



Climate Change, GHG Registries (formerly VCR Inc.)



CHALLENGE REGISTRY GUIDE TO ENTITY & FACILITY-BASED REPORTING

Version 6.0

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CSA Climate Change, GHG Registries

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Q: Why should I register a comprehensive Action Plan when my organization is reporting emissions under a mandatory program?

A: Mandatory reporting systems have a limited point of view, documenting only historical direct emissions from certain facilities. A comprehensive Action Plan allows you to document your entity's entire emissions footprint, and illustrate your GHG emissions reduction best practices on a broader scale. It includes a contextual setting: rather than just reporting static, historical numbers, you can explain how the emissions have changed over time, how you think your actions will affect future emissions and how you got to where you are today through innovation and perseverance. A registered Action Plan is a more insightful and valued document for public edification.



Q: Mandatory reporting schemes do not include indirect GHG emissions. Why is reporting indirect GHG emissions encouraged in a registered Action Plan?

A: Mandatory reporting schemes are focused on direct emissions from specific facilities and do not describe your entity's entire emissions profile. A registered Action Plan is much more comprehensive, including all facilities and both direct and indirect emissions. By including indirect emissions, you can pinpoint opportunities for reducing all sources of emissions. A registered Action Plan documents a more meaningful corporate emissions profile.



Q: How will posting an Action Plan help focus efforts within my organization to encourage actions to reduce GHG emissions?

A: A registered Action Plan encourages you to identify your "business-as-usual" emissions, set targets, and to devise actions to achieve your goals. GHG management is primarily energy management, which provides the opportunity to reduce your bottom line costs. An Action Plan helps the organization to focus on a plan to reduce costs internally while providing a public motive for doing so. It engages all of your employees in a win-win scenario.



Q: How can a publicly held company benefit from registering an Action Plan in addition to mandatory reporting?

A: A publicly held company can exhibit good corporate citizenship by reporting to their current and prospective shareholders that they not only meet the current mandatory GHG emission reporting requirements but ALSO that they have submitted a champion-level action plan for posting in the [Challenge Registry](#).



Q: What do we get for our registration fee?

A: The registration fee covers the administration and processing for the evaluation and registration of your action plan submission. The advantages include:

- Entities that have a registered champion-level GHG action plan in their [Challenge Registry](#) online profile receive positive market recognition and exposure,
- The evaluation process means that the submission undergoes a thorough and accurate review of your quantification methodology.
- The development of the GHG Action Plan requires you to track and monitor energy and emission and also provides you with the opportunity to help focus corporate efforts on savings, and
- Allows for the comparison and publishing of best practices in a publicly accessible forum.

Introduction

This guideline is version 5.0 of our [Challenge Registry Guide](#). It is intended as a generic handbook for submitting an Action Plan for posting in the [Challenge Registry](#) which uses our Champion Level Reporting system.

We have made a significant change to the posting requirements for the [Challenge Registry](#) that will enhance its status as a measure of true performance in GHG emissions management. The posted files of entities with Action Plans that were significantly below the Bronze level of reporting have been removed from the Registry as of 2004 and the proponents have been notified. In order to be posted, an Action Plan meeting a minimum of Bronze-level reporting is required.

This living document will benefit greatly from your input and comment. Your continued commitment to this important initiative is greatly appreciated.

You may also find that our [Standardized Reporting Template](#) serves to simplify the preparation of your action plan. In order to facilitate a quick and accurate review and rating of your plan please submit a completed [Transmittal Form](#), along with your report and the registration fee.

Should you have any questions or suggestions for improvement please contact our office by telephone at (613) 565-5151 or by e-mail at: ghgregistries@csa.ca.



