

Briefing Paper: Revising & Communicating Baselines

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What is a baseline?

A baseline is the greenhouse gas (GHG) emissions, measured in CO₂ equivalent (CO₂e), associated with an institutions activities for a full year. It will usually be the last year for which complete and reliable data are available.

When setting a baseline you need to clearly define your organisational reporting boundary, state the period it covers, the emissions conversion factors used and any assumptions. The baseline can then be used as a reference point, against which current emissions can be compared to track progress towards meeting net zero targets.

When should a baseline be recalculated?

As institutions improve the quality of their GHG emissions reporting they often expand the sources of emissions included in their organisational boundary. This can sometimes present a challenge to monitoring emissions reductions progress over time and some institutions may decide to recalculate their baseline at this point.

The [GHG Protocol](#) recommends that organisations should develop a clear policy that states the threshold at which a recalculation of historic emissions will occur. The key changes that may prompt a recalculation are:

- Mergers & acquisitions
- Outsourcing or insourcing activities
- Significant changes to calculation methodology or activity data
- Identification of significant errors

[Resource Efficient Scotland](#) suggest organisations should only recalculate their baseline if the change represents more than 10% of total emissions. It is important that the policy is consistent in approach to both increases and decreases in GHG emissions and a significant structural reduction should also trigger a recalculation of the baseline.

Example: Identifying a new source of emissions

If an institution has identified a new source of emissions that should be included within its reporting boundary, they should initially determine if this change will fall above the 10% threshold. If the change is deemed significant, the institution should then aim to recalculate its baseline emissions and all intervening reporting periods. For example, in its [Carbon Footprint Report for 2018/19](#), Glasgow

Caledonian University identified flights booked independently by staff as a new material source of emissions, and so recalculated its baseline and the intervening reporting periods to include this new source of emissions.

Please note that if an institution has historically omitted a key source of emissions, such as electricity transmission and distribution losses, these can easily be added to the baseline and previous reporting periods as no extra data are required.

What if it is not possible to recalculate the baseline?

Sometimes it may not be possible to retrospectively collect data for the baseline year. In this case, if the change is below the 10% threshold, an institution may choose to simply add a note to its annual report to explain the change. However, if the change to the reporting boundary is significant the institution could reset its baseline to the last year for which complete and reliable data are available for the new sources of emissions.

The [Sustainable Scotland Network](#) advise that institutions may also choose to reset their baseline if a new corporate target is agreed as part of a climate strategy.

Communicating any changes to the baseline

It is important that any baseline revisions are communicated in a transparent and accessible manner, so that any impacts to emissions reduction progress are clearly understood by stakeholders. For example, in the University of Edinburgh's [Zero by 2040 Climate Strategy \(2016-2026\)](#) the 2007/08 baseline was recalculated to include business travel and the resulting increase to absolute GHG emissions is clearly communicated in the strategy.

When there have been changes to the reporting boundary it is also useful to report emissions reductions by [scope](#). New sources of emissions are often scope 3 so it may be useful for an institution to monitor absolute reductions over time, alongside the reductions that have been achieved within each scope. For example, in its [Public Bodies Climate Change Duties Summary Analysis](#) report the Sustainable Scotland Network report the reduction in scope 1 & 2 emissions as the headline figure.

Further reading

1. [GHG Protocol Corporate Standard Chapter 5 Tracking Emissions Over Time \(WBCSD/WRI\)](#)
2. [Carbon Management Reporting Guidance for Public Sector Organisations \(Resource Efficient Scotland\)](#)
3. [Base Year Recalculation Methodologies for Structural Changes Appendix E GHG Protocol \(WBCSD/WRI\)](#)