

Tracking Emissions Over Time

The *Climate Leaders program requires participants to establish a historic performance datum for comparing emissions over time. This performance datum is referred to as “base year emissions.”* Companies often undergo significant structural changes such as acquisitions, divestments, and mergers. These changes will alter a company’s historical emission profile, making meaningful comparisons over time difficult. To maintain consistency over time, or in other words, to keep comparing “like with like,” historic emission data will have to be recalculated. This chapter describes the process for choosing and adjusting the base year.

Choosing a Base Year

A Climate Leaders Partner’s base year is the most recent year for which data is available when the Partner joins the program. Data for years as far back as 1990 may be reported to Climate Leaders; however base year data is used for purposes of assessing a company’s progress towards its emission reduction goal.

Recalculating Base Year Emissions

Partners shall develop a base year emissions recalculation policy (as documented in the *Inventory Management Plan*), and clearly articulate the basis and context for any recalculations. The policy shall state any “significance threshold” applied for deciding on historic emissions recalculation. “Significance

threshold” is a qualitative and/or quantitative criterion used to define any significant change to the data, inventory boundary, methods, or any other relevant factors. It is the responsibility of the company to determine the “significance threshold” that triggers base year emissions recalculation and to disclose it. It is the responsibility of the verifier to confirm the company’s adherence to its threshold policy. The following cases shall trigger recalculation of base year emissions:

- Structural changes in the reporting organization that have a significant impact on the company’s base year emissions. A structural change involves the transfer of ownership or control of emissions-generating activities or operations from one company to another. While a single structural change might not have a significant impact on the base year emissions, the cumulative effect of a number of minor structural changes can result in a significant impact. Structural changes include:
 - ◆ Mergers, acquisitions, and divestments
 - ◆ Outsourcing and insourcing of emitting activities
- *Changes in status of leased assets (ending leases or obtaining new leases)*
- Changes in calculation methodology or improvements in the accuracy of emission factors or activity data that result in a significant impact on the base year emissions data

- Discovery of significant errors, or a number of cumulative errors, that are collectively significant

Not all structural changes may turn out to be significant. The concept of significance should be used to judge whether a base year recalculation is needed due to a structural change. It is the responsibility of the Partner to use its best judgement to define significance for considering base year emissions adjustments. In most cases, determining an adjustment of the base year depends on the intended use of the information, the characteristics of the company, and the cumulative effect of numerous structural changes.

In summary, base year emissions shall be retroactively recalculated to reflect changes in the company that would otherwise compromise the consistency and relevance of the reported GHG emissions information. Once a *Partner* has determined its policy on how it will recalculate base year emissions, it shall apply this policy in a consistent manner. For example, it shall recalculate for both GHG emissions increases and decreases.

Timing of Recalculations for Structural Changes

When significant structural changes occur during the middle of a year, the base year emissions should be recalculated for the entire year, rather than only for the remainder of the reporting period after the structural change occurred. Recalculating the base year emissions avoids having to recalculate base year emissions again in the succeeding year. Similarly, current year emissions should be recalculated for the entire year to maintain

consistency with the base year recalculation. If it is not possible to make a recalculation in the year of the structural change (e.g., due to lack of data for an acquired company), the base year recalculation may be carried out in the following year.

Recalculations for Changes in Calculation Methodology or Improvements in Data Accuracy

A *Partner* might report the same sources of GHG emissions as in previous years, but measure or calculate them differently. For example, a *Partner* might have used a national electric power generation emissions factor to estimate *core indirect* emissions in the first year of reporting. In later years, the *Partner* may obtain more accurate utility-specific emission factors (for the current year as well as past years) that better reflect the GHG emissions associated with the electricity that it has purchased. If the differences in emissions resulting from such a change are significant, historic data is recalculated applying the new data and/or methodology.