In order to foster consistency in the measurement, reporting and verification of GHG emissions, reductions, and avoidance we have adopted “best practice” text from a broad range of sources and have attempted to give due credit throughout the text. *In the past, GHG Registries reprinted the available external sources for several of the emission factors and global warming potentials. We are now providing the link to the web versions of references and sources available online at www.ghgregistries.ca/emission_estimation_resources_e.cfm that are maintained and updated on a regular basis by the respective parties that should enable you to locate the most current relevant factor for your use. This is meant to assist you in locating pertinent information and is not meant to be a complete and exhaustive list. If you are aware of a source or reference that could be listed, please contact us so that we may add it to assist others.*

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Appendix 1 — Challenge Registry Transmittal Form

[\[http://www.ghgregistries.ca/assets/rtf/Challenge_Transmittal_form_E.rtf\]](http://www.ghgregistries.ca/assets/rtf/Challenge_Transmittal_form_E.rtf)

Appendix 2 — Challenge Registry Standardized Reporting Template

[\[http://www.ghgregistries.ca/assets/rtf/Challenge_Reporting_Template_E.rtf\]](http://www.ghgregistries.ca/assets/rtf/Challenge_Reporting_Template_E.rtf)

1. What is the Registration Procedure?

When our office first receives an Action Plan and Transmittal form, we begin by acknowledging its receipt and posting the plan in our Challenge Registry as received and describe it as 'Evaluation Results Pending', provided the self assessment embodied in the [Transmittal Form](#) indicates a minimum of bronze-level reporting and that the registration fee has been paid. All plans are posted publicly on our web site in the [Challenge Registry](#). Anyone with access to the Internet may read them.

Once the initial posting has been completed we compare the elements included in the report against the [Champion Reporting Checklist](#) of this guide. We assess whether or not the report qualifies to be awarded Bronze, Silver or Gold Champion Level Reporting status. You will be notified of the results of our review by e-mail. A secure on-line registration feature is available on our web site, which allows you to review your records in the Challenge Registry. Champion Level Reporters are recognized in the Registry by including the appropriate logo on the front page of their electronic file.

We register all entity and/or facility-based reports, whether they are from a single operation or from an integrated corporation. Several large organizations have chosen to delegate Challenge Registry reporting to individual subsidiaries, business units or facilities to create an internal challenge among them to 'Go for Gold!' and have provided appropriate internal incentives to those who achieve this level. We will recognize Bronze, Silver or Gold status reports regardless of the boundaries chosen for reporting.

2. Building Your Action Plan

There are eight steps that you should follow in preparing your Action Plan:

1. Obtain senior management support
2. Develop an inventory
3. Establish business-as-usual projections
4. Set targets
5. Identify measures to achieve targets
6. Record results achieved
7. Describe your education, training and awareness programs
8. Submit your action plan

The [Challenge Registry Standardized Reporting Template](#) can assist you in developing your Action Plan to address these steps.

2.1 Principles

As a general guide to the preparation of your Action Plan we would recommend the following principles found in the [World Business Council for Sustainable Development \(WBCSD\)](#) and the [World Resources Institute \(WRI\) "Greenhouse Gas Protocol"](#):

1. **Relevance:** Ensure the GHG inventory appropriately reflects the GHG emissions of the company and serves the decision-making needs of users – both internal and external to the company.
2. **Completeness:** Account for and report all greenhouse gas emission sources and activities within the chosen inventory boundary. Disclose and justify any specific exclusions.
3. **Consistency:** Use consistent methodologies to allow meaningful comparison of emissions over time. Transparently document any change to the data, inventory boundary, methods, or any other relevant factors in the time series.
4. **Transparency:** Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.
5. **Accuracy:** Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

2.2 Reporting Baselines, Business-as-Usual Projections, Targets and Results

2.2.1 Boundaries

In order to properly define the data gathering required for completing your Action Plan, it is essential to clearly establish boundaries around the operations being tracked. In addition, you need a consistent method of accounting for the dynamic changes in these

boundaries that you may experience due to acquisitions, divestitures, shutdowns, and other substantive changes that occur over time.

Geographic Boundaries

It is recommended that your data be gathered and reported by identifying the emissions from each facility within your corporate umbrella.

Organizational Boundaries

Your organization may be structured with a variety of wholly owned, partially owned, joint-ventured, and other entities. You will need to decide what will and will not be included in your Action Plan with respect to each of these situations.

It is suggested that if you have majority control of the operation of a facility or another entity, you include 100% of the GHG emissions in your plan. If you have significant influence over another facility or entity, you should include a portion of these emissions based on your equity share. These methods are similar to current financial reporting structures. It is understood that this approach could result in more than one registered Action Plan reporting overlapping information. As long as the basis for your reporting is clearly outlined this “double counting” can be identified and rationalized, if required.



