encounter inconsistencies in the data obtained from different sources. For example, in the United States, the net generation data provided in the EIA databases may differ from the net generation data provided in a FERC Form 1. In some cases, these differences can be explained by understanding the rules for reporting to each agency or the timing of the report (e.g., preliminary or final data), but in some cases the differences are not readily apparent. When this occurs, the verifier should draw attention to this inconsistency, and make a professional judgment about the data and how it affects the Verification Statement.

## Part 5 – Completing the Verification Process

There are no specific EPS requirements for Part 5. The Verification Report and the Verification Statement will be prepared by the Verification Body in the same manner as for the general verification process. However, the actual Verification Statement (Attachment 2) will be specific to EPS verifications.

# Attachment 1: Checklist of Questions to Consider in Verifying EPS Inventory Emissions Estimates

This list of questions corresponds to GVP Appendix B.1.

## Preparing for Verification

1. Has the EPS Member explained how common sources were consolidated and reported as single facilities in CRIS?

## Conformance

2. For power generation using biogenic sources (such as Landfills and WWT digesters), have the operational boundaries been correctly defined?
3. Are the GHG calculation methodologies/procedures properly entered in CRIS at the facility or unit level, as appropriate?
4. Are the GHG calculation methodologies/procedures consistent with GRP/EPS requirements and with other EPS industry standards?
5. Are calculation methods used by EPS Member consistent with EPS protocol, as well as GRP?
6. Does the participant use an approved CEMS configuration to measure and report GHG emissions?
7. If the EPS Member is reporting CO<sub>2</sub> emissions to The Registry using CEMS, does the fuel-based calculation corroborate the CO<sub>2</sub> emissions reported?
8. Has the CO<sub>2</sub> emission rate (lb CO<sub>2</sub>/MWh) changed by 10 percent or more from the previous year at a unit that CEMS is used to report emissions? If so, do the fuel-based calculations corroborate this change?
9. If the Member controls separate T&D systems (e.g., operated as separate companies under the parent entity), has

each system been reported separately as a “system”?

10. Are mergers, acquisitions and divestitures considered on a sub-facility level where they involved shared assets before or after the transaction?
11. For stationary combustion power generation emissions, has the same method (CEMS or Fuel Use) been used year-to-year?
12. For EPS Members choosing to use Transitional Reporting, can it be confirmed that they properly omitted T&D line losses, Scope 3 power purchases, and metrics as required by the EPS Protocol?

## Completeness

13. For power generation sources, does the diversity of emission source categories include stationary combustion, process and fugitive emissions, and also biogenic emissions as well as anthropogenic emissions?
14. Has the EPS Member addressed all applicable sections of the EPS Protocol, including the need for sub-facility data, power flow data and Scope 3 emissions, metrics, etc., where applicable?
15. Does the inventory report include all non-emissions data items required by the EPS protocol (MWh, equity share, metrics, etc.)?
16. Are all generating assets, transmission and distribution assets, and buildings clearly and accurately defined and grouped as “facilities” in CRIS?
17. Are process and fugitive emissions properly categorized (e.g., for landfills and geothermal power generation) and included in the inventory?

18. Are all fuel types identified for power generation (co-firing, start-up fuels, auxiliary boilers, etc.)?

### Completeness

19. Does the emission report include equity share and power received for all power generation facilities?

20. Does the report include all process and fugitive emissions from biogenic power generation as well as biogenic combustion emissions?

21. Are biogenic emissions sources (direct and indirect) properly segregated from anthropogenic – for direct and indirect emissions sources?

22. Are all required GHG emissions and *power flow data* included?

23. For an EPS Member that reports purchased power wholesale, has it eliminated “virtual energy” reflective of hedge or speculative trades of energy that were not delivered to the system?

24. Has the EPS Member opted to report RECs or other electricity certificates, and if yes, does the inventory include a complete list of REC purchases and sales?

