

Corporate Case Study

Accounting for Change:

Best practice in updating corporate GHG inventories at dynamic companies

Moving Targets

A moving target is difficult to hit. Companies seeking to meet greenhouse gas (GHG) emission reduction targets, or simply evaluate emission trends, must determine how changes to the organization over time should be reflected in their corporate GHG inventory. This can be especially challenging for corporations undergoing constant change through mergers and acquisitions.

Of primary concern are *base year* emissions, the figure against which future emissions can be compared to measure the success of a company's GHG reduction efforts. Base year emissions can be adjusted to reflect any number of changes over time, such as updated emission factors or corrections to errors in previous years emissions data, but structural changes (e.g., mergers, acquisitions, divestitures, insourcing, or outsourcing) are perhaps the most difficult to reflect accurately.

Inaccurate base year adjustments to a corporate GHG inventory obscure actual emission trends, which can prevent effective GHG management and put a company at risk of accusations of "cooking the books" to meet GHG reduction goals. But how can a company accurately reflect major changes, like new large facilities, outsourced operations, or recently acquired business units? And how do leading companies manage this process effectively and efficiently?

The sections below describe how two companies have answered these and other common questions about adjusting corporate GHG inventories.

Baxter International Inc.: Using the Greenhouse Gas Protocol

Baxter, a global biotechnology, medical device, and specialty pharmaceutical company, has publicly reported its global GHG emissions since 1996. In doing so, the company has developed valuable internal knowledge and capacity as an early adopter of the *Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard*.¹ Baxter also participates in voluntary GHG reduction programs based on the Greenhouse Gas Protocol, such as U.S. EPA's Climate Leaders and the Chicago Climate Exchange (of which Baxter is a founding member).

Familiarity with rules and procedures for tracking emissions is particularly important for evaluating corporate performance toward GHG reduction goals. Baxter set a target in 2005 (following up on its initial goal for the period 1996 to 2005) to reduce its GHG emissions from facility and fleet operations 20 percent per dollar of revenue by 2010 from a 2005 base year. Last year Baxter extended this commitment, announcing a new goal to reduce GHG emissions from facility and fleet operations 45 percent per

¹ Note: Baxter was a member of the WRI/WBCSD stakeholder initiative to develop and pilot the Greenhouse Gas Protocol, published in 2001. See: <http://www.ghgprotocol.org/standards/corporate-standard>

dollar of revenue by 2015 from a 2005 base year.

However, base year emissions are not necessarily static, especially for a large, multi-national company like Baxter. Between 2005 and 2015, Baxter may acquire additional facilities or companies and/or divest other facilities or business units. Per guidance in the GHG Protocol, Baxter adjusts its base year GHG emissions figure to reflect such a change in operations (see basic example in Box 1).² If acquiring a facility or company, Baxter updates its 2005 base year emissions figure to include that facility's/company's actual or estimated GHG emissions in 2005. Likewise, if divesting a specific facility or business unit, Baxter subtracts that facility's/business unit's 2005 GHG emissions from its base year total.

Such recalculations can take time to complete, depending on data availability and the extent of the change. In situations when historic GHG emissions of a recently acquired facility or company are not readily available, Baxter seeks energy use information or other proxy data to develop estimates for previous years' emissions dating back to the 2005 base year.

Baxter achieves efficiencies and ensures consistency by incorporating GHG management into broader environmental, health & safety (EH&S) processes. Regional EH&S coordinators are responsible for ensuring new facilities and business units are trained and prepared to report necessary data into Baxter's web-based EH&S information management system. Facility

² Note: the construction of a new facility or the addition of a facility built after the company's base year would not be subject to a base year adjustment, as they would reflect new emissions from organic growth.

EH&S or energy managers report energy usage and cost information monthly, facilitating centralized GHG calculations. Baxter conducts periodic reviews of reported information and data to verify accuracy.

Box 1. A hypothetical base year adjustment to reflect a recent merger.

Company A uses a base year of 2005 (when it emitted 5,000 metric tons CO₂e). Its current year emissions (4,500 metric tons CO₂e) reflects a reduction of 500 metric tons (10 percent) compared to its base year emissions.

Company A purchases Company B. Company B's emissions were 1,000 metric tons CO₂e in 2005 and are 1,200 metric tons CO₂e in the current year.

Company A adds Company B's 2005 emissions to its base year inventory, and Company B's current year emissions to its current inventory.

Adjusted 2005 base year emissions for Company A = 6,000 metric tons CO₂e

Adjusted current year emissions for Company A = 5,700 metric tons CO₂e

The updated current GHG inventory for Company A now reflects a reduction of 300 metric tons CO₂e (5 percent) compared to its adjusted base year. This example reflects the importance of considering energy use and GHG emissions in mergers and acquisitions.

