Executive Order 13514 Section 13: *Recommendations for Vendor and Contractor Emissions*

General Services Administration

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Preface

On October 5, 2009, the President of the United States signed Executive Order (EO) 13514 calling on Federal agencies to "establish an integrated strategy towards sustainability in the Federal Government and to make reduction of greenhouse gas emissions a priority for federal agencies." Among other initiatives, the EO requires agencies to set baselines and targets for their scope 1, 2, and 3 greenhouse gas (GHG) emissions. Scope 3 emissions are emissions from indirect sources related to agency activities, including supply chain emissions. Section 13 of the EO specifically directs the General Services Administration (GSA), in coordination with other key agencies, to assess the feasibility of working with the Federal supplier community (comprised of vendors and contractors that serve federal agencies) to measure and reduce supply chain GHG emissions, while encouraging sustainable supplier operations.

GSA formed and led a cross-agency working group (Section 13 Working Group) to address the feasibility questions outlined in Section 13. Membership included representatives from GSA and the Department of Defense (DOD), Environmental Protection Agency (EPA), Department of Energy (DOE), Department of the Interior (DOI), Small Business Administration (SBA), and National Aeronautics and Space Administration (NASA). The Working Group addressed the feasibility questions raised in Section 13 in a series of meetings where members provided expertise and experience from their agencies' programs and procurement activities. GSA paired the Working Group meetings with additional research activities including interviews with experts, industry, and other Federal Government representatives.

This report is a feasibility assessment addressing the requirements of Section 13. The recommendations presented are based on research into current industry and Government practices, as well as thought leadership on the topic of the use of contractor and vendor GHG emissions inventories in the Federal acquisition system. GHG emissions tracking, especially when extended into the supply chain, is an emerging field, and the standards and processes for completing GHG emissions inventories, as well as the use of GHG emissions data in procurements, are adapting to advancements made by Government, academia, and industry. GSA made every effort to be comprehensive in its research, but recognizes that, as organizations adapt to new requirements, new standards and practices will emerge. For this reason, any approach towards using supplier disclosed GHG emissions data in the Federal acquisition system must include the flexibility to adapt to emerging practices.

GSA concluded that it is feasible, if employing the recommended phased approach, for the Federal Government to track and reduce its scope 3 supply chain emissions through coordination with suppliers and other stakeholders. The reporting of scope 3 supply chain emissions is an emerging field, and all stakeholders will need time and resources to adjust to a steep learning curve. Adopting a phased approach should allow the Government to incorporate leading practices as they develop. The recommended mechanism for achieving scope 3 supply chain emissions tracking is based on existing requirements for agencies to measure and set reduction goals for scope 3 GHG emissions. Specifically including supply chain emissions in agency scope 3 inventories should provide the incentive for agencies to track supplier emissions and possibly use emissions information in procurement decisions.

This report presents GSA's conclusions regarding the feasibility questions posed in Section 13 of EO 13514. The key findings are included as Chapter 2 of this report. The detailed feasibility assessment upon which the key findings are based can be found in Chapter 3. This report also contains a recommended approach for implementing the feasibility findings in Chapter 4. Lastly, Chapter 5 explores the broader topic of sustainability in procurement.

GSA would like to thank the Section 13 Working Group as well as the numerous Federal, industry, and academic experts that contributed to the development of these recommendations.

Chapter 1
Introduction

1.1 Executive Order 13514 Background

Executive Order (EO) 13514, signed by President Barack Obama on October 5, 2009, represents a new level of Federal effort in operating sustainably. It builds on previous Executive Orders (e.g., EO 13423) and legislation (e.g., Energy Independence and Security Act of 2007 and the Energy Policy Act of 2005), as well as an increased public understanding of sustainability issues, to require a new level of commitment within the Federal sector to issues of the sustainability of Federal programs and operations.

1.1.1 Overview of the EO Requirements

The overarching goal of EO 13514 is to encourage sustainable operations in Federal agencies. The Order addresses multiple aspects of Federal operations, including supply chains, vehicle fleets, buildings, energy use, and product management. The specific goals within the Order are intended to lead agencies to implement sustainable operations. Agencies must create strategic sustainability performance plans, complete with decisions based on lifecycle return on investment. These plans must include greenhouse gas (GHG) reporting and reduction goals and outline the agency's processes for the effective implementation of EO 13514. Agencies must establish a 2020 goal for reducing scope 1 and 2 emissions and a separate goal for reducing scope 3 emissions, which include supply chain emissions (as described in more detail below). EO 13514 also requires agencies to appoint Senior Sustainability Officers who are accountable for successful implementation of the EO.