### Risk Assessment

25. Does the EPS Member’s management system address the need for inventory input from personnel who are knowledgeable of the power purchases, power trades and power sales, when applicable?

### Sampling Plan

26. Does the sampling plan address direct and indirect emissions separately?

27. For those facilities where electricity use is not metered, how were indirect emissions estimated or otherwise captured in the inventory?

28. Has the EPS Member used appropriate emission factors for each counterparty purchase listed in the annual summary of purchased power?

29. If an EPS Member has chosen to optionally report Metric D-2, has the system average metric (D-1) been adjusted accordingly?

### Verification of Emission Estimates

30. Did the EPS Member have sufficient basis for designating power purchases as specified purchases (e.g. evidence linking that power purchase to a specific facility with known emissions intensity)?

31. Does a sample of the Member’s required non-emissions data agree with your recalculated values? Consider power generation (gross/net), power purchases, and power deliveries and sales. Also consider organizational boundary (equity) issues and power flows and power generation types associated with reported Special power certificates.

32. If the EPS entity consists of more than one power delivery system (Load Serving Entity), are the verification criteria (5% materiality threshold, 5% threshold for simplified estimation methodologies, etc.) met for each system?

33. Has the EPS Member provided sufficient evidence to support the reported power flows for wheeled power and power purchased for resale?

34. Has EPS Member converted EPA CEMS data from short tons to metric tons?



The Climate Registry

## Attachment 2: Electric Power Sector Verification Statement

**Name of Verification Body:** \_\_\_\_\_

This Verification Statement documents that [Verification Body] has conducted verification activities in compliance with ISO 14064-3 and The Registry's General Verification Protocol. This statement also attests to the fact that [Verification Body] provides [reasonable assurance/limited assurance] that [Member] reported greenhouse gas emissions from January 1, [Year] through December 31, [Year] are verifiable and meet the requirements of The Climate Registry's voluntary program.

**Date verification was completed (from CRIS):** \_\_\_\_\_

**Reporting classification:**  Transitional  Complete  Historical

**Type of verification:**  Batch  Streamlined  Full

**GHG reporting protocols against which verification was conducted:**

- The Climate Registry's General Reporting Protocol Version 1.1, dated May 2008
- The Climate Registry's GRP Updates and Clarifications document dated \_\_\_\_\_
- The Climate Registry's Electric Power Sector Protocol version 1.0 dated June 2009

**GHG verification protocols used to conduct the verification:**

- The Climate Registry's General Verification Protocol version 2.0, dated June 2010
- The Climate Registry's GVP Updates and Clarifications document dated \_\_\_\_\_
- The Climate Registry's Electric Power Sector Addendum to the General Verification Protocol, version 1.0 dated January 2010

**Member's organizational boundaries:**

- Control Only: ( Financial or  Operational)
- Equity Share and Control ( Financial or  Operational)

**Geographic scope of verification:**

- Transitional or Historical, specify boundary: \_\_\_\_\_
- North American  Worldwide (including North America)  Worldwide (non-North America)

**Base Year (if applicable):** \_\_\_\_\_

**Electric Power Sector Entity Information**

**Total Entity-Wide Emissions Verified (Control Criteria):**

Total Scope 1 Emissions: \_\_\_\_\_ tonnes CO<sub>2</sub>-e

Enter tonnes of each GHG: \_\_\_\_\_ CO<sub>2</sub> \_\_\_\_\_ CH<sub>4</sub> \_\_\_\_\_ N<sub>2</sub>O \_\_\_\_\_ HFCs \_\_\_\_\_ PFCs  
\_\_\_\_\_ SF<sub>6</sub>

Total Scope 2 Emissions: \_\_\_\_\_ tonnes CO<sub>2</sub>-e

Enter tonnes of each GHG: \_\_\_\_\_ CO<sub>2</sub> \_\_\_\_\_ CH<sub>4</sub> \_\_\_\_\_ N<sub>2</sub>O

