



The Climate Registry

General Verification Protocol Version 2.1 Updates and Clarifications Last Revised: June 7, 2019

The Climate Registry (TCR) published General Verification Protocol Version 2.1 (GVP v. 2.1) in June 2014. While TCR intends for GVP v. 2.1 to be a complete document, it recognizes that updates and clarifications will be necessary as the program evolves.

TCR is planning a comprehensive update to the GVP to incorporate updates in ISO 14064-3: 2019, as well as updates to the General Reporting Protocol (GRP) v. 3.0, which was released in May 2019. Until the next version of the GVP is released, all members and verification bodies should refer to the updates and clarifications listed below for the most current interpretation and explanation of verification policies, processes, and activities. Due to the comprehensive nature of these updates, TCR is not identifying explicit passages and edits at this time.

If you have any questions about the updates or clarifications in this document, or if you wish to request further explanation or clarification of other verification policies, please contact Michelle Zilinskas at: verification@theclimateregistry.org or (213) 542-0283.

Updates to Verification Concepts and Requirements from General Reporting Protocol v. 3.0 (June 7, 2019)

GRP v. 3.0 incorporates a new modular format, streamlines reporting methods, and provides additional flexibility in setting inventory boundaries. It also incorporates some updates from the International Organization for Standardization's (ISO) standard on quantifying and reporting greenhouse gases at the organizational level (ISO 14064-1: 2018).¹

Several policy updates in GRP 3.0 impact concepts and requirements in GVP v. 2.1. Verifiers are responsible for reviewing GRP v. 3.0 and verifying members' conformance with that protocol. Relevant updates have also been summarized below:²

1. Equity share inventories can be reported without accompanying financial or operational control inventories (as previously required in GRP v. 2.1.) Members may use a single organizational boundary approach or a combination of approaches. Verification bodies

¹ Verifiers should note that conformance with GRP v. 3.0 does not guarantee conformance with ISO 14064-1: 2018. TCR is developing a guidance document with additional requirements for conformance with ISO 14064-1: 2018.

² This is not a comprehensive summary of the reporting requirements in GRP v. 3.0.

must confirm which approach(es) the member uses, and must apply the materiality threshold separately to each approach.

2. The term “operational boundary” has been changed to “reporting boundary” for simplicity and to reflect the update in terminology in ISO 14064-1: 2018.
3. The concepts of transitional reporting, which previously allowed members to self-define a reporting boundary for five years, has been removed. GRP v. 3.0 defines relevant emission sources that must be reported for inventories to be considered “complete” according to TCR’s criteria (see the [Inventory Boundaries Module](#), pg. B-3). The reporting boundary may be customized to reflect a member’s own determination of relevant GHG sources. Members reporting in conformance with TCR’s program that exclude GHG sources from the reporting boundary that TCR has defined as relevant must identify the excluded sources and explain the reason for their exclusion on the self-defined boundary form in CRIS. Verifiers must check that the self-defined boundary form is completed accurately for members that are defining a reporting boundary that differs from TCR’s definition of relevant emission sources.
4. The separate inventory reporting and verification requirements for North American and Non-North American/Worldwide emissions inventories have been removed.³ Under GRP 3.0, a single inventory must be verified with a single materiality threshold. “Complete” inventories (according to TCR’s definition of relevant emissions) must therefore include North American and non-North American emission sources.
5. GRP v. 3.0 allows members to define their own annual reporting period (e.g., calendar year, fiscal year). GRP v. 3.0 also expands options for base year selection to include a single reporting year, average of several consecutive years, or a rolling base year. Members must include an explanation of any change to or recalculation of a base-year or previous GHG inventory.
6. Members reporting in conformance with GRP v. 3.0 may now use Simplified Estimation Methods (SEMs) to estimate any combination of emission sources and/or gases, provided that corresponding emissions do not exceed 10% of the CO₂e sum of reported Scope 1, Scope 2, combustion-based direct biogenic emissions and combustion-based indirect biogenic emissions associated with consumed energy.

³ Members still have the option to generate separate North American and non-North American reports in CRIS.