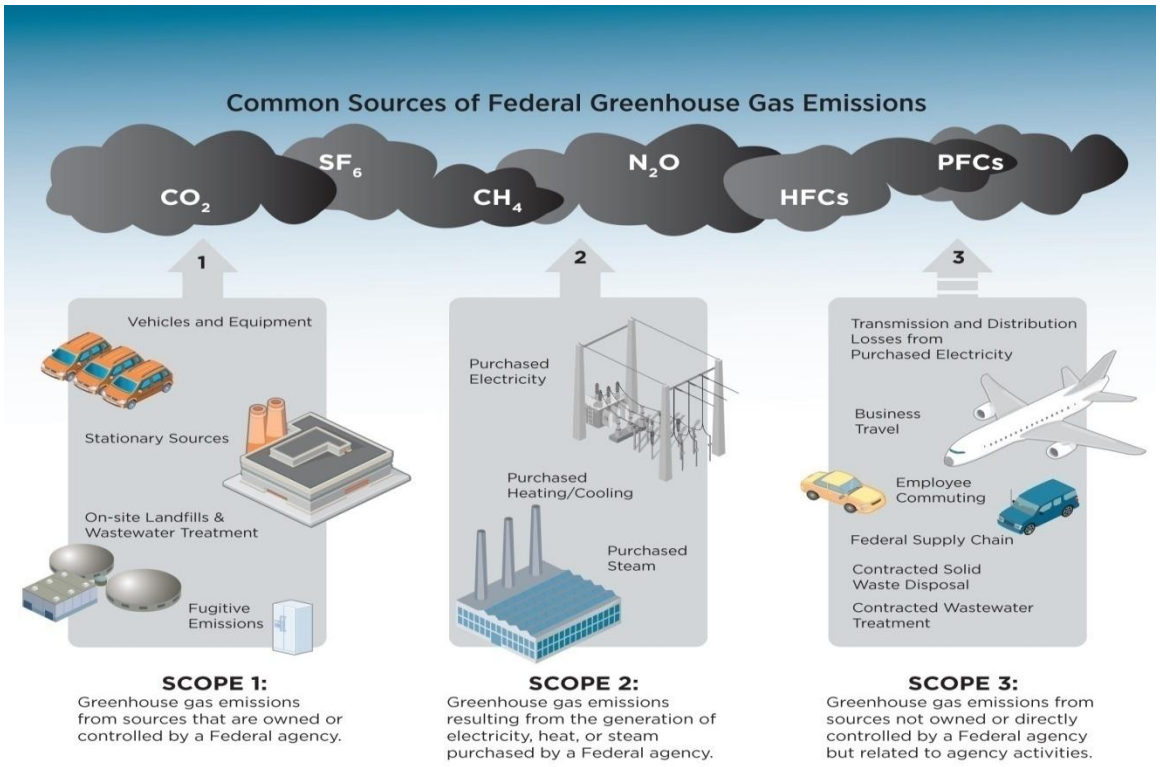
1.1.2 GHG Emissions Scopes

GHG emissions are divided into three "scopes" for management purposes. EO 13514 (as well as most GHG-related standards) applies these scope definitions to parse an organization's emissions. For that reason, it is useful to review the definition of the GHG emissions scopes to ensure a common understanding of the EO requirements.

Figure 1-1 shows the primary elements of GHG emissions from agency operations and the six major gases covered by EO 13514. The emissions elements are characterized as scope 1, 2, or 3, [1] depending on the source of the emission. Emissions from supplier operations (excluding energy supply) are part of agency scope 3 and are the subject of Section 13 of EO 13514. The emissions scopes are defined here from a Federal agency perspective; however, the same definitions can apply to any organization's GHG emissions.

[1] Pankaj Bhatia and Janet Ranganathan, *The Greenhouse Gas Protocol: A corporate accounting and reporting standard* (revised edition), World Business Council for Sustainable Development (WBCSD), March 2004.

Figure 1-1 Scope 1, 2 and 3 Emissions



Source: EO 13514 Section 9 Working Group.

Note: EO 13514 does not include the term "cooling" in its definition of scope 2. Emissions associated with cooling are included in reporting outlined in the guidance for implementing the EO.

Note: HFC = hydrofluorocarbon; PFC = perfluorocarbon.

1.1.2.1 Direct Emissions: Scope 1

Scope 1 emissions result primarily from the following types of activities:

- *Generation of electricity, heat, cooling, or steam*: Emissions that result from the combustion of fuels in stationary sources (e.g., boilers, furnaces, turbines, and emergency generators); include CH_4 and N_2O emissions from biomass combusted for production of electricity, heat, cooling, or steam.

- *Mobile sources*: Emissions that result from the combustion of fuels in agency-controlled mobile combustion sources (e.g., automobiles, ships, and aircraft), including Federal fleet vehicles, such as GSA-leased, commercially leased, and agency-owned vehicles; include CH_4 and N_2O emissions from biofuel combustion.

- *Fugitive emissions*: Emissions that result from intentional or unintentional releases of GHGs from within the agency's organizational boundary (e.g., equipment leaks from joints, seals, packing, and gaskets; landfills and wastewater treatment plants; HFC emissions from the use of refrigeration and air conditioning equipment; methane

leaks from gas transport; SF_6 emissions from leaking electrical equipment; and CH_4 emissions from coal mines and venting).

- *Process emissions*: Emissions that result from the manufacturing or processing of chemicals and materials, and from laboratory activities.

1.1.2.2 Indirect Emissions: Scope 2

Scope 2 emissions are a consequence of activities that take place within the organizational boundaries of the reporting agency, but physically occur at the facility where the electricity, steam, heating, or cooling is generated. Agencies must report all scope 2 emissions in their base year and subsequent annual GHG inventories.

1.1.2.3 Other Emissions: Scope 3

Scope 3 is a reporting category that allows for the accounting of all other indirect emissions not included in scope 2. Scope 3 emissions are a consequence of the activities of the organization, but come from sources outside of the organizational boundary. Examples of scope 3 emissions include those from the agency supply chain, employee business travel, contracted waste disposal, and employee commuter travel.

1.1.3 Section 13

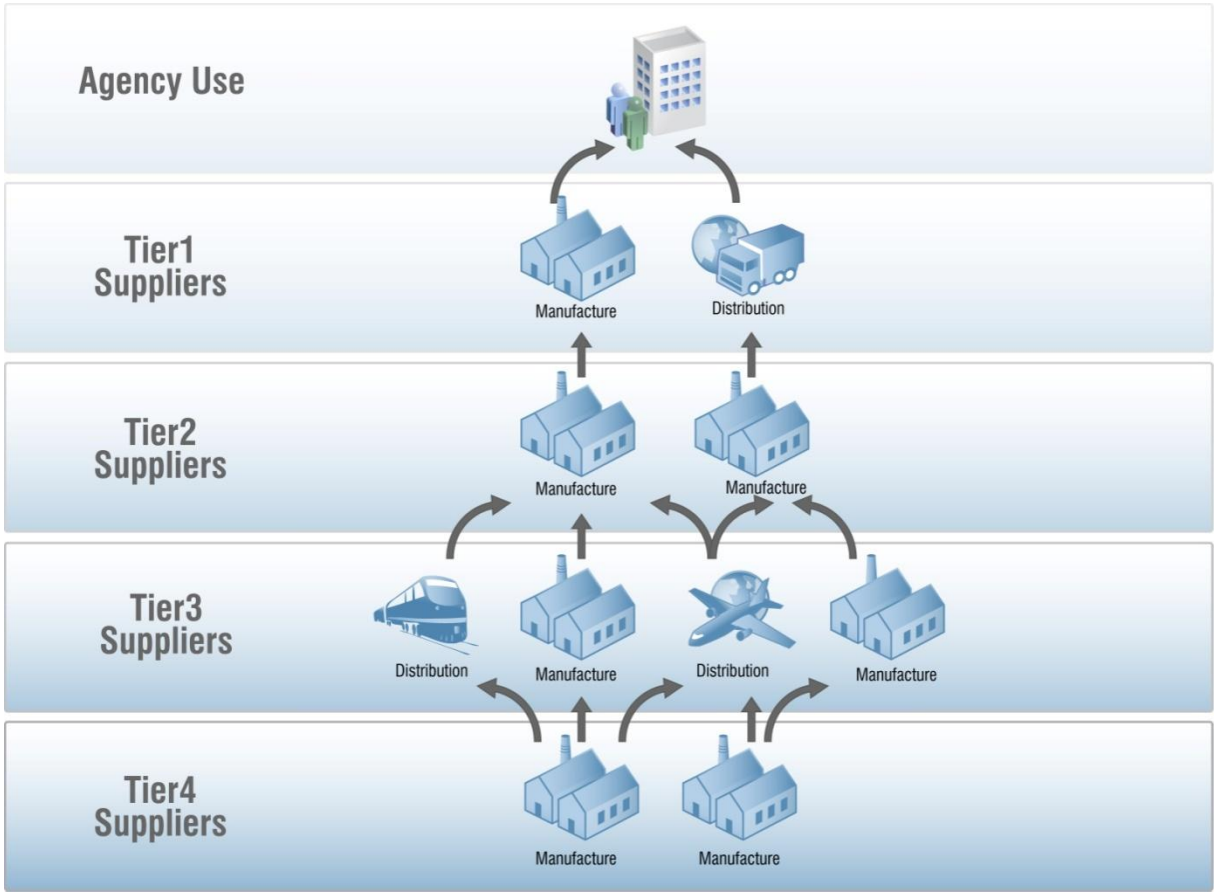
Section 13 of EO 13514 (shown below) requires the General Services Administration (GSA), in coordination with the Department of Defense (DOD), Environmental Protection Agency (EPA), and other key agencies to provide to the Council on Environmental Quality (CEQ) and Office of Federal Procurement Policy (OFPP) recommendations regarding the feasibility of tracking and reducing GHG emissions from the Federal supply chain and improving supplier sustainability. This effort focuses on the mechanisms the Government can apply to manage supplier and supply chain sustainability.