Biogenic CO<sub>2</sub> (stationary & mobile combustion only): \_\_\_\_\_ tonnes CO<sub>2</sub>

**Total Entity-Wide Emissions Verified (Equity Share Criteria, if applicable):**

Total Scope 1 Emissions: \_\_\_\_\_ tonnes CO<sub>2</sub>-e

Enter tonnes of each GHG: \_\_\_\_\_ CO<sub>2</sub> \_\_\_\_\_ CH<sub>4</sub> \_\_\_\_\_ N<sub>2</sub>O \_\_\_\_\_ HFCs \_\_\_\_\_ PFCs  
\_\_\_\_\_ SF<sub>6</sub>

Total Scope 2 Emissions: \_\_\_\_\_ tonnes CO<sub>2</sub>-e

Enter tonnes of each GHG: \_\_\_\_\_ CO<sub>2</sub> \_\_\_\_\_ CH<sub>4</sub> \_\_\_\_\_ N<sub>2</sub>O

Biogenic CO<sub>2</sub> (stationary & mobile combustion only): \_\_\_\_\_ tonnes CO<sub>2</sub>

**Verified Metrics:**

Please complete the table below to indicate which of the following metrics have been verified and meet The Registry’s EPS Protocol reporting requirements and the five percent materiality threshold:

<b>YES</b>	<b>NO*</b>	<b>N/A**</b>	<b>EPS Metrics</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EPS Metric G-4 (company average)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Average power deliveries metric for system mix
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All “Certificate-Adjusted” average power delivery metrics
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All facility-specific generation metrics (EPS Metrics G-1 through G-3, as applicable)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All optionally reported power delivery metrics (EPS Metrics D-1 through D-3, as applicable)

\* A finding of “Unable to Verify” must be issued if the response to any of the metrics above is “No”

\*\* Response of N/A is acceptable only if Member is a transitional reporter or if optional metrics were not reported.

**Verification Statement:**

Verified

Unable to Verify (include reason, e.g., “due to data errors” or “due to non-compliance with The Registry’s reporting requirements): \_\_\_\_\_

Comment: \_\_\_\_\_

**Attestation:**

\_\_\_\_\_  
[Insert Name], Lead Verifier

\_\_\_\_\_  
Date

Digital Signature Acknowledgement\*

\_\_\_\_\_  
[Insert Name], Independent Peer Reviewer

\_\_\_\_\_  
Date

Digital Signature Acknowledgement\*

**Authorization:**

I [Name of Reporter Representative] accept the findings in this Verification Statement and authorize the submission of this Verification Statement to The Climate Registry on behalf of [Name of Member].

\_\_\_\_\_  
[Member Representative Signature]

\_\_\_\_\_  
Date

Digital Signature Acknowledgement\*

\* For digital signature: By checking the “Digital Signature Acknowledgement” box, I agree that this Verification Statement shall be deemed to be “in writing” and to have been “signed” for all purposes and that any electronic record will be deemed to be in “writing.” I will not contest the legally binding nature, validity, or enforceability of this Verification Statement and any corresponding documents based on the fact that they were entered and executed electronically, and expressly waive any and all rights I may have to assert any such claim.

# Appendix C3: Oil & Gas Production Sector Addendum to the General Verification Protocol Version 1.0 (February 2010)

## Part 1 – Introduction

### 1.1 Background and Purpose

The Climate Registry's (The Registry's) General Verification Protocol (GVP) presents the verification requirements for The Registry's voluntary greenhouse gas (GHG) emissions reporting program for all Members. The GVP was developed to provide Registry-recognized Verification Bodies with clear instructions for executing a standardized approach to the independent verification of GHG emissions reported to The Registry.

For Oil and Gas Production (O&GP) Members and Verification Bodies serving this sector, the GVP remains the primary Verification Protocol. The O&GP Protocol specifies a number of reporting requirements specific to this sector that are in addition to, or differ from, the requirements presented in The Registry's General Reporting Protocol (GRP). Therefore, Verification Bodies performing verifications of O&GP sector emissions reports must verify conformance with the reporting requirements specified in both the GRP and the O&GP Protocol.

