



## Cventure Approach to GHG Inventory Development and Reporting

The first step in organization response to climate change is to understand the risks associated with core operations by conducting an inventory of greenhouse gas emissions. A well prepared GHG emission inventory can serve multiple purposes, such as providing information to retailers, customers and suppliers, benchmarking against best practices, and informing strategic decisions.

In approaching GHG development and reporting assignments we draw from the best available methods and procedures while tailoring to the needs and requirements of our clients. The general process we use to compile a GHG emission inventory is summarized below in Figure 1.

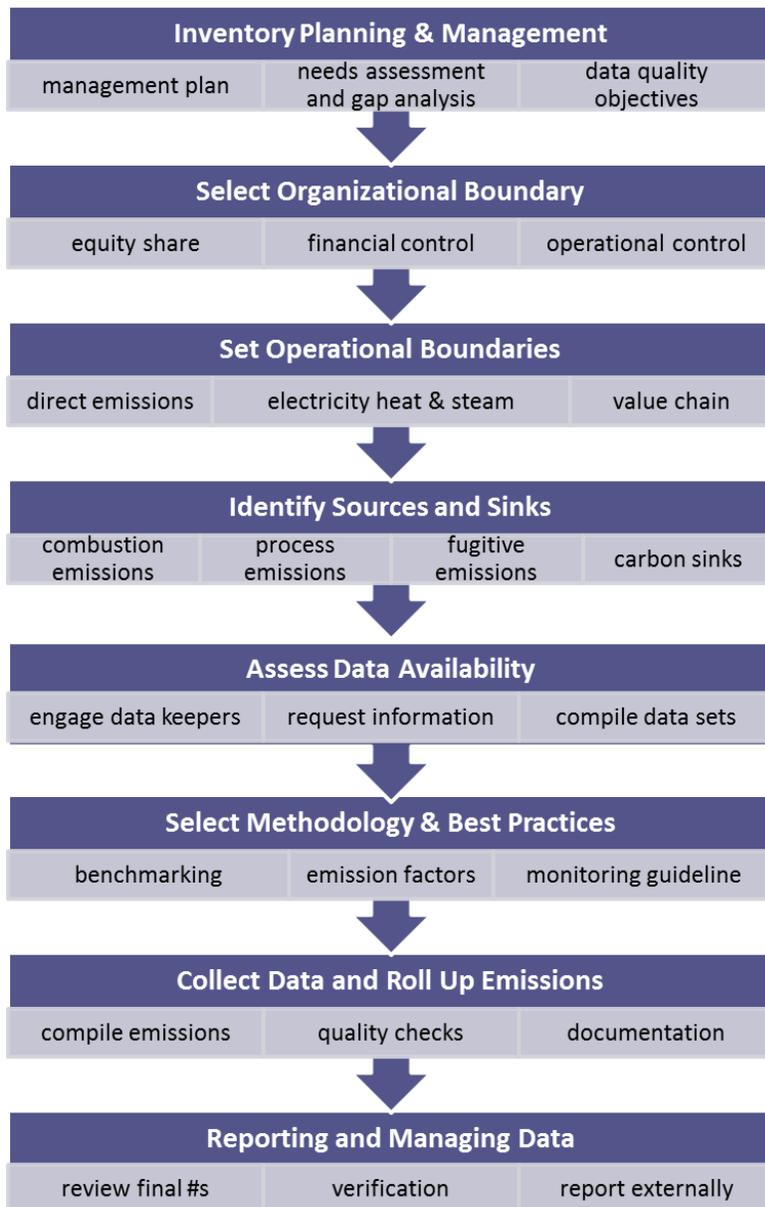


Figure 1. GHG Emission Inventory Development Path

The GHG emission inventory provides a useful tool for tracking the effects of policies and measures intended to drive emissions down. When strategies work well, there is a powerful story to tell stakeholders, but if the inventory reveals emissions growth remains unchecked, these issues can quickly lead to reputational damage and/or compliance problems.

A GHG emission inventory is an accounting of emissions from sources and removals by sinks of greenhouse gases summed over the course of a year, and within established organizational boundaries. If this is the first time such a step is undertaken, a series of questions will arise, and decisions and judgement calls must be taken.

How will the boundaries be set?  
What sources are included?  
What gasses are included?  
Who are the data keepers?  
How to deal with electricity use and renewable energy generation or purchase?  
How to handle missing records or data gaps?