> Executive Order 13514 October 5, 2009
>
> Section 13. *Recommendations for Vendor and Contractor Emissions*.
>
> Within 180 days of the date of this order, the General Services Administration, in coordination with the Department of Defense, the Environmental Protection Agency, and other agencies as appropriate, shall review and provide recommendations to the CEQ Chair and the Administrator of OMB's Office of Federal Procurement Policy regarding the feasibility of working with the Federal vendor and contractor community to provide information that will assist Federal agencies in tracking and reducing scope 3 greenhouse gas emissions related to the supply of products and services to the government. These recommendations should consider the potential impacts on the procurement process, and the Federal vendor and contractor community, including small businesses and other socioeconomic procurement programs. Recommendations should also explore the feasibility of
>
> (a) requiring vendors and contractors to register with a voluntary registry or organization for reporting greenhouse gas emissions;
>
> (b) requiring contractors, as part of a new or revised registration under the Central Contractor Registration or other tracking system, to develop and make available its greenhouse gas inventory and description of efforts to mitigate greenhouse gas emissions;
>
> (c) using Federal Government purchasing preferences or other incentives for products manufactured using processes that minimize greenhouse gas emissions; and
>
> (d) other options for encouraging sustainable practices and reducing greenhouse gas emissions.

1.1.4 Supply Chain and Procurement

Supply chains consist of organizations that produce, handle, and process material or services as well as information related to orders and contracts.[2] For the purpose of this feasibility assessment, the definition of "supply chain" focuses on suppliers of goods and services to the Federal Government. To a large extent, the ability to optimize the supply chain depends on relationships among the organizations within the supply chain. Most organizations describe their relationship with suppliers in terms of supplier tiers, as shown in Figure 1-2.

Figure 1-2. Notional Supply Chain



Tier 1 suppliers supply goods or services directly to an agency.[3] In most cases, an agency has a contract with tier 1 suppliers. Tier 2 suppliers directly supply the tier 1 suppliers,[4] tier 3 suppliers directly supply tier 2 suppliers, and so on. Some organizations, including Government agencies, have contractual relationships with tier 2 suppliers or beyond, but, in most cases, there is not a direct relationship with suppliers beyond tier 1.

[2] Council of Supply Chain Management Professionals, http://cscmp.org/aboutcscmp/definitions.asp, accessed March 18, 2010.

[3] *Financial Times* Lexicon, http://lexicon.ft.com/term.asp?t=first_tier-supplier, accessed March 18, 2010.

[4] See Footnote 3.

References to procurement, supply chain, contracting, or acquisition in this report refer to contracts of executive branch agencies for the procurement of goods or services for which the United States (U.S.) Federal Government is acting in the role of buyer. Procurement is only one of several forms of contracting in which the Government engages. Other types of Government contractual arrangements include sales of personal property, grants, employment contracts, real property transactions, and cooperative agreements. While the principles and recommendations in this report may be applicable to procurement and non-procurement transactions, this report does not cover the precise application of the recommendations to non-procurement transactions.

From a legal perspective, Government procurement can be considered a form of administrative law, with an overlay of contract law. The procurement of goods and services by the U.S. Government is a unique activity that is governed by a web of specialized rules, regulations, statutes, and policies outside of the realm of commercial contract law. These rules arise out of the nature of the Government as a contracting party and the distinctive forms and procedures used in the procurement process. The rules governing this process are contained in statutes, regulations, and decisions, many of which are designed to protect the public's interest and assure fair treatment of companies that enter contracts with the Government.[5] Most of these rules apply to all agencies, but some are specific to a certain agency.

Government procurement, or "acquisition" as it is called in the Federal Acquisition Regulation (FAR), involves contracting for goods and services.

> An executive agency shall use a procurement contract as the legal instrument reflecting a relationship between the United States Government and State, a local government, or other recipient when
>
> (1) the principal purpose of the instrument is to acquire (by purchase, lease, or barter) property or services for the direct benefit or use of the United States Government; or (2) the agency decides in a specific instance that the use of a procurement contract is appropriate.[6]

The FAR defines "acquisition" as:

> acquiring by contract with appropriated funds of supplies or services (including construction) by and for the use of the Federal Government through purchase or lease.[7]

"Supplies" is defined by the FAR as:

> …all property except land or interest in land. It includes (but is not limited to) public works, buildings, and facilities; ships, floating equipment, and vessels of every character, type, and description, together with parts and accessories; aircraft and aircraft parts, accessories, and equipment; machine tools; and the alteration or installation of any of the foregoing.[8]

[5] John Cibinic, Jr. and Ralph C. Nash, Jr., *Formation of Government Contracts*, 3d ed., 1, The George Washington University (1998).