More detailed explanations and further examples can be found at the GHG Protocol website at www.ghgprotocol.org.

Operational Boundaries

GHG emissions can be broken down into two distinct groups – direct and indirect.

Direct emissions are those emissions that are directly released by your organization, usually from the burning of fossil fuels in heating buildings, running plants and processes and operating vehicles. It would also include such things as methane released from landfills owned by the organization and fugitive emissions from natural gas pipelines. Direct emissions should be reported by individual gas type (CO₂, CH₄, N₂O, etc.) as well as in aggregate (CO₂ equivalent). These emissions should be calculated and reported on a facility basis.

Indirect energy emissions are those emissions associated with an outside organization that supplies energy. Electricity generation is most common, but purchased steam, hot water and chilled water are considered indirect energy emission sources. You are encouraged to include the indirect emissions associated with these outside sources because the actions you take will affect the amount of GHGs they generate. Indirect energy emissions should be quantified in aggregate (CO₂ equivalent). These emissions can be reported on either an entity or facility basis.

Other indirect emissions are typically services for business travel or transportation of goods (airplanes, ships, rail, bus, taxi, etc.), commuting by employees, and offsite waste decomposition. Reporting emissions from other indirect emissions sources is optional. Other indirect emissions may be quantified in aggregate (CO₂ equivalent). These emissions are best calculated and reported on an entity basis.

We recommend that you report direct emissions, indirect energy emissions, and other indirect emissions that are significant for your organization. You can gain extra points in our Champion Level Reporting system for separately listing these emissions.

Temporal Boundaries

Boundaries can also be temporal (time-based) in nature. That is, emissions will change over time as you implement changes to reduce energy consumption and GHG emissions. We recommend that you report actual GHG emissions on an annual basis, starting with 1990 or the earliest date where accurate data is available. Annual emissions should be documented up to the most recent data available. Emissions projections, preferably business-as-usual projections, should be documented into the future and it is suggested to show projections for at least 5 years.

2.2.2 Measurement Techniques

Unlike criteria air contaminants such as nitrous oxides (NO_x) and sulphur dioxide (SO₂), carbon dioxide (CO₂), the primary GHG, is seldom monitored directly. If direct measurements of CO₂ emissions are available, using these measurements is the most accurate way to determine your GHG emissions.

However, since about 80% of emissions are from direct combustion of fossil fuels such as natural gas and fuel oil, using emission factors is the most common method of calculating emissions. The location of emission factors for a variety of fuels is available in [Section 6](#). Multiplying the quantity of fuel of a specific type purchased in a given year by the appropriate emission factor will allow you to estimate the GHG emissions associated with consuming that fuel. While CO₂ emission rates remain unchanged for mobile sources, CH₄ and N₂O emissions vary both with fuel consumption and motor technology.

2.2.3 Reporting Data

We recommend that you report your direct emissions, indirect energy emissions and other indirect emissions for your chosen base year ([see Section 5. Champion Reporting Checklist](#)) and subsequent years, by GHG gas type (direct emissions only), in units of tonnes of CO₂ e (direct, indirect energy and other indirect emissions). You can also report business-as-usual projections and emission targets in the same manner. Extra points are available in our Champion Level Reporting system for reporting direct emissions separately (CO₂, CH₄, N₂O, SF₆, PCFs, HFCs).

Most indirect emission factors only list emissions data in CO₂ equivalent.

You may find it of value to also calculate, estimate and target using a performance-based indicator or intensity value. Examples include GHG emission per unit of output or energy consumption per unit of output. Many institutional participants use building floor area and number of employees as units of output. For manufacturing companies, kg of product, number of units assembled or sales revenue have been used. You may also want to report on the percentage change in these values since the base year or from

one year to the next. Some industry associations have developed specific intensity factors in their guidelines.

2.2.4 Recalculating Historic Emissions

You may need to recalculate your historic emissions. Reasons for this type of change may include:

- Change in facility ownership
- Change in reduction project or offset ownership
- Change boundaries for calculating GHG emissions ([see 2.2.1](#))
- Change in assumptions or GHG quantification methodology

If you have had to recalculate some or all of your previously reported emissions, you should document and justify the changes.