Note: GHG Protocol guidelines require companies to report base year and current year emissions, but most companies choose to report emissions for all intervening years as well.

Baxter's web-based information management system uses data from utility payment services and other supporting energy invoice management systems to provide easily accessible information and documentation for corporate reporting needs (for example, reporting to U.S. EPA's Climate Leaders and the Chicago Climate Exchange). Management systems and

automation are part of the company's continuous efforts to refine its GHG accounting processes. With more than 12 years of experience in GHG inventory management, Baxter is in a good position to leverage accounting, management and reporting efficiencies in pursuit of its global 2010 and 2015 GHG emission reduction goals.

For more information about Baxter's GHG inventory management approach see: http://sustainability.baxter.com/EHS/2007_environmental_performance/emissions.html

General Electric: Managing a Dynamic Corporate GHG Inventory

General Electric (GE) is a global corporation with public GHG reduction goals and years of experience applying the GHG Protocol Corporate Accounting and Reporting Standard. GE experiences a high annual facility turnover rate among the roughly 600 large facilities that account for most of GE's total GHG emissions. Approximately 10 percent of this portfolio changes from year to year (about 50 to 60 facilities added or subtracted), driven largely by mergers, acquisitions, or divestitures.

This annual turnover makes it particularly challenging to maintain an accurate figure for base year emissions. GE recognized the importance of understanding the GHG Protocol's rules and procedures for adjusting base year emissions to plan for and accurately measure progress towards meeting its "1-30-30" GHG goals (see Box 2). To accurately measure progress towards these goals, the company had to answer two primary questions:

- What are the "triggers" or guidelines for a base year adjustment?
- How can we manage the changes most efficiently?

Box 2. GE's "1-30-30" Climate and Energy Goals

As part of GE's ecomaginationSM initiative commitment, the company established three GHG reduction targets against a 2004 base year:

- ♦ 1 percent reduction in absolute GHG emissions worldwide by 2012
- ♦ 30 percent reduction in GHG intensity (GHG emissions per dollar of revenue) by 2008
- ♦ 30 percent improvement in energy efficiency by 2012

Guidance for answering the first question comes from the *Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard*.³ GE typically experiences significant changes to its portfolio of reporting facilities. The company adjusts its 2004 base year total to include 2004 emissions from facilities acquired and exclude emissions from facilities divested over the course of the year. GE makes similar changes to ensure accurate present year and intervening year emission totals, integrating full year historic emissions (rather than prorated figures) into its corporate inventory regardless of whether acquisitions or divestitures occur mid-year.

Efficiently managing this process was a separate challenge. Early on, the company circulated email surveys to gather information about what facilities needed to be added or subtracted from the inventory. GE digitized its inventory process, replacing the slow and cumbersome survey with a

³ GHG Protocol guidance states: "it is the responsibility of the company to determine the 'significance threshold' that triggers base year emissions recalculation and to disclose it." See Chapter 5 and Appendix E of the GHG Protocol Corporate Accounting and Reporting Standard – Revised Edition at: <http://www.ghgprotocol.org/standards/corporate-standard>.

module within GenSuite[®], a proprietary, customized electronic environmental management system.

GE used GenSuite to help create standardized processes across 2,000 GE sites and streamline data gathering for reporting requirements. After completing final quality assurance procedures, GE can review changes to its portfolio and update its 2004 base year as necessary to accurately assess and report annual progress towards its GHG reduction goals.

GenSuite's GHG inventory database allows for an annual two-step inventory update process:

1. GenSuite administrators for each business unit update respective facility lists.
2. GHG inventory managers input energy use data into GenSuite.

Each year, after the annual update process is complete, GE assesses what facility additions or subtractions that year warrant inclusion in or subtraction from the 2004

base year total. For acquired facilities that were in operation in 2004, the base year is adjusted to account for those historic emissions. Emissions from new facilities that represent business growth do not merit a base year change and are counted as new emissions.

In addition to its data collection advantages, GenSuite also automates GHG calculations, produces inventory reports and documentation, and evaluates trends across different countries, facility types, or business units, among other analyses. GE has installed quality assurance and quality check measures, including numerous guidance documents and annual data review procedures, to enhance data reliability. To further ensure the accuracy of its base year inventory, GE also completed third-party verification for its 2004 GHG emissions.

For more information about GE's GHG inventory management approach see: http://www.ge.com/citizenship/performance_areas/environment_health_safety_inv.jsp