Sometimes the more accurate data input may not be reasonably applied to all past years or new data points may not be available for past years. The *Partner* may then have to backcast these data points, or the change in data source may simply be acknowledged (i.e., via the *Inventory Management Plan*) without recalculation. This acknowledgement should be made each year to enhance transparency; otherwise, new users of the report in the two or three

years after the change may make incorrect assumptions about the performance of the company.

Any changes in emission factor or activity data that reflect real changes in emissions (i.e., changes in fuel type or technology) do not trigger a recalculation.

No Base Year Emissions Recalculations for Facilities that Did Not Exist in the Base Year

Base year emissions are not recalculated if the company makes an acquisition of (or insources) operations that did not exist in its base year. There *should* be a recalculation of historic data back to the year in which the acquired company came into existence. The same applies to cases where the company makes a divestment of (or outsources) operations that did not exist in the base year.

No Recalculation for “Outsourcing/Insourcing” if Reported Under Core Indirect and/or Optional Emissions

Structural changes due to “outsourcing” or “insourcing” do not trigger base year emissions recalculation if the company is reporting its indirect emissions from relevant outsourced or insourced activities. For example, outsourcing production of electricity, heat, or steam does

not trigger base year emissions recalculation, because the *Climate Leaders Design Principles* requires *core indirect* reporting. However, outsourcing/insourcing that shifts significant emissions between *core direct* and *optional* emissions reporting when *optional* emissions are not reported does trigger base year emissions recalculation (e.g., when a company outsources the transportation of products).

No Recalculation for Organic Growth or Decline

Base year emissions and any historic data are not recalculated for organic growth or decline. Organic growth/decline refers to increase/decrease in production output, changes in product mix, and closures and openings of operating units that are owned or controlled by the company. The rationale for this is that organic growth or decline results in a change of emissions to the atmosphere and, therefore, needs to be counted as an increase or decrease in the company’s emissions profile over time. *Change in lease status is not considered organic growth or decline, even if the vacated lease goes unrented.*

Climate Leaders tracks the originally established base year emissions as well as subsequent recalculated base year emissions to ensure transparency. In addition, the Inventory Management Plan documents the base year adjustment policy developed by the Partner, the implementation of which will be reviewed during the onsite IMP review at the selected facility.

Table 5-1 presents basic rules that shall be observed for base year emissions recalculations.