GVP v 2.1 Updates and Clarifications

| | | | |
|---|--|-------------|---|
| GVP Section 1.2.2 | Becoming a TCR-Recognized Verification Body | p. 6 | Issued: March 25, 2016 Effective: March 25, 2016 |
| <p>TCR is expanding sector-specific accreditation requirements to conform to ANSI's GHG Validation and Verification Body Accreditation Scoping Policy. VBs must achieve accreditation against the scopes specified by ANSI in order to conduct verification work for clients that have operations in any of the following sectors:</p> <ol style="list-style-type: none"> 1. General (all organization-level reporting) 2. Manufacturing 3. Power Generation 4. Electric Power Transactions 5. Mining and Mineral Production 6. Metals Production 7. Chemical Production 8. Oil and gas extraction, production and refining, including petrochemicals 9. Waste <p>Accordingly, section 1.2.2. is replaced with the following text:</p> <p>“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 (<i>Greenhouse Gases – Requirements for Greenhouse Gas Validation and Verification Bodies for use in Accreditation or other forms of Recognition</i>). Please refer to The Registry’s <i>Guidance on Accreditation</i> for details about accreditation.</p> <p>To undertake verification for any Registry Member, a verification body must be accredited to the organizational-level general scope (e.g. ANSI Group 1⁹) by a Registry partner accreditation body.</p> <p>The Registry’s requirements for sector-specific accreditation are as follows:</p> <ul style="list-style-type: none"> • Manufacturing (e.g. ANSI Group 2): Verification bodies must be accredited to this scope in order to verify inventories of Members that operate in the manufacturing sector. • Power Generation (e.g. ANSI Group 3): Verification bodies must be accredited to this scope in order to verify inventories of Members that operate in the power generation sector and/or prepare inventories 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 scope in order to verify inventories of Members that | | | |

| | |
|--|---|
| | <p>have electric power transactions and/or prepare report delivery metrics in accordance with The Registry’s Electric Power Sector Protocol.</p> <ul style="list-style-type: none"> • Mining and Mineral Production (e.g. ANSI Group 5): Verification bodies must be accredited to this scope in order to verify inventories of Members that operate in the mining and mineral production sector. • Metals Production (e.g. ANSI Group 6): Verification bodies must be accredited to this scope in order to verify inventories of Members that operate in the metals production sector. • Chemical Production (e.g. ANSI Group 7): Verification bodies must be accredited to this scope in order to verify inventories of Members that operate in the chemical production sector. • Oil & Gas Production (e.g. ANSI Group 8): Verification bodies must be accredited to this scope in order to verify inventories of Members whose operations involve oil and gas extraction, production, and refining, including petrochemicals and/or prepare inventories in accordance with The Registry’s Oil & Gas Production Protocol. • Waste (e.g. ANSI Group 9): Verification bodies must be accredited to this scope in order to verify inventories of Members that operate in the waste sector. <p>The Registry’s sector-specific requirements for verification are specified in the GVP addenda provided in Appendix C.</p> <p>⁹ ANSI’s GHG Validation and Verification Body Accreditation Scoping Policy can be viewed through ANSI’s website.</p> |
|--|---|

| | | | |
|------------------------|--|-----------------|---|
| GVP Section 2.5 | Materiality | p. 10-18 | Issued: March 25, 2016 Effective: March 25, 2016 |
| | <p>As a result of the update to the GRP, the materiality threshold for Scope 2 must be evaluated by assessing entity-wide emissions separately for each Scope 2 method, so that a five percent or greater understatement or overstatement of Scope 2 emissions (including any reported indirect biogenic emissions) by either Scope 2 method will exceed the materiality threshold.</p> <p>Accordingly, the second paragraph of section 2.5 (pages 10-11) is replaced with the following text:</p> <p>“The Registry sets the entity-level materiality threshold at five percent (for both understatements and overstatements), which applies separately to a Member’s:</p> <ol style="list-style-type: none"> 1. Direct (scope 1, including any reported direct biogenic) CO₂-e emissions; 2. Location-based indirect (scope 2, including any reported indirect biogenic) CO₂-e emissions; and | | |

