

# Greenhouse Gas Accounting Introduction

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These pages present a generic step-by-step guide to the processes of greenhouse gas accounting tuned to the normal needs of federal agencies. Agency inventories are complicated by a number of factors:

- The GHG inventory process is new to the federal government and few individuals within the federal government have direct experience with this process.
- Federal operations are subject to many regulations and other considerations that complicate the process or that require special training and permissions for various steps in the process.
- Many federal agencies collect relevant data using diverse systems and for disparate purposes so that the required data may be widely disbursed and difficult to access. In some cases, access may require special permissions or the data may be mixed with other data for which access is limited.

For all of these reasons and others, the federal GHG inventory process will require care and diligence. This is further complicated by the short time period and limited resources agencies will have to complete the first GHG inventory. We hope that this step-by-step guide will facilitate the effort and simplify the process. As with any general guide to a complex subject, not all nuances can be covered here. You are encouraged to reach out to the DOE Federal Energy Management Program and refer to other resources on the FedCenter<sup>1</sup> web site for additional support to understand this process.

This guide covers the following topics:

- Organization of the effort
- Departmental level actions
- Actions of the Senior Sustainability Officer
- Actions of the Greenhouse Gas Lead(s)
- Actions of the data collectors

This guide does not discuss issues related to GHG mitigation – the effort to reduce GHG emissions. Agencies have set GHG mitigation targets and those targets are percentage reductions relative to base year GHG emissions values that will be reported through a GHG inventory process such as the one described here.

Most large organizations will have a hierarchical approach to their GHG inventory and the number of people involved may range up to thousands since information from each of thousands of facilities may be required to complete the inventory. We describe below typical organizational structures for this effort.

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<sup>1</sup> [www.fedcenter.gov/programs/greenhouse/](http://www.fedcenter.gov/programs/greenhouse/)

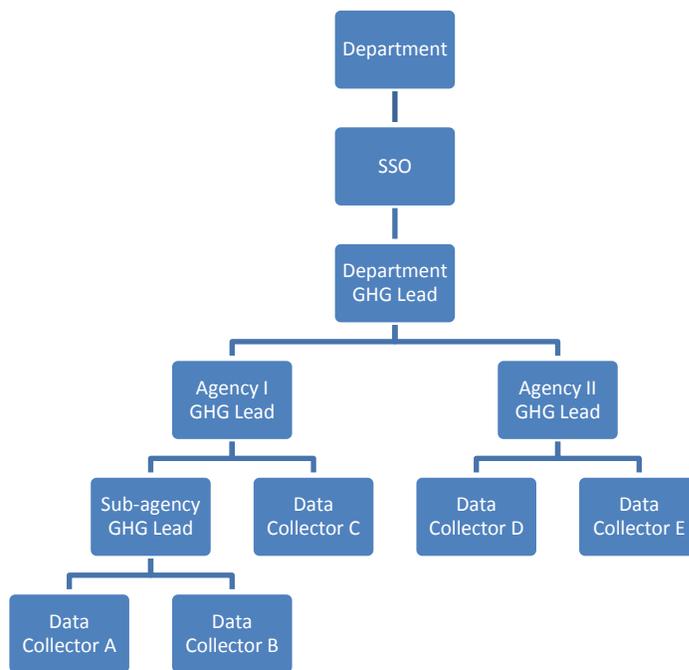
### Organization of GHG reporting effort

Executive Order (EO) 13514 makes each Department responsible to report FY2010 GHG emissions to CEQ via the FEMP reporting tool. Departments must also report their FY2008 base year GHG emissions. Both of these reports are due by the end of January 2011.

Although the responsibility lies at the Departmental level, EO13514 requires each Department to designate a Senior Sustainability Officer (SSO) who has primary responsibility for these reports. Each Department has already designated an SSO, so the steps listed below for Departments are included simply for completeness.

For most Departments, execution of the GHG inventory and reporting is beyond the direct efforts of the SSO and will involve scores, hundreds or even more staff. Responsibilities at each level must be clear and lines of communication must be known so that the process is completed efficiently. Below (Figure 1), we identify a typical structure Departments could use to organize the effort. Figure 2 shows some parts of this structure for one example, the Department of Commerce.