This O&GP Addendum to the General Verification Protocol is intended to serve as an aid to Verification Bodies conducting verification activities in the sector and to promote standard practices. To that end, the requirements and guidance in this document are primarily focused on the additional sector-specific reporting elements that are included in the O&GP Protocol.

The information contained in this document is structured in a way that mirrors the organization of the body of the GVP. Accordingly, this addendum is presented under five headings that correspond to the core parts of the GVP.

The section numbers and topics addressed in this document also parallel those of the GVP. However, for subsections with no additional or specific requirements for the O&GP sector, those subsections and their headings are not included in this addendum to the GVP.

### 1.2 Overview of the O&GP Verification Process

Part 1 of the GVP provides an overview of the verification process as it pertains to The Registry's voluntary reporting program. Within Part 1 there is one sector-specific issue which extends to the O&GP sector: the sector-specific accreditation needed to conduct O&GP sector verifications.<sup>29</sup>

To undertake verification for a Registry Member within the O&GP sector, the Verification Body must be accredited by a Registry partner Accreditation Body<sup>30</sup> to ISO 14065. The Verification Body must then demonstrate competency within the O&G sector and attain accreditation to this industry sector scope.<sup>31</sup> O&GP Members are required to report in accordance with the O&GP Protocol starting with their emissions year 2010 data (to be reported in 2011), and likewise, O&GP Members must retain a Verification Body that is accredited to the O&G sector to verify their emissions year 2010 reports (to be reported in 2011) and subsequent emissions year reports. If an O&GP Member chooses to report and verify in accordance with the O&GP Protocol in advance their emissions year 2010 data, then

<sup>29</sup> Accreditation is generally covered under Section 1.2.2 of the GVP.

<sup>30</sup> Currently the only Accreditation Body with which The Registry has an agreement to provide accreditation services is the American National Standards Institute (ANSI).

<sup>31</sup> ANSI's policy and assessment requirements for accrediting firms to industry sector scopes can be viewed through [ANSI's website](#).



the O&GP Member must retain a Verification Body accredited to the O&GP sector.

## Part 2 – Summary of Verification Process and Requirements

### 2.4 Verification Standard

The verification standards applicable to the verification of O&GP Member's GHG emissions inventory are as follows:

- The Registry's General Reporting Protocol (relevant to all Members)
- ISO 14063-3 – *Specification with Guidance for the Validation and Verification of Greenhouse Gas Assertions* (relevant to all Members)
- The Registry's General Verification Protocol (relevant to all Members)
- The Registry's Oil & Gas Production Protocol (relevant to O&GP Members)
- The Registry's Oil & Gas Production GVP Addendum (this document, relevant to O&GP Members)

Verification Bodies must confirm that O&GP emissions sources are quantified using O&GP Protocol approved calculation methodologies (or simplified estimation methodologies, if the sources represent less than five percent of the CO<sub>2</sub>-e emissions). Unless otherwise noted, calculation methodologies included in the GRP or O&GP Protocols are *not* simplified methods, and hence emissions calculated using these Registry-approved methods do not count towards the five percent threshold for the use of simplified methods.

### 2.7 Scope of Verification

Optionally reported metrics are not subject to verification.

## Part 3 – Preparing for Verification

For Part 3, the GVP requirements are relevant and applicable to verifications for O&GP Members. This addendum makes one addition to Section 3.3 (Assembling the Verification team). The Verification Body must be accredited to the O&GP sector and assemble a team that is competent to conduct verifications in the O&GP sector.

The verification team members with O&GP sector experience need to be identified on the Designated Staff, Roles, & Responsibilities Form that the Verification Body must provide to The Registry before initiating verification activities.