| | |
|--|---|
| | <p>3. Market-based indirect (scope 2, including any reported indirect biogenic) CO₂-e emissions.</p> <p>Thus, The Registry requires verification bodies to assess the accuracy of a Member’s direct, location-based indirect, and market-based indirect emissions separately. A Member’s direct, location-based indirect, and market-based indirect emissions must each be deemed as accurate (within five percent) for a verification body to issue a positive verification statement for the Member.”</p> |
| | <p>The definition of Material Misstatement on page 11 is replaced with the following text:</p> <p>“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, location-based indirect, or market-based indirect emissions by plus or minus five percent at the entity level.”</p> |
| | <p>All references to assessing materiality separately for direct and indirect emissions on pages 14-16 and page 18 are changed to assessing materiality separately for direct, location-based indirect, and market-based indirect emissions.</p> |
| | <p>Example 2.1, “Application of the Five Percent Materiality Threshold” on page 15 is updated to include the location-based and market-based methods in assessing materiality.</p> <p>Therefore, the content in Example 2.1 is replaced with the following text:</p> <p>“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. The verification body has also found no material errors in the bank’s market-based indirect (scope 2) emissions. (The bank purchased RECs for 100% of electricity consumption at all of their branches). However, in reviewing the bank’s location-based indirect (scope 2) emissions from electricity use, the verification body discovers that the bank incorrectly applied the electricity emission factors for eGRID Subregion SERC Midwest to <i>all</i> of its branches. Although most of Illinois falls within Subregion SERC Midwest, the northern tier of the state is in Subregion RFC West, and six of the bank’s branches are located in this northern tier.</p> <p>The difference between the emission factors for Subregion RFC West and Subregion SERC Midwest is 13 percent. However, this 13 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 40 percent of the bank’s location-based indirect (scope 2) emissions. Therefore, the use of the incorrect emission factor leads to an error of (0.4x13% =) 5.2 percent in the bank’s <i>total entity-level</i> location-based indirect CO₂-e emissions. Although the bank had no material discrepancies in its reported direct emissions, or market-based indirect emissions, the 5.2 percent discrepancy in location-based indirect emissions exceeds the five percent materiality threshold, and therefore the verification body concludes that the bank’s emission report has a material misstatement.</p> |

In this example, it should be emphasized that considerable uncertainty surrounds the eGRID emission factors. Thus, even after the bank corrects its report by applying the correct eGRID emission factors to the six northern Illinois branches, uncertainty will remain in the reported location-based scope 2 emissions 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 2.3, “Non-offsetting Errors: Direct vs. Indirect Emissions” on page 16 is updated to include the location-based and market-based methods in assessing materiality.

Therefore the content in Example 2.3 is replaced with the following text:

“During verification, a verification body finds that a Member applied an incorrect emission factor to calculate its CO₂ 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 utility-specific emission factor for its electricity consumption in California under the market-based method, leading to an overstatement of its market-based indirect emissions by three percent. Additionally, the verification body finds that the Member used a utility-specific emission factor for its electricity consumption in Washington under the location-method. This error results in an understatement of its location-based indirect emissions by six percent (due to the appropriate eGRID emission factor being significantly higher).

While the three percent market-based indirect emissions discrepancy is acceptable, the six percent location-based indirect emissions discrepancy as well as the seven percent direct emissions discrepancy lead to a finding that material misstatements have occurred for both direct emissions and location-based indirect emissions. The Member must correct its direct emissions estimates for natural gas combustion and its location-based indirect emissions for purchased electricity before its emission report can be accepted as verified.

As this example illustrates, while discrepancies must be summed *within* scope 1 (including direct biomass), location-based scope 2 (including indirect biomass), and market-based scope 2 (including indirect biomass) to determine whether a material misstatement has occurred, discrepancies are never summed *across* scopes or across the scope 2 calculation methods. Instead, the five percent materiality threshold must be applied separately to scope 1, location-based scope 2, and market-based scope 2 emissions. If the sum of discrepancies for *either* scope 1 *or* location-based scope 2 *or* market-based scope 2 emissions is found to exceed five percent, a material misstatement has occurred.”