2.2.5 Quality Control

Ensuring that your GHG emission calculations are accurate and complete will save you time in reporting your information in the future. If you have achieved an ISO 9001 or ISO 14001 designation, then you are already familiar with implementing quality control procedures. Including GHG emission measurement and reporting is a logical step in such a process. You may want to consider the following as you develop your procedures:

- Use a standard system for reporting GHG across different facilities/departments
- Use the same units of measurement across different facilities/departments
- Use an appropriate calculation method
- Design a robust data collection system
- Perform regular accuracy checks
- Organize regular training of personnel
- Perform uncertainty analysis



One of the Champion Level Checklist items ([see item 3.8: Results that have been externally verified](#)) involves obtaining a third party verification of your Action Plan data and/or calculations. You may want to consider this to help ensure the accuracy of your information and methodology.

3. Transmittal Form

Your submission cannot be processed without a completed transmittal form and registration fee. We request that you fill out and submit the [Transmittal Form](#) which can be downloaded from our website. A sample is also provided in Appendix 1. This form streamlines the Champion Level Reporter evaluations and ensures that our records accurately reflect your correct contact information. Your transmittal form will not be posted. It is against our policy to distribute the contact information of our registrants.

The first section of the Transmittal Form is intended to assist us in ensuring that our database has recorded the most up-to-date contacts for your organization. Your *executive contact* should represent the most senior level of management responsible for the report – usually your President, Chief Executive Officer or an equivalent. You should also designate a *primary technical contact* for your company or organization – usually the person responsible for preparing your Action Plan. Other technical contacts should also be identified as *secondary technical contacts* (these may include other executives and managers responsible for Challenge Registry reporting, as well as technical staff involved in the reporting process). You may also wish to include information about any outside contractors that may have helped you prepare your Action Plan.

Submissions must be received in electronic format. Current technology enables us to post all MS Word and Adobe Acrobat (PDF) files. If you wish to submit your Action Plan in another electronic format, please contact our office to verify your compatibility with our system.

If your Action Plan was produced in more than one language, we also ask you to submit all available versions (each will be posted on our Web site).

Since we work with hundreds of companies operating in virtually every sector of the Canadian economy, we also ask you to specify the sector that you believe best classifies your operations. As well, please indicate if you are submitting an Action Plan to us for the first time, and if your organization should be classified as a small- or medium-sized enterprise. We plan to use this information to ensure that all Challenge Registry leaders are recognized, taking into account significant differences in the scale of operations.

Lastly, we ask you to check off the Champion Reporting categories that are documented within your Action Plan. We use this checklist as a cross-reference when we are in the process of determining whether your organization has achieved Bronze, Silver or Gold status.

4. Submitting Your Action Plan

All documents submitted for inclusion in the [Challenge Registry](#) will be treated as public documents.

As indicated on the Canadian GHG Challenge Transmittal Form, you may submit your Action Plan in a variety of electronic forms.

E-mail reports and transmittal form to: ghgregistries@csa.ca

Mail or ship CD-ROMs or
floppy disks to:

CSA Climate Change, GHG Registries
155 Queen Street, Suite 1300
Ottawa, Ontario K1P 6L1

5. Champion Reporting Checklist

In order to provide us with an objective way to award Bronze, Silver or Gold Champion Level Reporter status based on your Action Plan, we have developed the Champion Reporting Checklist. Within this Checklist, we use a point system to quantify the depth of your Action Plan. Points are awarded for each element on an 'all or nothing basis' — meaning that if you have included a given element in your Action Plan, you will be assigned all of the points indicated for that element. The points for the three levels are:

50 points to reach the Bronze level →



70 points to reach the Silver level →









90 points to reach the Gold level →






The elements marked with a '✓' in the Checklist are minimum requirements for that level of reporting and must be included in your Action Plan in order to attain the indicated reporting level. Each checklist element is explained in detail in section 5.1: Checklist Element Detail Descriptions of this guide.