## Cventure Approach to GHG Inventory Development and Reporting

When an organization brings Cventure onboard to help with the management of their GHG concerns, our first step is to understand and document management expectations and requirements. We recommend creation of a written Inventory Management Plan to guide work flow from initial launch to final delivery of products and reports. Our process is always determined by the needs, budget, and schedule constraints of our clients.

An **Inventory Management Plan** is an internal policy document that clarifies schedule and priorities, provides a high level overview of the internal process to be employed to collect, calculate, and maintain GHG data, and identifies key staff involved in GHG strategy and reporting, clarifying roles and responsibilities. When implemented, the plan will reduce long-term costs associated with data collection and GHG inventory production.

GHG emission inventory development rarely ends with a single year report. Indeed, when developed in the context of goals and targets, an emission inventory summarizes emissions over multiple years starting with a historic base year and proceeding to the most current year for which data are available. This time series data is used to track progress towards internal and external goals. Experience teaches us that with proper planning, inventory programs will improve with each annual cycle, as processes become familiar and staff gain experience with the subject matter and underlying data.

Most organizations embarked on this path implement a continuous improvement program to review and learn from the preceding work cycle, to refine work flow processes, and to improve the accuracy and completeness of their reporting.

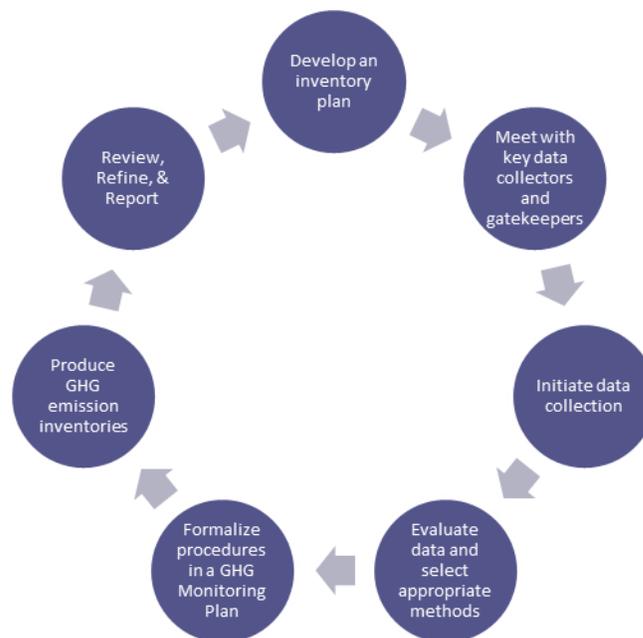


Figure 2. Emission Inventory Work Cycle



## Cventure Approach to GHG Inventory Development and Reporting

To ensure transparency in GHG reporting, a **GHG Monitoring Guideline** is often used to document the technical and methodological issues involved in the overall process and to provide details on the overall approach, equations, emission factors, and input assumptions used. A company-specific GHG Monitoring Guideline is a legal requirement of the Cap-and-Trade program of California, and is encouraged in voluntary applications as well, to ensure transparency and better prepare for third party review and verification. A detailed, technical GHG Monitoring Guideline establishes and documents an institutionalized process in a manner that minimizes disruptions caused by employee turnover and loss of expertise in the team, ensures the credibility of the inventory disclosed to auditors and stakeholders, and will maximize the transparency, accuracy, and consistency of the effort over time.

A GHG Monitoring Guideline addresses the data systems where primary data is archived and stored, describes in detail the sources of GHG emissions (as well as removals by sinks), describes the methodologies and assumptions used in the generation of the inventory, documents emission factors, fuel characteristics, and characterizes technologies and equipment involved in GHG emissions, and details many technical considerations such as recalculations due to mergers and acquisitions, boundary selection, calibration procedures for measurement devices, quality assurance/quality control practices, and procedures to be used for data gap filling. This often leads to identification of areas for improvement and opportunities for improving efficiency over time.

Prior to finalizing the results and contents of an emission inventory report, organizations should determine if the reporting program has released a 'scoring methodology.' A scoring methodology provides very important information on how the submission will be graded and scored – these should be carefully considered to maximize the benefits of public reporting.

The final step in the cycle of work is to submit all materials required for reporting under the appropriate standard or program. In addition to the submittal of a written report, many programs require completion of specific numeric data tables or benchmarks summarizing key metrics and disclosures. These should be produced in an integrated fashion with the rest of the inventory and should be double checked to ensure consistency with the finished product.