| | | | |
|--|--------------------------------------|--------------------------|---|
| GVP Section 2.5 | Simplified Estimation Methods | p. 11- 12 | Issued: March 25, 2016 Effective: March 25, 2016 |
| <p>GRP v. 2.1 requires the threshold for simplified estimation methods to be assessed separately for entity-wide emissions calculated with the location-based method and market-based method for Scope 2 emissions.</p> <p>Accordingly, the following text is removed from the first paragraph in the “Simplified Estimation Methods” box on page 12:</p> <p>“The sum of emissions estimated using such simplified methods cannot exceed five percent of an organization’s total emissions on a CO₂-e basis.”</p> <p>The following text replaces the removed sentence:</p> <p>“The sum of emissions estimated using such simplified methods cannot exceed five percent of the sum of an organization’s Scope 1, Scope 2 and direct and indirect biogenic emissions aggregated on a CO₂-e basis.¹</p> <p>¹The five percent threshold must be calculated separately for both Scope 2 totals, so that exceeding five percent using either method would exceed the threshold.”</p> | | | |
| <p>Similarly, the same footnote is added to the following unchanged text in the next paragraph:</p> <p>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 <i>General Reporting Protocol</i>.¹</p> <p>¹The five percent threshold must be calculated separately for both Scope 2 totals, so that exceeding five percent using either method would exceed the threshold.”</p> | | | |
| <p>To reflect the change in assessing the threshold for SEMs, the definition of inherent uncertainty on page 11 is also replaced with the following text:</p> <p>“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 direct and indirect biogenic emissions).¹</p> <p>¹The five percent threshold must be calculated separately for both Scope 2 totals, so that exceeding five percent using either method would exceed the threshold.”</p> | | | |

| | | | |
|--|--------------------------|-----------------|---|
| GVP Section 2.5 | Miniscule Sources | p. 11-12 | Issued: March 25, 2016 Effective: March 25, 2016 |
| <p>Members have the option to exclude TCR-approved miniscule sources from their inventory by submitting a Miniscule Sources Form directly in CRIS. Previously this form was uploaded as a public document once and applied to all subsequent inventories, but now it must be submitted for every emissions year for which sources are excluded.</p> <p>Accordingly, the last paragraph on page 11 and first two paragraphs on page 12 are replaced with the following text:</p> <p>“The Registry maintains a list of miniscule sources that are eligible for exclusion on the Miniscule Sources Form. If a Member chooses to exclude miniscule sources from their inventory, they must identify the sources on The Registry’s Miniscule Sources Form, which must be completed directly in CRIS. Excluded sources are not included in the scope of the assertion and therefore not subject to verification. The verification body must confirm that the Member has identified all excluded sources on The Registry’s Miniscule Sources Form for each emission year verified. Additionally, the verification body must confirm that the Member has excluded only sources that are eligible for exclusion in their industry sector.</p> <p>The verifier is neither required nor expected to confirm that sources listed on The Registry’s Miniscule Sources Form are insignificant to the Member’s inventory; however, if during the course of verification activities, the verifier becomes aware that a source identified on the Miniscule Sources Form is, in fact, significant to the Member’s inventory, the verifier must notify The Registry.”</p> | | | |

| | | | |
|---|-------------------------------|--------------|---|
| GVP Section 2.7.2 | Transitional Reporting | p. 20 | Issued: March 25, 2016 Effective: March 25, 2016 |
| <p>The following text is inserted in section 2.7.2 on page 20 at the end of the third paragraph (beginning with “If a Member chooses to report on a transitional basis...”):</p> <p>“Verification bodies must review the Self-Defined Boundary Form in CRIS to confirm that the boundary is identified accurately.”</p> | | | |