## Part 4 – Conducting Verification Activities

### Developing a Verification Plan

Table 4.1 in the GVP provides a list of general documents Verifiers may review during the verification effort. In addition, there are a number of documents more specific to the O&G sector that may prove useful to Verifiers in assessing conformance with the GRP and O&GP protocols, the completeness of the inventory, and risks of material misstatement associated with deficient internal controls. These sector-specific documents are listed in Table 4.1 below.

## O&GP Addendum to the GVP Table 4.1 Additional Documents to be Reviewed During Verification Activities for O&GP Inventory Reports<sup>32</sup>

<i>Activity or Emissions Source</i>	<i>Documents</i>
<b><i>Emission Source Inventory</i></b>	<ul style="list-style-type: none"> <li>• <b><i>List of Facility and Field Permits</i></b></li> <li>• <b><i>Facility and Field Plot Plans Showing Direct Emission Sources</i></b></li> <li>• <b><i>Process Flow Diagrams</i></b></li> <li>• <b><i>Air Emission Inventory Reports</i></b></li> <li>• <b><i>EPA Title V Reports</i></b></li> </ul>
<b><i>Organizational, Operational and Geographic Boundaries</i></b>	<ul style="list-style-type: none"> <li>• <b><i>State Oil and Gas Production Reports</i></b></li> <li>• <b><i>Summary of Lease and Royalty Information</i></b></li> <li>• <b><i>List of JV Partners, if applicable</i></b></li> </ul>
<b><i>Methodologies and Management Systems</i></b>	<ul style="list-style-type: none"> <li>• <b><i>Any Protocols and Emission Factors Used (in addition to the GRP and O&amp;GP)</i></b></li> <li>• <b><i>Quality Assurance/Quality Control Plans for any Continuous Emissions Monitoring Systems</i></b></li> </ul>
<b><i>Verifying Emissions - Direct Emissions from Stationary Combustion</i></b>	<ul style="list-style-type: none"> <li>• <b><i>Fuel Purchase Records</i></b></li> <li>• <b><i>Other Fuel Volume Records</i></b></li> <li>• <b><i>Data Acquisition and Handling System</i></b></li> <li>• <b><i>Relative Accuracy Test Audit (RATA) results (cogeneration units)</i></b></li> <li>• <b><i>Basis Adjustment Factor (if any) applied to CEMS data</i></b></li> <li>• <b><i>Fuel Meter Data</i></b></li> <li>• <b><i>Fuel Flow Meter Calibration and Maintenance Records</i></b></li> <li>• <b><i>Fuel Compositional Analysis</i></b></li> <li>• <b><i>Electric Generation Data (MWh) (cogeneration units)</i></b></li> <li>• <b><i>Steam Generation Data (Mlbs) (cogeneration units)</i></b></li> </ul>
<b><i>Verifying Emissions - Direct Vented Emissions</i></b>	<ul style="list-style-type: none"> <li>• <b><i>When directly measured, records of vented volumes and gas compositions</i></b></li> <li>• <b><i>Records of scheduled and unscheduled maintenance activities involving equipment blowdowns and startups</i></b></li> <li>• <b><i>Inventory of venting equipment by type and number</i></b></li> <li>• <b><i>Any records from metering equipment up and downstream of vented emission sources</i></b></li> <li>• <b><i>When using a software or simulation, details of all relevant input data</i></b></li> <li>• <b><i>Records of mud volumes</i></b></li> <li>• <b><i>Records of type of mud used</i></b></li> <li>• <b><i>Records of loaded volumes and gas composition</i></b></li> <li>• <b><i>Emission Factors used</i></b></li> </ul>

<sup>32</sup> The documents and reports to be reviewed during verification include the documents listed in this table *in addition* to those listed in Table 4.1 of the GVP. Note that this is not intended to be a complete list, nor does it imply that all of these documents must be reviewed during the verification process. It is left to the verifier to determine which documents are most useful to form a Verification Statement.