**Figure 1. Typical organization of Department GHG reporting effort.**

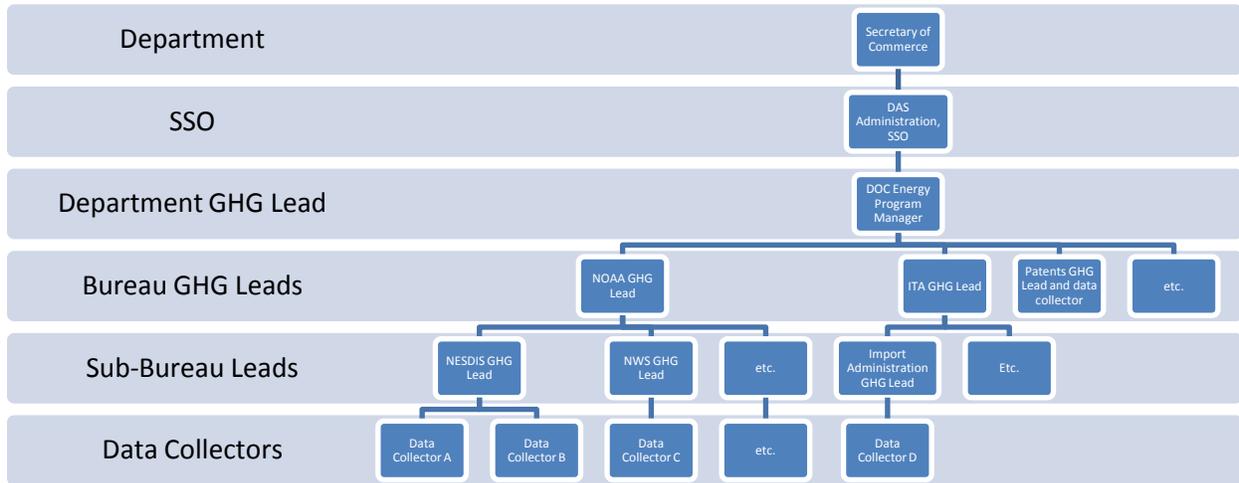


The Department of Commerce is comprised of 12 bureaus including BEA, NTIS, NOAA, Patent and Trademark, and ITA, among others. Each bureau will have a GHG lead and some of the larger bureaus will have sub-bureau level GHG leads.

An early effort on the part of the SSO will be to designate a lead individual who is responsible for developing the Departmental GHG inventory. That person will develop the detailed process for the Department and identify all POCs for the next level of organization within the

Department. Each of those POCs in turn must identify their reporting contacts at the next lower level and the process continues until those who actually collect, analyze and report the information are known throughout the Department.

**Figure 2. Specific organization of GHG reporting effort within the Department of Commerce (partial example).**



Additional efforts are needed from each of these designated GHG leads and data collectors and key efforts are listed below under the appropriate heading.

### Department Actions

1. Identify SSO
2. Convey SSO assignment to CEQ
3. Notify CEQ of changes in SSO status

### SSO Actions

Although the responsibility to produce a GHG inventory lies at the Departmental level, [EO13514](#) requires each Department to [designate](#) a Senior Sustainability Officer (SSO) who has primary responsibility for GHG inventory reports.

The SSO may chose to delegate many of the actions listed below. The SSO is ultimately responsible for these actions so we list them here to provide guidance on steps that are likely to be needed. This may provide some insight for others on the team ([GHG Leads](#) and [GHG Data Collectors](#)) about the actions the SSO must assure while leading the overall effort.