| | | | |
|--|---|------------------------|---|
| <p>GVP Section 2.7.4</p> | <p>Other Optional Emissions Data</p> | <p>p. 21-22</p> | <p>Issued: March 25, 2016 Effective: March 25, 2016</p> |
| <p>The list of optional information that Members may report with their inventories in the GVP is updated to reflect updates to the GRP. The primary update is the optional disclosure of specific information related to Scope 2 emissions. Additionally, RECs that Members apply to their inventories are no longer optional and thus are removed from the list of optional information required to be verified.</p> <p>Accordingly, the first three paragraphs of section 2.7.4 on page 21 are replaced with the following text:</p> <p>“In addition to the scope 1 and 2 emissions required to be reported to The Registry, Members may voluntarily report the following data:</p> <ul style="list-style-type: none"> • Worldwide emissions; • Unit-level emissions (for stationary combustion units); • Historical emissions; • Emissions based on both equity share and control consolidation methodologies; • Scope 2 disclosure (see page 146 of GRP v. 2.1 for examples); • Scope 3 emissions (e.g., indirect emissions from sources outside scope 2). Scope 3 emissions will be clearly identified; • Information on any GHG management or reduction programs or strategies, such as purchases of offsets (including information on whether they are verified or certified); and, • Descriptions of unique environmental practices. <p>In general, The Registry does not require optional emissions to be verified. Thus these types of emissions are outside the normal verification scope. Three exceptions to the rule which must be verified are:</p> <ol style="list-style-type: none"> 1. Application of offsets to the Member’s adjusted inventory; 2. The optional category of scope 1 and scope 2 worldwide emissions; and, 3. Equity share consolidation methodology. <p>Although other categories of optional data are not included in the scope of verification, should the verifier observe a miscategorization of optional data (e.g. scope 3 reported as scope 1 optional) that affects a significant quantity of emissions, the verifier is encouraged to share their observation with the Member. To the extent The Registry identifies a significant miscategorization of optional data, The Registry may require correction before publishing the report, and it is helpful if this correction can be made during the normal corrective action period.”</p> | | | |

| | |
|--|--|
| | <p>The last paragraph of section 2.7.4 titled “RECs and Offsets” has been updated to remove mention of RECs, since RECs applied to an inventory are no longer considered optional information. The paragraph has been replaced with the following text:</p> <p>“Offsets</p> <p>If a Member has optionally applied offsets to their adjusted inventory summary, the verification body must confirm that the offsets have been retired and meet The Registry’s accounting criteria, and that the Member has disclosed the correct quantity of offsets. The verification body is not responsible for verifying the offsets; the offset verifier is responsible for verifying that the offsets are real, additional, permanent, and otherwise meet the criteria of the offset program.”</p> |
|--|--|

| | | | |
|--|--|------------------------|---|
| <p>GVP Section 2.7.5</p> | <p>Other (Non Emissions) Data</p> | <p>p. 22-23</p> | <p>Issued: March 25, 2016 Effective: March 25, 2016</p> |
| <p>Due to updates to the GRP, the list of non emissions data required to be verified has been updated to include the eligibility of contractual instruments used in the market-based Scope 2 method and required Scope 2 disclosure.</p> <p>Accordingly, the following text has been inserted at the end of section 2.7.5 on page 23:</p> <p>“4. Eligibility of contractual instruments. Verification bodies must confirm that contractual instruments used in reporting market-based indirect emissions meet the scope 2 Eligibility Criteria.</p> <p>5. Required scope 2 disclosure. Verification bodies must confirm that scope 2 disclosure requirements are met. This involves reviewing the information Members provide in the required portions of the scope 2 disclosure form for completeness and accuracy. Before submitting the verification statement, verification bodies must ensure that this form is uploaded to CRIS as a public document.”</p> | | | |

| | | | |
|---|---|----------------------------|---|
| <p>GVP Section 2.7</p> | <p>Scope of Verification – terminology changes</p> | <p>p. 19-20, 22</p> | <p>Issued: March 25, 2016 Effective: March 25, 2016</p> |
| <p>The update of TCR’s reporting software to CRIS 4.0 resulted in changes to both the names of the reports and how the reports are structured.</p> <p>Accordingly, the second paragraph of GVP v. 2.1 section 2.7 (p. 19-20) is replaced with the following text:</p> <p>“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 Detail CRIS reports, which include the “Detail – Control” report and “Detail - Equity Share and Control” report.*</p> | | | |