Activity or Emissions Source	Documents
<b>Verifying Emissions - Direct Fugitive Emissions</b>	<ul style="list-style-type: none"> <li>• <b>When using a software or simulation, details of all relevant input data (i.e. pressure, temperature, etc)</b></li> <li>• <b>Inventory of equipment with potential to generate fugitive emissions by type and number</b></li> <li>• <b>Any records from metering equipment up and downstream of fugitive emission sources</b></li> <li>• Records of production volumes</li> <li>• Records of types of pneumatic devices and bleed rates</li> <li>• Record of type of components used in a E&amp;P field (i.e. pumps, valves, flanges, seals, etc)</li> <li>• Records of gas composition</li> <li>• Emission Factors used</li> </ul>
<b>Verifying Emissions – Flaring Emissions</b>	<ul style="list-style-type: none"> <li>• <b>Records of volumes sent to flares</b></li> <li>• <b>Records of gas composition</b></li> <li>• <b>Records of manufacturer data (i.e. equipment combustion efficiency)</b></li> <li>• <b>Emission Factors used</b></li> </ul>
<b>Verifying Emissions - Indirect Emissions Associated with Imported/Exported Electricity/Steam</b>	<ul style="list-style-type: none"> <li>• <b>Monthly Utility Bills</b></li> <li>• <b>Records of imported or exported steam quantities and energy content</b></li> <li>• <b>Emission Factors</b></li> </ul>
<b>Verifying Metrics</b>	<ul style="list-style-type: none"> <li>• <b>Records of oil and gas produced</b></li> <li>• <b>Alternative metrics (i.e. field age, total energy input)</b></li> </ul>

## Conformance and Completeness

Attachment 1 includes a checklist of questions for the Verification Body to consider in assessing the Member’s conformance with The Registry’s requirements and completeness of the inventory. This checklist is provided as a guide for the Verifier, but it is not a requirement to complete this checklist as part of the verification documentation. The O&GP verification checklist is a supplemental checklist to be used with the GVP checklists, rather than a stand-alone checklist for O&GP Members.

## Selecting a Sample / Developing a Sampling Plan

As discussed in Chapter 6 of the O&GP Protocol, a field is considered to be the equivalent of a facility for purposes of aggregating emissions from O&GP activities. In recognition of unique geographic realities in the O&GP sector, The Registry requires that distributed emission sources be aggregated and reported by oil or gas field, while facilities

that conform to the traditional definition of a facility continue to be reported as separate facilities.

Part 4 of the GVP provides Verification Bodies guidance on determining the number of facilities to be visited during the verification process. The Verification Body should treat each field in which a Member has operations as equivalent to a single facility when selecting the sample of facilities to visit. More specifically, the Verification Body should understand the term “facility” in to refer to either a standard facility (i.e., a single physical premises) or a field.

## Part 5 – Completing the Verification Process

There are no specific O&GP requirements for Part 5. The Verification Report and the Verification Statement will be prepared by the Verification Body in the same manner as for the general verification process.

# Attachment 1: Checklist of Questions to Consider in Verifying O&GP Inventory Emissions Estimates

This list of questions corresponds to GVP Appendix B1.

## Preparing for Verification

1. Has the O&GP Member explained how sources were consolidated and reported as facilities or fields in CRIS?

## Conformance

2. Are the GHG calculation methodologies/procedures properly entered in CRIS at the facility or field level, as appropriate?
3. Are the GHG calculation methodologies/procedures consistent with GRP/O&GP requirements and with other O&GP industry standards?
4. Are calculation methods used by O&GP Reporter consistent with O&GP protocol, as well as GRP?
5. Are all CEM-calculated emissions included and documented as such?
6. For stationary combustion emissions, has the same method (fuel use, load factors or CEMS) been used year-to-year?
7. If CEMS is being used, does the O&GP Member have an approved CEMS configuration to measure and report GHG emissions?
8. If the O&GP Member is reporting CO<sub>2</sub> emissions to The Registry using CEMS, does the fuel-based calculation corroborate the CO<sub>2</sub> emissions reported?