[6] 31 U.S.C. § 6303 (2010).

[7] 48 C.F.R. § 2.101 (2010).

[8] See Footnote 7.

This definition is expansive and somewhat counterintuitive in application. For example, contracts for the construction of buildings are not supply contracts, but "construction" of ships are supply contracts.[9]

"Services" is defined by the FAR as:

> …a contract that directly engages the time and effort of a contractor whose primary purpose is to perform an identifiable task rather than to furnish an end item of supply.[10]

The definitions cited are provided as examples of the complexity involved in the U.S. Federal procurement system. In addition to the cited definitions, all executive branch agencies with major procurement functions issue supplementary regulations to implement the FAR. The recommendations presented in this report are intended to apply to all procurement contracts covered by the FAR.

The Federal Government is engaged in a series of strategic sourcing initiatives to optimize the supply chain for specific commodities. "Strategic sourcing is the *collaborative* and *structured* process of critically analyzing an organization's spending and using this information to make business decisions about acquiring commodities and services more effectively and efficiently."[11] As this implies, strategic sourcing is not about getting the best price on an individual purchase, but instead focuses on forming a relationship with a small group of key tier 1 suppliers to reduce the total cost of procurement and ownership for a commodity group. The concept of total cost of procurement and ownership can include elements outside of cost, such as GHG emissions. It is important to note that the efficiency goals of the Federal strategic sourcing initiative are not absolutes because the Federal procurement system is used to accomplish other policy goals, such as enabling small businesses and promoting sustainability.

1.2 Managing GHG Emissions in the Federal Government

The operations of the U.S. Government include offices, production facilities, laboratories, medical centers, transportation services, construction operations, law enforcement, and other activities. All of these activities directly or indirectly generate GHG emissions. In addition, GHG emissions are generated in the production and distribution of the products and services used for these operations.

To reduce the GHG emissions generated by the Government and its suppliers, an overarching approach should be used to measure and track these emissions. EO 13514 establishes an emissions-tracking approach by requiring agencies to develop GHG inventories of their operations and to set reduction targets for those emissions. As agencies establish these management programs, they should identify ways to reduce their GHG emissions.

For scope 3 supply chain emissions from the supplier community, the Government has the challenge of tracking emissions from external supplier operations. Agencies would not procure products by focusing only on low GHG emissions profiles; price and technical performance must

[9] 48 C.F.R. § 36 (2010).

[10] 48 C.F.R. § 37.101 (2010).

[11] Memorandum from Clay Johnson, III, Deputy Director for Management, Office of Management and Budget, May 20, 2005.

be considered in procurement. With the Government's purchasing power, any action it takes to reduce emissions from commercial suppliers will have an effect on the way industry operates.

Government supply chain GHG emissions tracking should be done in partnership with the supplier community to reduce any duplication of effort across agencies and industry and to leverage existing GHG emissions programs. Any Government GHG emissions tracking approach should strive to minimize the burden placed on industry—especially small and disadvantaged businesses and other socioeconomic groups—while facilitating measurable scope 3 supply chain emissions reductions. Most importantly, reporting of scope 3 emissions should be done with the recognition that it is an emerging management concept, and any initiative should be flexible enough to work with changing practices.

1.3 Guiding Principles

GSA held to a set of five core principles when determining the feasibility of working with the Federal suppliers to provide information that will assist Federal agencies in tracking and reducing scope 3 GHG emissions related to the supply of products and services to the Government.[12]

- *Ease of use*. Strive to be easily understood and used by both suppliers and agencies, keeping in mind that most users are not experts in sustainability.
- *Transparency*. Ensure the data and goals are clearly understood and available to key stakeholders while protecting sensitive supplier and agency information.
- *Parity*. Do not favor a specific industry sector, company, or region.
- *Realizing Federal GHG reductions*. Foster effective improvements to assist Federal agencies in tracking and reducing scope 3 GHG emissions related to the supply of products and services to the Government.
- *Leveraging existing systems and mechanisms*. Utilize existing applicable systems and mechanisms to the greatest extent possible.

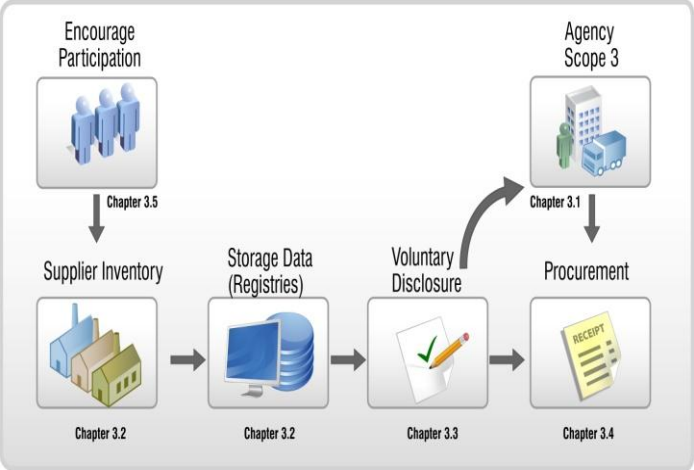
These principles ensure the path forward takes into consideration the goals of the Administration, as well as GSA's goal to bring about Government-wide GHG reductions, with low barriers of entry for suppliers and the acquisition workforce.

[12] Additional sustainability factors are discussed in Chapter 5, "Encouraging Sustainability in the Federal Procurement Process."

1.4 Federal Supply Chain GHG Emissions Management Approach

Section 13 of EO 13514 tasks GSA, in coordination with other key agencies, to review the feasibility of capturing and tracking supplier GHG emissions to support agency GHG emissions inventories and reduction plans. The feasibility assessment must address the ability of the Federal Government to identify, track, and reduce relevant scope 3 emissions. This feasibility assessment considers the actions required for agencies to obtain the necessary information to track their scope 3 supply chain GHG emissions. Those actions are shown in Figure 1-3.