Table 1 — Champion Reporting Checklist

Components	Required Elements Identified with a ✓			
	Points Earned	 Bronze	 Silver	 Gold
1 Senior Management Support				
1.1 Statement of endorsement	N/A	✓	✓	✓
1.2 Commitment to regular reporting	N/A	✓	✓	✓
1.3 Internal practices on climate change	2			
1.4 Management system description	3			
2 Base Year Quantification				
2.1 Any quantification that can be used in target setting	N/A	✓	✓	✓
2.2 Provide methodology for the calculation of the base year quantification	2		✓	✓
2.3 Include GHG emissions inventory by gas type	4			
2.4 Provide methodology for the calculation of the base year quantification by gas type	4			
2.5 Include indirect energy emissions	2			✓
3 Results Achieved				
3.1 Results reported within one year of commitment	N/A	✓	✓	✓
3.2 Results in all years since base year quantification	2			
3.3 Tonnage inventory of emissions	2		✓	✓
3.4 Tonnage inventory of emissions since base year quantification	2			
3.5 Results in comparison with previous targets	4		✓	✓
3.6 Results that are below base year quantification levels of CO₂ e or energy intensity per unit of output	6			✓
3.7 Results that are verifiable	2			✓
3.8 Results that have been externally verified	3			
3.9 Document emission reduction offsets	2			

Components	Required Elements Identified with a ✓			
	Points Earned	 Bronze	 Silver	 Gold
4 Business-as-Usual Projection				
4.1 Describe basis for Business-As-Usual projection (without emissions reduction actions)	2		✓	✓
4.2 Business-As-Usual projection (without emissions reduction actions) expressed in tonnes of CO2 equivalent emissions to at least 2 years in the future.	2			✓
4.3 Identify major sources of GHG emissions	1			
4.4 Include indirect energy emissions	1			
4.5 Specified by GHG type	1			
5 Target Setting				
5.1 Commit to target setting	N/A	✓	✓	✓
5.2 Identify your target or explain the process by which you are selecting your target	5			✓
5.3 Target projected to at least 5 years in future	2			
5.4 Process for target review and update	2			
6. Past Actions				
6.1 Estimate sum of impacts of identified key activities	2			
6.2 Estimate individual impacts of key activities/projects	2			
6.3 Estimate sum of impacts of key activities/projects in tonnes CO₂ equivalent	2			
6.4 Estimate individual impacts of key activities/projects in CO₂ equivalent	2			
7. Potential Future Actions to Achieve Targets				
7.1 List potential reduction activities and/or projects	N/A	✓	✓	✓
7.2 Quantify the sum of all impacts of potential activities using any reporting format	4			
7.3 Quantify the impact of individual potential activities using any reporting format	3			
7.4 Quantify the sum of all impacts of potential activities in tonnes CO₂ equivalent.	4			
7.5 Quantify the impact of potential individual activities in tonnes CO₂ equivalent	4			
7.6 Categorize the activities	4			

Components	Required Elements Identified with a ✓			
	Points Earned	 Bronze	 Silver	 Gold
8 Education, Training and Awareness				
8.1 Climate change issue explained to employees	3		✓	✓
8.2 Communicate response to climate change	3			✓
8.3 Identify opportunities for individual action	3			✓
8.4 Create incentives for emission reductions by employees outside of work	2			
8.5 Create incentives for emissions reductions through supply-side management	2			
8.6 Create incentives for emissions reductions through demand-side management	2			
8.7 Participate in life-cycle analysis or other activities to influence external contacts	1			
8.8 Undertake public education	1			
Maximum Total	100			

5.1 Checklist Element Detail Descriptions

Section 1. Senior Management Support

Checklist Item 1.1 — Statement of endorsement

All registrants are required to submit a statement by a representative of senior management that endorses registration in the [Challenge Registry](#). Typical signatories include executives such as Presidents, CEOs, Vice Presidents, and Deputy Ministers. For registering a facility (as opposed to an entire corporate entity), the facility manager would be the preferred endorsement. The statement may be documented in either a cover letter, or inside the report, in a section usually called 'Message from the President'.

Points Awarded: N/A

Mandatory Element for: Bronze, Silver, Gold

Checklist Item 1.2 — Commitment to regular reporting

All registrants are required to commit to regular reporting. A statement committing the organization to report on an annual or biennial basis is preferred. This commitment is usually documented within the senior management endorsement.