1. Develop agency-wide [Strategic Sustainability Performance Plan](#) (SSPP)
2. Disseminate agency-wide [SSPP](#)

3. Review [draft Guidance and Technical Support Document](#)
4. Provide [comments](#) to CEQ on draft Guidance and Technical Support documents
5. Review final [Guidance and Technical Support Document](#)
6. Determine the need for sub-agency guidance vs. use of [CEQ Guidance](#)
7. Develop guidance for sub-agency and or site-specific sustainability plans
8. Identify budget needs and resources, convey to GHG Lead
9. Identify staffing requirements
10. Obtain budget authority
11. Secure staff and assign responsibilities
12. Integrate/combine current data management systems/processes/calls when feasible
13. Approve IMP
14. Approve tools to be used for GHG inventory
15. Notify GHG Lead and agency leads of requirements for tool use
16. Monitor GHG inventory process with regular team updates
17. Take note of any [CEQ-announced changes in Guidance and TSD](#) and disseminate accordingly
18. Review and approve GHG inventory
19. Submit GHG report to [FEMP reporting tool](#)

### Actions for GHG Lead

*These steps may apply at every level of leadership involvement below the GHG lead*

We use the term GHG Lead to identify the person within any level of the organization who has delegated responsibility to organize, execute and oversee production of the GHG inventory. There may be a GHG Lead at the level of the Department who works directly under the SSO. Within each bureau (or other high-level organization within the Department) there may be a GHG Lead who is responsible for the GHG inventory of that bureau. Below the bureau level there may be other GHG leads who report to the bureau GHG lead, and so forth.

1. Review final [Guidance and Technical Support Document](#)
2. Establish organizational boundaries
3. Identify key agency participants and staffing needs (subordinate GHG leads and data collectors)
4. Identify data sources and POCs for these data
5. Ensure POC's for data collection are assigned to task
6. Identify any special challenges with data collection and take action to address
7. Review [draft FEMP GHG Reporting Workbooks](#)
8. Review and understand [final FEMP GHG reporting workbook](#) and online reporting tool
9. Identify tools agency will use (e.g. EPA Portfolio Manager, etc.)
10. Integrate EMS and [SSPP](#) or site-specific plans into IMP
11. Prepare Draft IMP
12. Finalize IMP for your level in the Department (after [final guidance and TSD](#) issued by CEQ and considering agency [SSPP](#) or HQ directives)
13. Distribute and brief approved IMP to key agency participants
14. Develop protocols for data collection (e.g. sources, contacts, frequency, security, quality, storage, updates, review, responsible parties)

15. Release all data calls and data collection tools
16. Work with agency leads to determine training needs (e.g. tools, IMP, target population, etc.)
17. Determine which training should be centralized and which the sub-agencies should provide
18. Access [FEMP training opportunities](#)
19. Obtain approval to administer training (unions, management, legal, HR, vendors, etc.)
20. Develop centralized training (as needed)
21. Provide centralized training (as needed)
22. Monitor progress
23. Update IMP as needed
24. Provide continuing support
25. Compile data as received
26. Define pre-submission quality checks to be performed
27. Perform pre-submission quality checks of data
28. Correct data as needed and possible
29. Submit compiled, checked and corrected data to SSO (or supervisor)
30. Define post-submission quality checks to be performed
31. Perform post-submission quality checks of data
32. Correct data as needed and possible
33. Document any changes/corrections required in next submission

### **Actions for those directly compiling the GHG inventory (data collection/analysis)**

Supporting the effort of the Department to complete the GHG inventory there may be many individuals with direct access to, and knowledge of, the various and disparate sources of data that must be accessed to calculate emissions. These individuals may have no direct background in GHG inventories and may maintain databases originally designed for quite different applications.

1. Review [final Guidance and Technical Support Document](#)
2. Review IMP and identify your responsibilities
3. Obtain training as assigned by your supervisor
4. Receive data calls from supervisor
5. Access relevant data sources
6. Enter constant data if/as needed (e.g. building data in [EPA Portfolio Manager](#), if it is to be used)
7. Maintain data and metadata records
8. Respond to requests for data and metadata
9. Identify data gaps and data quality problems
10. Obtain missing data and correct data quality where possible
11. Alert supervisor to unresolved data gaps
12. Summarize data for input to agency GHG inventory tool(s)
13. Enter building energy data in [EPA Portfolio Manager](#) (if it is to be used, and according to agency protocols)

14. Enter activity data in the designated agency GHG inventory tool (e.g. web, spreadsheet, form, etc.)
15. Perform quality checks specified in IMP
16. Correct data as required and document corrections
17. Transmit data to supervisor
18. Notify supervisor when you have completed data input
19. Revise methods in response to changes in IMP
20. Document problems and report to supervisor