Figure 1-3. Proposed Agency Scope 3 Supply Chain GHG Emissions Management Process



1.4.1 Agency Scope 3

Section 9 of EO 13514 requires the Department of Energy (DOE) to develop recommendations for Federal GHG accounting and reporting so that agencies can carry out their EO 13514 obligations, including their scope 3 reduction goals.[13] Section 13, the subject of this report, involves assessing the feasibility of Federal suppliers voluntarily disclosing GHG emissions data to support agency scope 3 inventories (supply chain emissions are one component of scope 3).[14] The agency scope 3 action describes the agencies' process for using the voluntarily disclosed supplier GHG emissions data to facilitate agency scope 3 inventories.

1.4.2 Supplier Inventory

For suppliers to voluntarily disclose GHG emissions data that is at a level of reliability to be used as part of agency scope 3 inventories or the Federal procurement process, suppliers need a Government-approved method for conducting their GHG emissions inventories. This action describes the standards that guide how suppliers conduct their GHG emissions inventories and the processes for verifying those inventories.

1.4.3 Store Data (Registries)

This action describes the methods for storing supplier GHG emissions inventories to ensure needed information is available to the Federal Government.

1.4.4 Voluntary Disclosure

For the Government to use suppliers' GHG emissions inventories, that information must be voluntarily disclosed by the suppliers. This action describes the processes and tools necessary to facilitate suppliers' voluntary disclosure of their GHG emissions information.

[13] "Executive Order 13514 of October 5, 2009: Federal Leadership in Environmental, Energy, and Economic Performance." *Federal Register* 74 (8 October 2009): 52117–52127. Print.

[14] See Footnote 13.

1.4.5 Procurement

It is possible to use GHG emissions as a source selection evaluation factor or as an environmental procurement preference in the Federal procurement process. This action describes the processes necessary to allow the use of GHG emissions in contract award decisions, including the possible impact on the acquisition workforce.

1.4.6 Encourage Participation

This action describes efforts the Federal Government can undertake to encourage suppliers to collect and voluntarily disclose their GHG emissions information with the Government.

Chapter 2
Key Findings

GSA addressed the requirements of Section 13 and arrived at the following key findings. These findings are based on the desire to provide incentives for suppliers to participate rather than placing requirements on the supplier community. They also seek to minimize any associated burden on suppliers and the acquisition workforce. GSA prefers this approach because participation and coordination with the supplier community has resulted, in productive and meaningful results. Chapter 3 presents the basis for these findings in detail.

2.1 Working with Federal Suppliers to Provide Information for Tracking and Reducing Scope 3 Supply Chain GHG Emissions

It is feasible for Federal agencies to work with their suppliers to voluntarily disclose the information necessary for tracking and reducing agency scope 3 supply chain GHG emissions. A growing number of companies are calculating their own GHG inventories and collecting some elements of GHG emissions data from their suppliers. Although it is feasible for suppliers to voluntarily disclose emissions data, it is important to understand that this is an emerging business field, and many suppliers currently do not collect emissions inventory data. Therefore, voluntary disclosure of emissions from the entire supplier base should be implemented in a phased approach according to supplier and agency capabilities.

2.1.1 Impacts on the Procurement Process

The act of suppliers voluntarily disclosing their emissions inventories should not have a direct impact on the procurement process, but the use of that information to support contract award decisions may have an impact. As agencies strive to reduce their scope 3 supply chain emissions, one of the most influential tools they could use is the procurement process; however, the process is already complex and has a significant workload. The acquisition workforce should be trained to use GHG emissions data fairly and effectively during procurements before any mandatory rule is implemented. In addition, changes to the FAR may be necessary to require supplier emissions data be used in the procurement process.

2.1.2 Impacts on the Vendor and Contractor Community

Some companies are currently collecting and voluntarily disclosing their GHG inventories, but a significant portion of the Federal supplier base needs to learn how to accurately calculate their emissions inventory. This education should include calculating scope 3 emissions, which is an immature GHG emissions area with standards just now being developed. Using a phased approach that considers the need for suppliers to learn how to collect GHG data and develop inventories makes this a feasible undertaking. This phased approach should also include outreach and coordination with key industry groups. In addition, suppliers who disclose their GHG emissions can gain a competitive advantage not only with their Federal customers, but also with their commercial customers and the public, who are increasingly seeking “greener” companies when making procurement decisions.

2.1.3 Impacts on Small Business and Other Socioeconomic Programs

In addition to the challenges facing all suppliers, small businesses do not necessarily have the resources to complete full, third party–verified emissions inventories. By using a phased approach, implementing outreach programs targeted to small business, and leveraging existing streamlined reporting tools that small businesses can use, the Government can ease the burden on this supplier group while still collecting meaningful GHG emissions data. It is equally important to note that small businesses may have operations that are not as complex as their larger counterparts; therefore, small businesses may find it easier to calculate their GHG inventories.

2.2 Requiring Suppliers to Use a Voluntary Registry for Disclosing Their GHG Emissions

It is feasible to have suppliers report to a voluntary registry, but it is not necessary. As long as suppliers make their emissions information available to the Government, the storage location of that information is not important. Ultimately, emissions information disclosed to the Government should be calculated using an acceptable standard and then verified. Voluntary registries offer significant value in terms of inventory calculation assistance and data management to the supplier community; however, that value does not clearly translate to equal value for the Government.

2.3 Requiring Suppliers to Provide Their GHG Inventory and Describe Their GHG Mitigation Efforts

It is feasible to have suppliers make their GHG emissions inventory available to the Government and voluntarily disclose emissions data upon request. Using the Central Contractor Registration (CCR) to collect GHG emissions data from suppliers is technically feasible but not preferred, and other systems may be better suited for this role. Although there is value in obtaining a description from suppliers of their mitigation efforts to reduce agency GHG emissions and it is feasible to ask for that information, other concerns need to be addressed, including whether the descriptions will be treated as confidential business information and what the trade-offs will be in the procurement process.

2.4 Using Federal Government Purchasing Preferences for Low GHG Products

GSA was unable to find an existing federally accepted product standard or label for GHG emissions. It is technically feasible to use Government purchasing preferences for low GHG suppliers and products much the same way purchasing preferences are employed for other programs, like socioeconomic business and green product preferences. However, until accepted product GHG emissions product standards are available, procurement preferences cannot be employed effectively at the product level. The Government should define criteria for identifying reliable and equitable GHG emission product standards, labels, systems, and processes that can be used in the procurement process. As soon as sufficient numbers of suppliers are voluntarily disclosing their GHG emissions with agencies, corporate-level supplier GHG emissions should be used as an evaluation factor until an accepted product-level GHG emissions standard is available to support a procurement evaluation factor.