Points Awarded: N/A

Mandatory Element for: Bronze, Silver, Gold

Checklist Item 1.3 — Internal practices on climate change

To earn this checklist element, an organization must have documented policies and/or practices with respect to climate change. If your organization does not have a climate change-specific policy, a description of emissions management systems, energy management systems and/or ISO 14001 registration is sufficient provided the description specifically addresses the climate change aspects of these management systems.

Points Awarded: 2

Checklist Item 1.4 — Management system description

To earn this checklist element, your organization should document how business decisions are made, specifically those business decisions relating to GHG emissions (and energy consumption) as well as GHG emissions reductions, offsets and education.

Points Awarded: 3

Section 2. Base Year Quantification

Checklist Item 2.1 — Any quantification that can be used in target setting

All registrants are required to document a base year quantification that could be used for target setting. The base year quantification can be any performance measure that has an impact on GHG emissions, including emissions intensity or energy intensity. GHG emissions for a calendar or fiscal year are preferred, but an average of several representative years is acceptable. The base year selected should be the earliest year accurate data is available.

The base year quantification may be adjusted to take into account changes in operations, and any quantification related to GHG emissions is acceptable.

Points Awarded: N/A

Mandatory Element for: Bronze, Silver, Gold

Checklist Item 2.2 — Provide methodology for the calculation of the base year quantification

To earn this checklist element, you should describe how you determined your base year quantification. All guidelines and third-party reference materials should be cited. As well, if a unique calculation methodology is used, sample calculations should be included in the body of the report or in an appendix.

Points Awarded: 2

Mandatory Element for: Silver, Gold

Checklist Item 2.3 — Include GHG emissions inventory by gas type

To earn this checklist element, your base year quantification must account for direct emissions by gas type. For the vast majority of organizations, these emissions are CO₂, CH₄ and N₂O – primarily the products of combustion of fossil fuels. Other relevant gas types that may be documented include SF₆ as well as gases from the HFC and PFC families. (These gases are typically emitted from specialized manufacturing processes and are not relevant to the vast majority of registrants.) In some rare instances, an estimation methodology used for calculating direct emissions does not break out emissions by gas type, or produces only CO₂ estimates. An organization that finds they cannot estimate their CH₄ or N₂O emissions can earn this checklist element by explaining the limitations of their calculation methodology and declaring that the non-CO₂ direct emissions from their operations are negligible (not material).

Points Awarded: 4

Checklist Item 2.4 — Provide methodology for the calculation of the base year quantification by gas type

To earn this checklist element, you should describe how you estimated your direct emissions. All guidelines and third-party reference materials should be cited. As well, if a unique calculation methodology is used, sample calculations should be included in the body of the report or in an appendix.

Points Awarded: 4

Checklist Item 2.5 — Include indirect energy emissions

To earn this checklist element, you must estimate the GHG emissions impact your organization has beyond its own operations. While you are not directly responsible for these emissions, the actions of your organization may affect the emissions of others. Indirect emissions may result from a variety of sources including purchased electricity, steam and chilled water.

To earn this checklist element, you must estimate the emissions impact of indirect energy emissions sources or document that these emissions are not material. The most commonly reported source is purchased electricity.

Points Awarded: 2

Mandatory Element for: Gold



Reporting other indirect emissions such as business travel, waste disposal, and employee commuting is optional.

Section 3. Results Achieved

Checklist Item 3.1 — Results reported within one year of commitment

To earn this checklist element, you must report the quantified results of at least one performance measure for the most recent reporting year. The results can be any performance measure that has an impact on GHG emissions, including emissions intensity or energy intensity. We prefer results expressed in absolute GHG emissions (tonnes CO₂ equivalent). However, any quantification related to GHG emissions is acceptable. An estimate of energy consumption or utility costs for the most recent reporting year is generally considered the absolute minimum to earn this element. First time participants can earn this element if results are reported in their next Action Plan, which is submitted within one year.