Table 5-1: Basic Rules for Base Year Emissions Recalculations

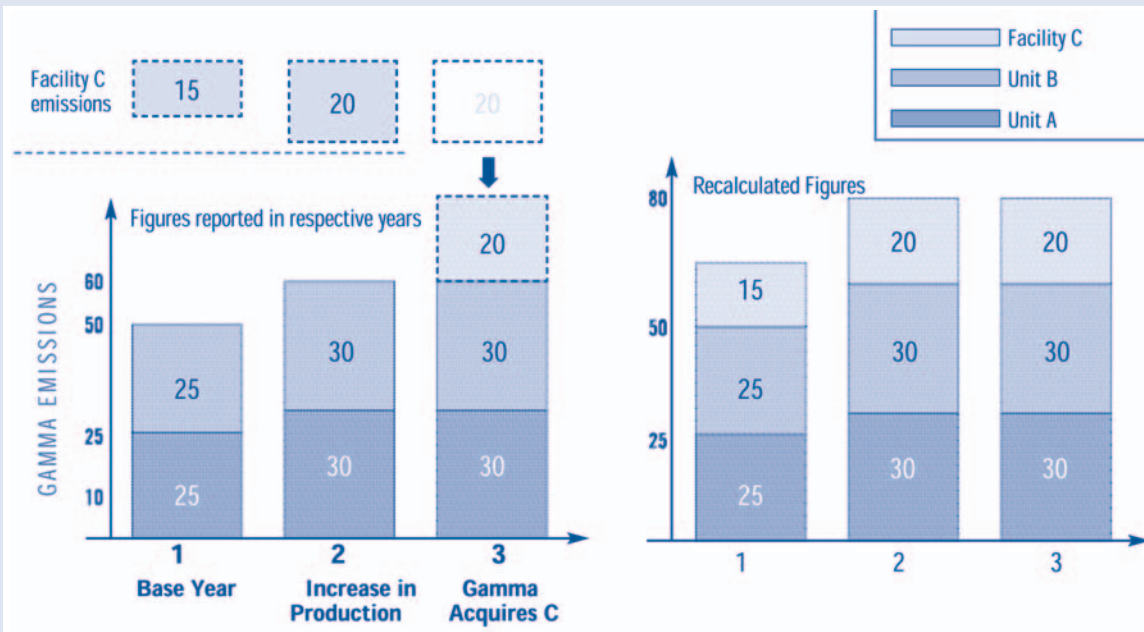
Condition	Base Year Recalculation Action
Mergers, Acquisitions, Divestitures	
1. Acquisition of (or insourcing) a facility that existed during the base year	Add the new facility's emissions generated during the base year to overall entity base year emissions, unless the now insourced operation was already included in the inventory as an <i>optional emission</i> .
2. Acquisition of (or insourcing) a facility that did not exist during the base year	No base year recalculation is needed.
3. Divestiture of (or outsourcing) a facility that existed during the base year	Subtract the divested facility's emissions generated during the base year from overall entity base year emissions, unless the now outsourced operation is still included in the inventory as an <i>optional emission</i> .
4. Divestiture of (or outsourcing) a facility that did not exist during the base year	No base year recalculation is needed.
5. Transfer of ownership/control of emissions sources. This includes changes in lease status.	Increased ownership shall be treated the same as a new acquisition; decreased ownership shall be treated the same as a divestiture. See 1-4 above.
Organic Growth and Decline	
6. Organic growth: <ul style="list-style-type: none"> ■ Increase in production output ■ Changes in product mix resulting in increased emissions ■ Opening of new plants or operating units 	No base year recalculation is needed.
7. Organic decline: <ul style="list-style-type: none"> ■ Decrease in production output ■ Changes in product mix resulting in decreased emissions ■ Closing of plants or operating units 	No base year recalculation is needed.
Changes in Quantification Methodologies/Errors	
8. Changes in emission factors or methodologies that reflect real changes in emissions (i.e., changes in fuel type or technology)	No base year recalculation is needed.
9. Changes in measurement or quantification methodologies, improvements in the accuracy of emission factors/activity data, or discovery of previous errors/number of cumulative errors	Recalculate base year emissions to be consistent with new approach or to correct errors.

Example One:

Base Year Emissions Recalculation for an Acquisition

Company Gamma consists of two business units (A and B), as shown below in Figure 5-1. In its base year (year one) each business unit emits 25 tons CO₂. In year two, the company undergoes “organic growth,” leading to an increase in emissions to 30 tons CO₂ per business unit, i.e., 60 tons in total. The base year emissions are not recalculated in this case. At the beginning of year three, the company acquires a production facility C from another company. The annual emissions of facility C in year one were 15 tons CO₂, and 20 tons CO₂ in years two and three.

