THE BOTTOM LINE ON...

Answers to frequently asked questions about climate and energy policy Issue 3

WORLD RESOURCES INSTITUTE

CORPORATE GHG INVENTORIES

Measurement is critical to effective greenhouse gas (GHG) management. As the United States moves toward a low-carbon economy, companies find it imperative that they keep track of their GHG emissions. This fact sheet answers key questions about corporate GHG inventories and how they relate to other GHG measurement initiatives.

WHY ARE CORPORATE GREENHOUSE GAS (GHG) INVENTORIES CRITICAL TO BUSINESS?

Corporate GHG inventories quantify the amount of GHGs a company emits into the atmosphere and are critical management tools for companies of all sizes and sectors. GHG inventories enable companies to identify their emission sources and track changes over time. Information presented in a GHG inventory can help inform corporate strategies and prioritize actions to reduce emissions, as well as provide benchmarks against which the success of these activities can be measured.

DO CORPORATE GHG INVENTORIES FEED IN TO NATIONAL/STATE/MUNICIPAL GHG INVENTORIES?

Corporate GHG inventories currently do not directly relate or feed in to national/state/municipal GHG inventories, which are broader efforts to estimate total net GHG emissions across a specific region. For example, the U.S. Environmental Protection Agency's *Inventory of Greenhouse Gas Emissions and Sinks* estimates the emissions from GHG 'sources' and the amount of GHGs sequestered (or removed from the atmosphere) by GHG 'sinks' across the United States over the course of a year. Because of the broader scope, national/state/municipal inventories rely on emissions proxy data, such as the amount of fossil fuel consumption, and relevant emission factors to estimate GHG emissions for entire industries or sectors rather than collecting company-specific emissions in corporate GHG inventories.

HOW ARE CORPORATE GHG INVENTORIES RELATED TO GHG REGISTRIES?

GHG registries serve as databases for GHG emissions data and use corporate GHG inventories to record and track GHG emissions from specific facilities or companies. Companies develop GHG inventories and then report GHG emissions data, as part of either voluntary or mandatory reporting programs, using the reporting protocols established by the GHG registry. GHG registries or other programs collecting corporate-level GHG data include The Climate Registry (www.theclimateregistry.org), the Carbon Disclosure Project (www.cdproject.net/) and the U.S. Environmental Protection Agency's Climate Leaders program (www.epa.gov/stateply/).

HOW DO COMPANIES DEVELOP CORPORATE GHG INVENTORIES?

Companies developing GHG inventories first establish a methodology that follows accounting standards, such as those in the GHG Protocol℠ Corporate Standard (www.ghgprotocol.org). This ensures inventories are as complete and accurate as possible and can be compared over time. Companies use this methodology to identify which facilities, operations, and sources should be included in the inventory. Next, companies collect available input data, which could include actual GHG emissions data collected from on-site monitoring devices or, more commonly, estimates based on activity data (e.g., the amount of electricity consumed) and standard emissions factors (e.g., the amount of GHGs emitted per unit of electricity consumed). Once data are collected and GHG emissions are estimated, the results are compiled, categorized, and summarized in a GHG inventory.

WHAT DO COMPANIES INCLUDE IN THEIR CORPORATE GHG EMISSIONS INVENTORY?

Companies following the GHG Protocol Corporate Standard aggregate GHG data from all owned or controlled facilities and operations at the corporate level, and classify emissions into the following categories:

- Scope 1 (required; direct GHG emissions) – emissions from sources that the company owns or controls.
- Scope 2 (required; indirect GHG emission from purchased electricity, steam, or heat) – emissions associated with the generation of electricity, steam, or heat purchased and consumed by facilities or equipment that the company owns or controls.
- Scope 3 (optional; other indirect GHG emissions) – emissions from other sources the company does not own or control. This may include waste disposal, leased/outsourced activities, or emissions such as those related to business travel and employee commuting.

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How is the GHG Protocol related to other GHG programs and tools?

The GHG Protocol Corporate Standard is the internationally-accepted accounting and reporting standard for corporate GHG inventories. The relevant ISO standard (14064-1) was based on the GHG Protocol. Several other types of programs and tools, noted below, are also based on or related to the GHG Protocol:

- GHG registries and reporting programs – The Climate Registry, a multi-state GHG registry, has established reporting protocols consistent with the GHG Protocol, as has the California Climate Action Registry, and Regional Greenhouse Gas Registry.
- Voluntary GHG reduction programs – Voluntary GHG reduction programs that require companies to report and track their emissions, such as the U.S. Environmental Protection Agency's Climate Leaders or the Chicago Climate Exchange, require that participating companies follow accounting and reporting standards that are based on GHG Protocol guidelines.
- Calculation methodologies and tools – The GHG Protocol provides a suite of tools for calculating GHG emissions from a range of generic and sector-specific sources and processes. Where applicable, these tools are based on and consistent with Intergovernmental Panel on Climate Change (IPCC) methodologies, tailored for use at the corporate level. The tools contain default emission factors from IPCC, International Energy Agency, U.S. Environmental Protection Agency and other relevant sources.

Does it cost a lot to develop a corporate GHG inventory?

Costs for developing a GHG inventory vary depending on the type and scale of the inventory, the degree to which inventory developers can draw on existing data collection systems (as opposed to implementing new ones), as well as the complexity of the methodology. Companies often can develop useful inventories on a limited budget, or with additional funds, can develop sophisticated inventories with more specific GHG data. A variety of tools are available to gather and calculate GHG emissions. For example, see the GHG Protocol's suite of publicly-available calculation tools (http://www.ghgprotocol.org/calculation-tools).

Additional References

- GHG Protocol Initiative: http://www.ghgprotocol.org/
- WRI's Climate Analysis Indicators Tool (CAIT): http://cait.wri.org/
- WRI's US Climate Policy Resources: http://www.wri.org/climate/usclimate

This series is a product of WRI's climate and business engagement projects including the Green Power Market Development Group and the U.S. Climate Business Group. Through these projects, WRI works with leading companies to pioneer low-carbon business strategies and advance markets for renewable energy.