2.5 Options for Encouraging Sustainable Practices

The Federal Government has several feasible and available options for encouraging sustainable practices from suppliers. These include outreach programs, such as EPA's Climate Leaders, and incentive programs, such as the established award and recognition programs; however, to apply these programs to the entire supplier base will require an increase in time and resources. A Government-wide communication plan should be developed to guide outreach and incentive programs associated with supplier GHG emissions.

2.6 Recommended Path Forward

Many of these feasibility findings are contingent upon the results of further exploration and the use of a phased implementation approach. Under this phased approach, the Government could begin using data provided by suppliers as early as fiscal year (FY) 2011. This phased approach should be guided by a dedicated program management office (PMO).

The most significant incentive for Federal suppliers to submit GHG inventory data is the desire to remain competitive in the Federal marketplace. Section 9 of EO 13514 requires Federal agencies to track components of scope 3 GHG emissions and set reduction targets. It is anticipated that this will naturally lead agencies to look for opportunities to reduce the emissions from their supply chains. With agencies looking for reduction opportunities, suppliers will want to add low GHG emissions as part of their value statement.

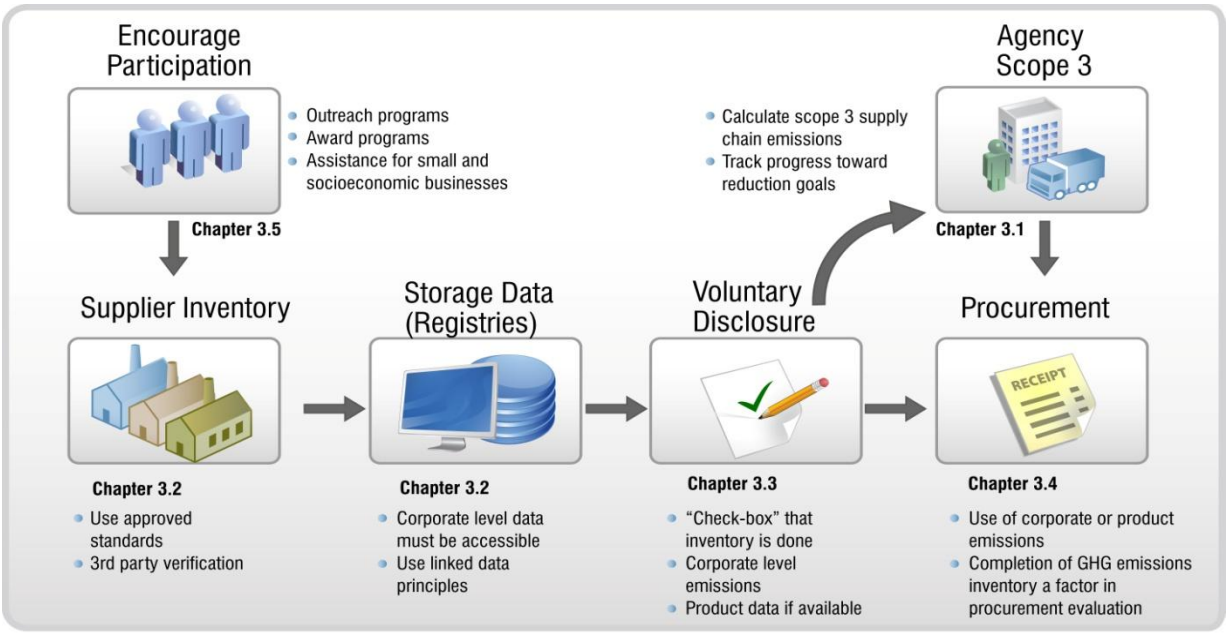
Chapter 3
Feasibility Assessment

This chapter outlines the arguments and supporting research behind GSA's feasibility conclusions, as requested by Section 13 of the EO 13514.

The feasibility assessments are based on a review of current industry and Government practices regarding the reporting of GHG emissions. They also reflect our knowledge of the activities of Federal agencies, international governments, and standard-making bodies in the areas of GHG emissions inventories, "green" procurement practices, and supply chain management. The fields of GHG emissions reporting (especially scope 3 emissions) and sustainable supply chain management are still emerging, and the data gathering processes associated with these two fields are complex and imperfect. While GSA benefited from the extraordinary insights, expertise, and thinking provided by representatives from numerous agencies, industry partners, and academics, GSA is aware that certain components of the feasibility arguments would benefit from additional research and review. Therefore, special care has been taken to identify those specific areas, as best as possible.

The feasibility assessments in this chapter address each feasibility question within Section 13, as shown in Figure 3-1. In answering each feasibility question, current trends, opportunities, challenges, and areas that require further exploration are outlined. By highlighting areas for further exploration, questions are identified that were beyond the expertise of GSA or the time allotted to conduct this assessment. Some of the areas identified as needing further exploration may only require a review, while others may require significant additional research.

Figure 3-1 EO 13514 Section 13 Feasibility Scope



3.1 Working with the Contractor Community to Provide Information

> Executive Order 13514 October 5, 2009
> …the feasibility of working with the Federal vendor and contractor community to provide information that will assist Federal agencies in tracking and reducing scope 3 greenhouse gas emissions related to the supply of products and services to the Government. These recommendations should consider the potential impacts on the procurement process, and the Federal vendor and contractor community, including small businesses and other socioeconomic procurement programs…

Working with the contractor community to provide supply chain GHG emissions information for use by Federal agencies is feasible.

3.1.1 Current Trends

Increasingly, companies are linking the sustainability of their products and operations to the sustainability of the products and operations of their supplier base. One reason for this is companies are recognizing that supply chain GHG emissions account for 20 to 75 percent[15] of an organization's total GHG emissions, depending on the particular industry.

GHG emissions are predominantly a byproduct of a company's energy usage. For service sectors, energy to power data centers is a corporation's largest source of GHG emissions.[16] By reducing GHG emissions, an organization can also reduce the energy costs associated with the production, transportation, and storage phases of its supply chain.[17] Companies that have had early success in managing sustainability across their supply chain have also seen a reduction in costs, an improvement in their supplier relationships, and other organizational improvements.