Points Awarded: N/A

Mandatory Element for: Bronze, Silver, Gold

Checklist Item 3.2 — Results in all years since base year quantification

To earn this checklist element, organizations must report the trend in results between the base year and the most recent reporting year. We encourage registrants to address each year. Special consideration will be given to those who claim that research costs or uncertain data prevent attributing results for all interim years. However, to earn this checklist element, registrants must estimate results for at least one year between the base year and the current reporting year, as well as justify any gaps in the results data.

Points Awarded: 2

Checklist Item 3.3 — Tonnage inventory of emissions

To earn this checklist element, the results of the most recent reporting year must be reported in terms of mass emissions (tonnes CO₂ equivalent) or emissions intensity (tonnes CO₂ equivalent per unit production or per facility area).

Points Awarded: 2

Mandatory Element for: Silver, Gold



Direct emissions should be reported in individual gas types (t CO₂, t CH₄, t N₂O, etc.) as well as t CO₂ equivalent.

Indirect energy emissions and other indirect emissions (optional) should be reported in t CO₂ equivalent.

Checklist Item 3.4 — Tonnage inventory of emissions since base year quantification

To earn this checklist element, the results of each year between the base year and the most recent reporting year must be reported in terms of mass emissions (tonnes CO₂ equivalent) or emissions intensity (tonnes CO₂ equivalent per unit production or per facility area). Special consideration will be given to those registrants who claim that

Section 4. Business-as-Usual Projection

Checklist Item 4.1 — Describe basis for business-as-usual projection (without emissions reduction actions)

To earn this checklist element, you need to estimate your GHG emissions performance as if no emission reduction activities had taken place and to define how that was determined. This is also called a 'Reference Case', 'Without Emission Reductions' or 'Frozen Efficiency Forecast'. We prefer that this measure be in GHG emissions by gas type, but any performance measure is acceptable. Other commonly reported projections include business-as-usual GHG emissions, emissions intensity, energy intensity, energy consumption and energy cost. If a business-as-usual projection is unavailable, any projection or forecast relevant to GHG emissions may be used.

Points Awarded: 2

Mandatory Element for:

Silver, Gold



While both are estimates of future performance, a business-as-usual (BAU) projection is not the same as a target. A business-as-usual projection is an estimate of the performance where the impact of GHG emissions reduction activities is not included. It represents the emission you would have had if you had done nothing to reduce them. A target reflects a management goal. Depending on senior management requirements, a target could be more or less challenging than a projected performance measure.

Checklist Item 4.2 — Business-as-usual projection (without emissions reduction actions) expressed in tonnes of CO₂ equivalent emissions to at least 2 years in the future.

To earn this checklist element, you need to estimate future GHG emissions (tonnes CO₂ equivalent) or emissions intensity (tonnes CO₂ equivalent per unit production or per facility area) without the impact of emission reductions.

Points Awarded: 2

Mandatory Element for:

Gold

Checklist Item 4.3 — Identify major sources of GHG emissions

To earn this checklist element, you should tabulate your projected business-as-usual GHG emissions (or emissions intensity) for each business unit, facility or energy source. Typically, registrants list three to six major sources of emissions.

Points Awarded: 1

Checklist Item 4.4 — Include indirect energy emissions

To earn this checklist element, you should project your indirect energy emissions (or indirect energy emissions intensity) from sources such as purchased electricity, steam, or chilled water. Special consideration will be given to those registrants who have no indirect emissions because they consume no electricity from the grid, or generate more electricity than they consume. These registrants may be credited for this checklist element if their report documents that they create no measurable indirect energy emissions.

Points Awarded: 1

Checklist Item 5.3 — Target projected to at least 5 years in future

To earn this checklist element, the timeframe for at least one target must be at least 5 years in future. Targets with ambiguous time-frames such as “Our goal continues to be to reduce our energy intensity by one per cent per year,” or “We will maintain emissions rates below base year levels,” must specify at least 5 years in future to earn this checklist element.

Points Awarded: 2

Checklist Item 5.4 — Process for target review and update

To earn this checklist element, your report must indicate how past targets were reviewed and updated, as well as when new targets will be reviewed and updated.

Points Awarded: 2



For example, “Low demand for our product caused a production reduction, which resulted in missing our emissions intensity target set in 2001. We have adjusted our goal for year 2005 based on our current rate of production. Senior management will review this new target on an annual basis.”