## Completeness

9. Has the O&GP Member addressed all applicable sections of the O&GP Protocol, including the need for field-level

aggregation of data, as well as all emissions from stationary combustion, vented and fugitive emissions, flaring emissions, and emissions from oil sands and oil shales operations when applicable?

10. Does the inventory report include all non-emissions data items required by the GRP and O&GP protocol (consolidation approaches used, equity shares if applicable, quantification methods used if the O&GP Member did not use CRIS to calculate emissions, etc.)?
11. Are all facilities and fields clearly and accurately defined and grouped in CRIS?
12. Are vented and fugitive emissions properly categorized and included in the inventory?
13. Are all fuel types identified for stationary combustion (start-up fuels, biomass, etc.)?
14. Are all required GHG emissions data included?

## Risk Assessment

15. Does the O&GP Member's management system address the need for emissions inventory input from personnel who are knowledgeable of the oil and gas operations?

## Sampling Plan

16. Does the Sampling Plan address direct and indirect emissions separately for O&GP Members



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Québec  
Saskatchewan  
Yukon

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Chihuahua  
Coahuila  
Nuevo Leon  
Sonora  
Tamaulipas

### Native Sovereign

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Gila River Indian Community  
Pueblo of Acoma  
Southern Ute Indian Tribe

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## Founding Members

3Degrees  
3form  
Alcoa, Inc.  
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American Energy Assets  
American Public Transportation Association  
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Appliance Recycling Centers of America  
Aquarium of the Pacific  
Arizona Electric Power Cooperative, Inc.  
Austin Energy  
Barr Engineering Company  
Bentley Prince Street  
Bonneville Power Administration  
Brightworks  
Cadence Network, Inc.  
California Environmental Protection Agency  
Cameron-Cole, LLC  
Carbon Credit Corp  
Carbon Solutions America, LLC  
Castle & Cook Florida, LTD  
City and County of San Francisco, CA  
City of Austin, TX  
City of Long Beach, CA  
City of Oneonta, NY  
City of Rochester, NY  
City of Roseville, CA  
City of Seattle, WA  
City of Syracuse, NY  
City of West Hollywood, CA  
City of Wilmington, DE  
CitySpaces Consulting Ltd.  
Clark County, WA  
Clark Public Utilities  
Cleveland-Cliffs Inc.  
Climatix Corporation  
Coastal Conservation League  
Colorado Interstate Gas  
Colorado Springs Utilities  
CommScope, Inc.  
Consolidated Edison Company of New York, Inc.  
Cormetech Inc.  
DAK Americas LLC  
Davidson College  
Dean Foods Company  
Dormitory Authority of the State of New York  
DPRA, Incorporated  
Dublin San Ramon Services District  
E. H. Pechan & Associates, Inc.  
Earth Advantage, Inc.  
Eastman Kodak Company  
Ecology and Environment, Inc.  
ÉcoRessources Consultants  
Ecos  
EcoSecurities  
Ecotek  
Edison International  
El Paso Natural Gas Company  
Element Markets  
Enviance, Inc.  
ENVIRON International Corporation  
Environmental Advocates of New York  
Environmental Planning Specialists, Inc.  
Environmental Science Associates  
EORM, Inc.  
ETC Group, LLC  
First Climate  
First Environment  
Ford Motor Company  
Fresh & Easy Neighborhood Market  
GDTS Chartered Accountants  
GHG Accountants, L.L.C.  
Good Company  
Grand Targhee Resort  
Great River Energy  
Green Building Services  
Green Mountain Power Corporation  
Groom Energy  
HES Ltd.  
Hilmar Cheese Company  