| | |
|--|--|
| | <p>These reports summarize a Member's total entity emissions, as well as all facility emissions, and include a list of emissions sources for each facility. All other CRIS reports are generated based on the GHG data contained in these reports. Since CRIS will aggregate a Member's data automatically to create other reports, TCR accepts these additional reports as correct if the underlying Detail reports are verifiable. If a Member optionally reports its worldwide emissions inventory, the verification body must additionally verify the Global or Non-North America Detail reports for Control (and "Equity Share and Control", if applicable); however, as discussed in Section 2.7.4, the verification body may apply the verification criteria to all worldwide emissions (including North America).</p> <p>*The "Detail – Equity Share and Control" report only needs to be verified if the Member reports according to the equity share consolidation methodology."</p> <p>In regard to Option 2 for verifying worldwide emissions, on page 22, when a member has prepared separate emissions reports, one for North America only and one for worldwide (including North America), the verification body will need to verify both the North America Detail report(s*) and the Global Detail report(s*) in CRIS. The Global Detail report was formerly named the Worldwide Entity Emissions Detailed Report (Private).</p> <p>*If the member is reporting according to the equity share consolidation methodology, the verification body will need to verify the "Detail – Control" and "Detail - Equity Share and Control" reports for both North America and Global.</p> |
|--|--|

| | | | |
|------------------------|---|--------------|---|
| GVP Section 3.3 | Assembling the Verification Team | p. 37 | Issued: 11/23/2015 Effective: 11/23/2015 |
| | <p>TCR has implemented a new training requirement for verifiers.</p> <p>Accordingly, the following text is added to the end of the list of TCR requirements for assembling verification teams:</p> <ol style="list-style-type: none"> 6. All verifiers that began verifying for The Registry after May, 2014 are required to view The Registry's General Verification Training webinar, which outlines the verification activities and requirements prescribed by the GVP. Please e-mail verification@theclimateregistry.org for the most recent version of the training. | | |

| | | | |
|------------------------|--|-----------------|---|
| GVP Section 4.2 | Developing a Verification Plan | p. 41-42 | Issued: March 25, 2016 Effective: March 25, 2016 |
| | <p>Table 4.1 "Documents that may be Reviewed During Verification Activities" has been updated to integrate new GRP v. 2.1 requirements. Each row pertaining to indirect emissions has been updated to include examples of documents that may be reviewed for market-based emissions.</p> | | |

| | |
|--|--|
| | <p>Example documents have been added to the following rows of the table:</p> <ol style="list-style-type: none"> 1. Indirect Emissions from Electricity Use; 2. Indirect Emissions from Cogeneration; 3. Indirect Emissions from Imported Steam; 4. Indirect Emissions from District Heating; and, 5. Indirect Emissions from District Cooling. <p>A new emissions source called Indirect Biogenic CO₂ Emissions with example documents has also been added to the table.</p> <p>The updated table is provided below.</p> |
|--|--|

| Activity or Emissions Source | Documents |
|---|--|
| Assessing Conformance with The Registry's Requirements | |
| General Conformance Assessment | 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 |
| Mergers, Acquisitions, Divestitures | Annual Report to Shareholders, SEC Filings |
| Assessing Completeness of Emissions Report | |
| Comprehensive Coverage of Facilities | Facility inventory |
| Comprehensive Coverage of Emission Sources | Emission source inventory <ul style="list-style-type: none"> • Stationary source inventory • Mobile source inventory • Fuel inventory • Air emissions permits |
| Performing Risk Assessment Based on Review of Information Systems and Controls | |
| Responsibilities for Implementing GHG Management Plan | Organization chart, GHG inventory management plan, GHG management documentation and retention plan |
| Training | Training manual, procedures manual, consultant qualifications statement |
| Methodologies | Control systems documentation, software/program documentation and users' guides, any other protocols used (in addition to The Registry's General Reporting Protocol) |
| Selecting a Sample | |
| Sample Size and Selection | Facility inventory, emission source inventory, description of operations |
| Verifying Emission Estimates Against Verification Criteria | |
| Indirect Emissions from Electricity Use | Monthly electric utility bills, utility/supplier-specific emission factors, energy attribute certificates such as |