Section 6. Past Actions

Checklist Item 6.1 — Estimate sum of impacts of identified key activities

To earn this checklist element, you must report a list of implemented emissions reduction activities and estimate the total impact of these activities.

Points Awarded: 2

Checklist Item 6.2 — Estimate individual impacts of key activities/projects

To earn this checklist element, you must report a list of implemented emissions reduction activities and quantify the impact of each of these activities. If some activities are not quantifiable, the report should indicate why. At least two key activities or projects must be quantified.

Points Awarded: 2

Checklist Item 6.3 — Estimate sum of impacts of key activities/projects in tonnes CO₂ equivalent

To earn this checklist element, you must report a list of implemented emissions reduction activities and estimate the total impact of these activities in tonnes CO₂ equivalent.

Points Awarded: 2

Checklist Item 6.4 — Estimate individual impacts of key activities/projects in CO₂ equivalent

To earn this checklist element, you must report a list of implemented emissions reduction activities and quantify the impact of each individual activity in tonnes CO₂ equivalent. If some activities are not quantifiable, the report should indicate why. The impacts of at least two key activities or projects must be estimated.

Points Awarded: 2

Section 7. Potential Future Actions to Achieve Targets

Checklist Item 7.1 — List potential reduction activities and/or projects

To earn this checklist element, the report must list activities and/or projects that may be implemented in the future.

Points Awarded: N/A

Mandatory Element for: Bronze, Silver, Gold

Checklist Item 7.2 — Quantify the sum of all impacts of potential activities using any reporting format

To earn this checklist element, the report must include an estimate of the sum of the impacts of all potential future activities and/or projects.

Points Awarded: 4

Checklist Item 7.3 — Quantify the impact of individual potential activities using any reporting format

To earn this checklist element, the report must include estimates of the impact of each potential future activity and/or project. If some activities are not quantifiable, the report should indicate why. At least two key activities or projects must be quantified.

Points Awarded: 3

Checklist Item 7.4 — Quantify the sum of all impacts of potential activities in tonnes CO₂ equivalent.

To earn this checklist element, you must report a list of potential future emissions reduction activities and estimate the total impact of these activities in tonnes CO₂ equivalent.

Points Awarded: 4

Checklist Item 7.5 — Quantify the impact of potential individual activities in tonnes CO₂ equivalent

To earn this checklist element, organizations must report a list of potential future emissions reduction activities and quantify the impact of each individual activity in tonnes CO₂ equivalent. If some activities are not quantifiable, the report should indicate why. The impacts of at least two key activities or projects must be estimated.

Points Awarded: 4

Checklist Item 8.5 — Create incentives for emissions reductions through supply-side management

To earn this checklist element, an organization must report how they share ideas with their suppliers and encourage GHG emissions reductions upstream of their operations.

Points Awarded: 2

Checklist Item 8.6 — Create incentives for emissions reductions through demand-side management

To earn this checklist element, an organization must report how they share ideas with their customers and encourage GHG emissions reductions downstream of their operations.

Points Awarded: 2

Checklist Item 8.7 — Participate in life-cycle analysis or other activities to influence external contacts

To earn this checklist element, an organization must report how they initiated or were engaged in a life-cycle analysis of a product or output, and how this life-cycle analysis included climate change impacts. This checklist element could also be earned by documenting how the organization worked with external contacts, such as trade associations, on climate change issues.

Points Awarded: 1

Checklist Item 8.8 — Undertake public education

To earn this checklist element, the report must include an explanation of how the organization attempted to encourage the public-at-large to reduce their impact on GHG emissions.

Points Awarded: 1

6. Emission Factors and Global Warming Potentials

In the past, GHG Registries reprinted the available external sources for several of the emission factors and global warming potentials. We are now providing the link to the web versions of references and sources available online at www.ghgregistries.ca/emission_estimation_resources_e.cfm that are maintained and updated on a regular basis by the respective parties that should enable you to locate the most current relevant factor for your use. This is meant to assist you in locating pertinent information and is not meant to be a complete and exhaustive list. If you are aware of a source or reference that could be listed, please contact us so that we may add it to assist others.