Figure 5-1: Base Year Emissions Recalculation for an Acquisition

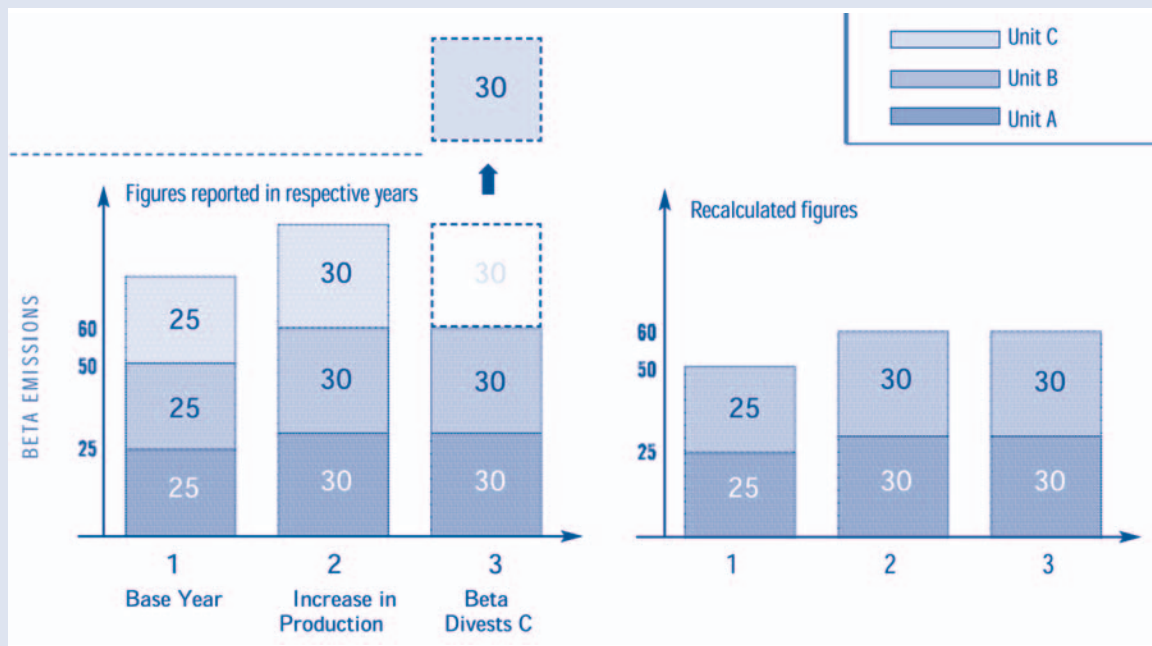


The total emission of company Gamma in year three, including facility C, are therefore 80 tons CO₂. To maintain consistency over time, the company recalculates its base year emissions to take into account the acquisition of facility C. The base year emissions increase by 15 tons CO₂—the quantity of emissions produced by facility C during its base year. The adjusted base year emissions are 65 tons CO₂. Gamma also reports 80 tons CO₂ as the recalculated emissions for year two.

**Example Two:
Base Year Emissions Recalculation for a Divestment**

Company Beta consists of three business units (A, B, and C), as shown in Figure 5-2. Each business unit emits 25 tons CO₂ and the total emissions for the company are 75 tons CO₂ in the base year (year one). In year two, the output of the company grows, leading to an increase in emissions to 30 tons CO₂ per business unit, i.e., 90 tons CO₂ in total. At the beginning of year three, Beta divests business unit C and its annual emissions are now 60 tons, representing an apparent reduction of 15 tons relative to the base year emissions. However, to maintain consistency over time, the company recalibrates its base year emissions to take into account the divestment of business unit C. The base year emissions are lowered by 25 tons CO₂—the quantity of emissions produced by the business unit C in the base year. The recalculated base year emissions are 50 tons CO₂, and the emissions of company Beta are seen to have risen by 10 tons CO₂ over the three years. Beta also reports 60 tons CO₂ as the recalculated emissions for year two.

Figure 5-2: Base Year Emissions Recalculation for a Divestment



**Example Three:
Acquisition of a Facility That Came Into Existence After
the Base Year was Set**

Company Teta consists of two business units (A and B). In its base year (year one), the company emit 50 tons CO₂. In year two, the company undergoes organic growth, leading to an increase in emissions to 30 tons CO₂ per business unit, i.e., 60 tons CO₂ in total. The base year emissions are not recalculated in this case.

At the beginning of year three, Teta acquires a production facility C from another company. Facility C came into existence in year two, its emissions being 15 tons CO₂ in year two and 20 tons CO₂ in year three. The total emissions of company Teta in year three, including facility C, are therefore 80 tons CO₂. In this acquisition case, the base year emissions of company Teta do not change because the acquired facility C did not exist in year one when the base year of Teta was set. The base year emissions of Teta therefore remains at 50 tons CO₂. Teta also reports 75 tons as the recalculated figure for year two emissions.

Figure 5-3: Acquisition of a Facility That Came Into Existence After the Base Year was Set