Companies that track and report their GHG emissions tend to focus on scope 1 and 2 emissions, not scope 3; but it is within scope 3 that companies account for their supply chain emissions (i.e., the emissions of their suppliers). The reason most oft cited for not tracking and reporting scope 3 supply chain emissions is the inherent complexity of the process. Today, only a small percentage of companies track their suppliers' emissions. For example, one voluntary registry, the Carbon Disclosure Project (CDP), has 2,500 organizations in some 60 countries measuring and disclosing their GHG emissions and climate change strategies, yet only 44 of those organizations participate in the CDP Supply Chain Program. In its *Supply Chain Report 2010*, CDP cites that "only a small number of companies have extensive knowledge about the availability of green products for their major spend categories," and most members do not currently have the tools they need to track their suppliers' emissions.[18]

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[15] Y. Anny Huang and others, *Categorization of Scope 3 Emissions for Streamlined Enterprise Carbon Footprinting*, Presentation to LCA9 Conference, October 1, 2009.

[16] William Forrest, James M. Kaplan, and Noah Kindler, "Data centers: How to cut carbon emissions and costs." *McKinsey Quarterly* 14, (Winter 2008): 4–13.

[17] Ram Nidumolu, C.K. Prahalad, and M.R. Rangaswami, "Why Sustainability is Now the Key Driver of Innovation," *Harvard Business Review* (September 2009).

[18] Carbon Disclosure Project, *Supply Chain Report 2010*, ii, https://www.cdproject.net/CDPResults/CDP-Supply-Chain-Report_2010.pdf.

Gathering the GHG emissions from a supply chain includes the following steps:

- Determine the business goal for seeking supply chain GHG emissions data.
- Map the value chain to identify the supply chain suppliers, customer, inputs, and activities.
- Set the boundary for which scope 3 emissions to include.
- Collect and evaluate data.
- Seek assurance reviews to verify the data.
- Report the data.[19]

In a survey of more than 300 companies, the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) found that companies experience many challenges when they analyze supply chain or product lifecycle emissions. The findings of that report prompted WBCSD/WRI to develop a scope 3 standard. While some challenges will be alleviated by this standard, others may persist because of the complexity of supply chains.

The following are among the enduring challenges:

- Difficulty defining the boundaries of accounting, especially in complex ownership or shared activity systems.
- Correctly allocating the emissions from the supplier to a product or activity.
- Budgeting the time and cost required to apply accounting methodologies.
- Difficulty obtaining data because of confidentiality concerns, outsourced manufacturing, and other circumstances.[20]

While it is feasible to work with suppliers to voluntarily disclose GHG emissions, supplier disclosure of scope 3 emissions may entail a considerable expenditure of their resources. Supplier disclosure of scope 3 emissions may be even more difficult without an agreed upon scope 3 supply chain reporting standard, such as what is currently under development by the WRI.

Even though capturing supplier emissions is difficult, companies are recognizing the benefits of doing so. For example, Wal-Mart announced a partnership with the CDP in September 2007 to measure Wal-Mart's supply chain energy use and emissions. The project began with less than 10 U.S.-based supplier sectors (such as DVDs, milk, and vacuum cleaners), but it is expanding to other sectors. In the Supplier Energy Efficiency Project (SEEP), Wal-Mart oversees energy

[19] World Resources Institute and World Business Council for Sustainable Development, *Scope 3 Accounting and Reporting Standard Executive Summary Review Draft,* November 2009.

[20] World Resources Institute and World Business Council for Sustainable Development, *Supply Chain and Life Cycle Survey Results,* May 2008, http://www.ghgprotocol.org/files/survey-summary.pdf (accessed March 16, 2010).

audits and retrofits its suppliers' factories. In its first year, Wal-Mart's global supply chain cut 3,300 metric tons of GHG emissions and saved suppliers $200,000 in energy costs.[21] In the United Kingdom, for example, ASDA, a wholly owned Wal-Mart subsidiary, worked with suppliers to map the carbon in their products and make reductions.[22]

In addition to GHG emissions reductions, Wal-Mart is planning to track overall supplier sustainability. The company plans to have suppliers rate their products based on sustainability criteria, collect data on product lifecycles, and develop a transparent sustainability index. The goal is to support sustainable consumption.[23]

Other companies are viewing their supply chain GHG emissions as a component of their strategic risk management strategy. The Securities and Exchange Commission (SEC) recently required publicly traded companies to start reporting climate change risks in their annual financial reports.[24] By identifying the areas within their supply chain with the greatest GHG emissions, companies can mitigate related business risks, such as regulatory changes or the physical effects of climate change. This allows the company to actively reduce its business risks and protect shareholder interests.

With GHG emissions reporting by companies still a nascent trend, for GSA to determine the feasibility of working with the supplier community to voluntarily disclose supply chain GHG emissions information for use by Federal agencies, the process components needed to be reviewed in more detail:

- What data will be collected?
- What suppliers will be included?
- What incentives are in place for suppliers?

To answer these questions, the trends of how companies are addressing each of these process components were reviewed.

[21] Wal-Mart Corporate, *Greenhouse Gas Elimination: Fact Sheet*, February 25, 2010, http://walmartstores.com/Sustainability/8141.aspx (accessed March 16, 2010).

[22] Wal-Mart, *Wal-Mart 2009 Global Sustainability Report*, p. 38, http://walmartstores.com/sites/sustainabilityreport/2009/index.html (accessed March 16, 2010).

[23] Maurice Berns and others, "The Business of Sustainability," *MIT Sloan Management Review*, 2009, p. 28.

[24] U.S. Securities and Exchange Commission, *SEC Issues Interpretive Guidance on Disclosure Related to Business or Legal Development Regarding Climate Change*, January 27, 2010, http://www.sec.gov/news/press/2010/2010-15.htm.

3.1.1.1 What Data Will Be Collected?

A key element of any sustainability program is the definition of the data that will be used to assess sustainable performance. Existing programs use anything from qualitative information, such as what can be reported in the CDP survey,[25] to multidimensional sustainability indexes, like those used by Wal-Mart[26] and Timberland.[27] Deciding on the most appropriate data to collect depends, in some part, on the goals of the organization.