Horizon Environmental Corporation  
Idaho Department of Environmental Quality  
Invitrogen Corporation  
Johnson & Johnson  
KEMA, Inc.  
Kennecott Land Company  
Kennecott Utah Copper  
Kleinfelder, Inc.  
Law Offices of Jeremy D. Weinstein, P.C.  
Lexington Medical Center  
Limousine Environmental Action Partnership  
Longview Fibre Paper and Packaging, Inc.  
M.E. Group, Inc.  
Madison Environmental Group, Inc.  
Malcolm Pirnie, Inc.  
Marin Sanitary Services  
Maryland Department of the Environment  
Massachusetts Department of Environmental Protection  
Mazzetti & Associates  
McWane, Inc.  
Mesquite Power  
Metropolitan Council of Minnesota  
MGM International Group, LLC  
Minnesota Department of Natural Resources  
Minnesota Pollution Control Agency  
Minnesota Power  
Missouri Botanical Garden  
Missouri History Museum  
Mitel Networks Corporation  
MotivEarth, LLC  
National Grid  
NativeEnergy, Inc  
Natural Resources Defense Council  
Nevada Division of Environmental Protection  
New York Power Authority  
New York State Department of Environmental Conservation  
New York State Energy Research and Development Authority  
New York State Environmental Facilities Corporation  
New York State Metropolitan Transportation Authority  
New York Office of General Services  
Newmont Mining Corporation  
Newmont Nevada Energy Investment, LLC.  
Nexant, Inc.  
Noblis  
North Star BlueScope Steel  
Northern California Power Agency  
Northern Natural Gas  
Nuclear Energy Institute  
PacifiCorp  
Parametrix, Inc.  
Pennsylvania Recycling Markets Center  
PG&E  
Platte River Power Authority  
Point Carbon North America, LLC  
Port of Seattle  
Progress Energy  
Public Utility District No. 1 of Clallam County  
Red Bull North America  
Resource Systems Group Inc.  
RMT, Inc.  
S&C Electric Company  
Sacramento Area Council of Governments  
Sacramento Municipality Utility District  
Saint Louis Science Center  
Salinas Valley Memorial Healthcare System  
Salt Lake City Corporation  
Salt River Project  
Saunders Thread Company  
SCANA Corporation  
Science Applications International Corporation (SAIC)  
SCS Engineers  
Shaw Industries Inc.  
Shell Oil Company  
ShoreBank Pacific  
Shultz Steel  
Sierra Pacific Resources  
Sokol Blosser Winery  
South Carolina Department of Health & Environmental Control  
Southwestern Power Group II  
Spring Hill Solutions, LLC  
St. Louis Zoo  
St. Olaf College  
Stantec  
State of Colorado  
State of Utah Executive Branch  
Sterling Planet, Inc.  
Subaru of Indiana Automotive, Inc.  
Summit Energy  
Supply Chain Consulting US, LLC  
Sustainable Business Consulting  
SWCA Environmental Consultants  
Symbiotic Engineering, LLC  
Syracuse University  
Termoelectrica de Mexicali, S. de R.L. de C.V.  
Tetra Tech  
The Cadmus Group, Inc  
The Climate Trust  
The North Carolina Department of Environment and Natural Resources  
The Port of Los Angeles  
The Port of Portland  
The Sacramento Metropolitan Air Quality Management District  
The Weidt Group  
TRC Solutions, Inc.  
Trihydro Corporation  
Tri-State Generation and Transmission Association, Inc.  
Tucson Electric Power Company  
U.S. Postal Service  
United States Tile Company  
University of Hawai'i at Mānoa  
USANA Health Sciences  
Utah Transit Authority  
Valmar & Associates, Inc  
Vermont Agency of Natural Resources  
Vermont Technical College  
Washington State Department of Ecology  
Washington State Department of Transportation  
Wenck Associates, Inc.  
West Basin Municipal Water District  
West Coast Environmental and Engineering  
West Linn Paper Company  
Willis Energy Services Ltd.  
Wolverine Power Cooperative  
World Resources Institute  
Xcel Energy