| | RECs, contracts such as power purchase agreements, utility/supplier-specific emission factor certifications |
|---|--|
| Activity or Emissions Source | Documents |
| Direct Emissions from Mobile Combustion | 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 |
| Direct Emissions from Stationary Combustion | 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 |
| Indirect Emissions from Cogeneration | Monthly utility bills, fuel and efficiency data from supplier, utility/supplier-specific emission factors, energy attribute certificates, contracts |
| Indirect Emissions from Imported Steam | Monthly utility bills, fuel and efficiency data from supplier, utility/supplier-specific emission factors, energy attribute certificates, contracts |
| Indirect Emissions from District Heating | Monthly utility bills, fuel and efficiency data from supplier, utility/supplier-specific emission factors, energy attribute certificates, contracts |
| Indirect Emissions from District Cooling | Monthly utility bills, fuel and efficiency data from supplier, utility/supplier-specific emission factors, energy attribute certificates, contracts |
| Direct Emissions from Process Activities | 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 |
| Biogenic CO₂ Emissions from Mobile Combustion | Fuel purchase records, fuel in stock, vehicle miles traveled, inventory of vehicles, emission factors (if not default), combustion efficiency, oxidation factors, meter calibration information |
| Biogenic CO₂ Emissions from Stationary Combustion | 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 |

| | | | |
|--------------------------|--|--------------|---|
| GVP Section 4.3.3 | Performing Risk Assessment Based on Review of Information Systems and Controls | p. 44 | Issued: March 25, 2016 Effective: March 25, 2016 |
| | <p>To account for the requirement to assess materiality separately for each Scope 2 accounting method in the risk assessment, the last paragraph in section 4.3.3 on page 44 is replaced with the following text:</p> <p>“Since the materiality threshold applies separately to direct, location-based indirect, and market-based indirect CO₂-e emissions and also applies separately to control and equity share consolidation methodologies, the verification body must separately assess the risk for material misstatement in each of these categories and consolidations of emissions.”</p> | | |

| | | | |
|--------------------------|---|--------------|---|
| GVP Section 4.3.4 | Method B: Based on Ranking Distribution of Generation of Direct Emissions | p. 50 | Issued: 6/24/2015 Effective: 6/24/2015 |
| | <p>TCR issued an update to Method B to clarify that the method is used to determine the minimum number of facilities to be visited, and does not dictate the specific facilities that must be visited. Once the verification body has determined the minimum number of facilities to be visited using Method B, it can then select the specific facilities to be visited based on risk-assessment findings regarding potential for material misstatement.</p> | | |
| | <p>Method B 1.c. is revised from: “All of these facilities must be visited under this method, even if the facilities are not identified through the worldwide analysis described below.”</p> <p>to: “At minimum, the number of facilities identified through this method must be visited, even if the number of facilities exceed the number of facilities identified through the worldwide analysis described below.”</p> | | |

| | | | |
|------------------------|---|-----------------|---|
| GVP Section 5.8 | Facts Discovered After Verification Process is Complete | p. 60-61 | Issued: March 25, 2016 Effective: March 25, 2016 |
| | <p>In the interest of maintaining the accuracy of public emissions data reported to The Climate Registry, the following text is added to page 61 before the first full paragraph starting with “Stakeholders discovering...”:</p> | | |

| | |
|--|--|
| | <p>“Verification bodies are neither required nor expected to check or verify data outside the scope of their verification. However, if during the course of a verification, a verification body discovers a possible material misstatement in a previous inventory verified by a different verification body, they must contact The Registry.”</p> |
|--|--|

| | | | |
|---------------------|---|-----------------|---|
| GVP Glossary | Glossary of Terms | p. 62-68 | Issued: March 25, 2016 Effective: March 25, 2016 |
| | <p>To reflect additions to the GRP Glossary, the following terms have been added to the Glossary of Terms in GVP v. 2.1:</p> <p>“Contractual Instrument: Any type of contract between two parties for the sale and purchase of energy bundled with energy generation attributes, or for unbundled attribute claims. Contractual instruments applied to an inventory must meet the TCR Eligibility Criteria.”</p> <p>“Location-based method: Scope 2 method that quantifies the average emissions from energy generated and consumed in a member’s geographic region(s) of operations within the member’s defined boundaries, primarily using grid-average emission factors.”</p> <p>“Market-based method: Scope 2 method that quantifies emissions from energy generated and consumed that members have purposefully purchased, using emission factors conveyed through contractual instruments between the member and the electricity or product provider.”</p> | | |

COI-A: Case Specific Conflict of Interest Assessment Form

| | | | |
|-------------------|---|-------------|---|
| COI-A Form | Proposed Verification Services | p. 5 | Issued: June 24, 2015 Effective: June 24, 2015 |
| | <p>TCR has issued an update to the COI-A Form, “Proposed Verification Services” on page 5 to include a question on whether facility visits will be performed. Refer to section 2.8 of the GVP for detailed information on facility visit requirements. Please answer this question to the best of your knowledge at the time of the COI-A form submittal. If your subsequent risk assessment indicates that facility visits are (or are not) necessary, you are not required to resubmit this form. This primary purpose of this question is to notify TCR whether the verification body will be forgoing facility visits for the full verification in the second three-year verification cycle (refer to GVP page 25 for more details on conditions that must be met).</p> | | |

Notification of Planned Facility Visits Form

| | | | |
|--|---|-----------------|---|
| NOPFV Form | Notification of Planned Facility Visits Form - Updates | p. 2 | Issued: March 25, 2016 Effective: March 25, 2016 |
| <p>Page 2 of the Notification of Planned Facility Visits (NOPFV) Form has been updated to incorporate the location-based and market-based methods and indirect biogenic emissions into the calculation for the percent of indirect emissions covered by facility visits. The updated NOPFV Form should be used for all verifications conducted against GRP v. 2.1.</p> | | | |

| | | |
|--|---|---|
| NOPFV Form | Notification of Planned Facility Visits – Clarification on Requirements for Submission | Issued: June 24, 2015 Effective: June 24, 2015 |
| <p>Notification of Planned Facility Visits (NOPFV) Forms must be submitted for all types of verification (full or streamlined) if a facility visit is performed. If you are performing a facility visit for a streamlined verification, you do not need to explain how the number of facilities selected for visits conforms to GVP v 2.1 Section 4.3.4.</p> <p>Complete NOPFV forms include a case-specific verification plan. Complete forms must be submitted to TCR at least 10 business days prior to the first facility visit.</p> | | |

Verification Statement

| | | | |
|--|---|-----------------|---|
| Verification Statement | Verification Statement - Updates | p. 2 | Issued: March 25, 2016 Effective: March 25, 2016 |
| <p>The Verification Statement has been updated to incorporate the location-based and market-based methods and indirect biogenic emissions for the entity-wide emission totals. The updated verification statement should be used for all verifications conducted against GRP v. 2.1.</p> | | | |

Electric Power Sector Verification Statement

| | | | |
|-----------------------------------|---|---------------|---|
| EPS Verification Statement | Electric Power Sector Verification Statement - Updates | p. 1-2 | Issued: March 25, 2016 Effective: March 25, 2016 |
| | The Electric Power Sector Verification Statement has been updated to incorporate the location-based and market-based methods and indirect biogenic emissions for the entity-wide emission totals. The updated EPS verification statement should be used for all EPS verifications conducted against GRP v. 2.1. | | |

| | | | |
|-----------------------------------|---|---------------|---|
| EPS Verification Statement | Electric Power Sector Verification Statement - Updates | p. 1-2 | Issued: June 24, 2015 Effective: June 24, 2015 |
| | TCR has issued a new Electric Power Sector Verification Statement to incorporate the most recent GRP, GVP and EPS Protocol versions and Updates and Clarifications documents, and the addition of NF ₃ , in accordance with the GRP. | | |

Optional Standard Verification Report Template

| | | | |
|---|--|---------------|---|
| Optional Standard Verification Report Template | Optional Standard Verification Report Template - Updates | p. 2-5 | Issued: March 25, 2016 Effective: March 25, 2016 |
| | The Optional Standard Verification Report Template has been updated to incorporate the location-based and market-based methods, indirect biogenic emissions and SF ₆ and NF ₃ into the tables for entity-level gas totals on page 2. The misstatement tables on pages 3-5 have also been updated to incorporate location-based and market-based methods and indirect biogenic emissions. | | |