Timberland developed its Green Index® to meet two goals: to compare the effects of different design choices and to inform customers so they can make sustainable purchases. To meet these goals, Timberland collects quantitative information to calculate a single product score, which is based on the production GHG emissions, presence of hazardous chemicals, and resource consumption.[28]

Alternatively, CDP's supply chain goals are to determine the organization's carbon emissions and identify "climate change risks and opportunities." CDP's questionnaire supports this goal by asking qualitative questions about the organization's operations and strategy to reduce its carbon footprint.[29] The following are sample questions asked by CDP:

- "Do you have a current emissions reduction target?"
- "Where is the highest level of responsibility for climate change within your company?"
- "What are the current or anticipated significant risks and opportunities and their associated countries/regions and timescales?"[30]

GSA identified two general approaches to supply chain GHG emissions reporting: corporate-level and product-level. Each approach appears to have its own advantages, can serve different purposes, and requires the use of different data. The corporate-level approach involves calculating the overall GHG emissions generated by an organization's operations. Agencies could calculate their scope 3 emissions from corporate-level data by capturing and aggregating corporate-level

[25] Although qualitative information can be reported in the CDP survey, CDP and its stakeholders strongly encourage companies to report quantitative GHG emissions data as well as reduction methods.

[26] Wal-Mart Corporate, *Sustainability Index*, http://walmartstores.com/Sustainability/9292.aspx (accessed March 2, 2010).

[27] Timberland, "Introducing the Green Index® Rating," *About Timberland: CSR Environmental Stewardship*, http://www.timberland.com/corp/index.jsp?page=csr_green_index (accessed March 2, 2010).

[28] Timberland, "The Green Index Rating in Detail," *About Timberland: CSR Environmental Stewardship*, http://www.timberland.com/corp/index.jsp?page=csr_green_index (accessed March 16, 2010).

[29] CDP, *CDP Supply Chain*, https://www.cdproject.net/en-US/Programmes/Pages/CDP-Supply-Chain.aspx (accessed March 16, 2010).

[30] CDP, *Carbon Disclosure Project 2010 Supplier Information Request*, https://www.cdproject.net/CDP%20Questionaire%20Documents/CDP2010_Supplier_Information_Request.pdf (accessed March 16, 2010).

emissions data from tier 1 suppliers. A limitation to using corporate-level data is it does not yield the detail necessary to make specific supply chain decisions for a given product.[31]

The product-level approach calculates the GHG emissions associated with producing and distributing an individual product. Agencies could calculate their scope 3 emissions from product-level data by aggregating GHG emissions data for every product purchased by the organization. This approach provides the information necessary to optimize the supply chain for a given product, but its usefulness is currently limited for Federal agency application because agencies procure a significant number of services. A parallel "service-level" approach would be needed to capture emissions associated with services provided by suppliers.

After comparing the approaches, there is a preference for the corporate-level approach for calculating agency scope 3 supply chain emissions. The five guiding principles utilized by the Section 13 Working Group assisted the discussions regarding which approach would be best suited to provide supplier GHG emissions data to Federal agencies as quickly as possible.[32]

A corporate-level approach is currently the best approach to facilitate the Government's understanding of the GHG emissions associated with its supply chains. Although a product-level approach may ultimately be the better approach, especially since it provides agencies with the data they need to optimize their supply chains by product, there are significant challenges in utilizing the product-level approach at this time. While advances in capturing product-level GHG emissions are ongoing, there are limits to the number of products for which this data is currently available. In addition, there is the question of how to go about capturing the GHG emissions associated with the services the Government procures.

The members of the Section 13 Working Group were not aware of any currently available standards for calculating service-level emissions. At this time, agency scope 3 emissions from service companies can be captured using only the corporate-level approach.

Emissions to Report

Section 13 clearly focuses on tracking GHG emissions from suppliers; EO 13514 limits GHGs to the Kyoto 6 gases.[33] It is feasible to require suppliers to report emissions from the Kyoto 6 gases; however, the Government should phase in this requirement to account for currently nascent supplier reporting capabilities. A recent study of supply chain emissions tracking found that 51 percent of suppliers responded to requests for information and, of those, 63 percent are reporting scope 1 and 2 emissions data.[34] The most common data currently reported by organizations is the

[31] Specific agency scope 3 calculation methods, including allocation of supplier emissions to agency purchases, should be developed jointly between the Section 9 and Section 13 Working Groups, as described in Chapter 4 of this report.

[32] See page 7 for a detailed description of the five guiding principles.

[33] The Kyoto 6 gases are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF_6).

[34] CDP, *Supply Chain Report 2010* (2010), 4.

Kyoto 6 gas emissions, in accordance with most reporting protocols, such as the GHG Protocol Corporate Standard[35] and The Climate Registry General Reporting Protocol.[36]

In a recent GHG registry survey, almost half of the companies reporting their emissions have set reduction targets for GHG emissions. Trends indicate that companies that report their emissions tend to work toward emissions reductions once they have a baseline. Almost 70 percent of the companies surveyed expected cost savings to be the primary driver for reducing GHG emissions.[37] As companies track the performance of their supply chain and areas of inefficiencies become clear, they usually take steps to address those inefficiencies.[38] Therefore, as companies identify and address their supply chain inefficiencies, the Federal Government will see a reduction in its scope 3 supply chain GHG emissions simply by tracking the GHG emissions from its suppliers.[39]

Suppliers will need to voluntarily disclose their aggregate corporate-level GHG emissions inventory data, not the fully detailed data used to calculate their inventory. However, if top-level aggregated GHG emissions data is used as part of procurement, companies should expect the detailed GHG emissions inventory data will need to be available for audit purposes.

Reporting Scope

Scope 1 and 2 inventories are typically used to measure corporate or organizational GHG emissions; that is, the emissions under the direct control of the organization. Suppliers should begin by voluntarily disclosing their scope 1 and 2 GHG emissions, and the Federal Government should define the period after which it will encourage suppliers to voluntarily disclose scope 3 GHG emissions. Ultimately, it is important for suppliers to disclose their scope 3 GHG emissions.

There is a need for suppliers to voluntarily disclose scope 3 (supply chain and other indirect) GHG emissions data because of the possible parity challenge associated with suppliers reporting only scope 1 (direct) and 2 (energy-related) emissions.[40] If an agency, focusing only on scope 1 and 2 emissions, were to use corporate-level GHG emissions data to decide on the purchase of a product, the corporate-level emissions of a product reseller could appear artificially lower than that of the original equipment manufacturer (OEM) of the same product. This is because the emissions associated with manufacturing would be captured in the OEM's scope 1 and 2 emissions report, but not in the reseller's scope 1 and 2 emissions. The manufacturing-related emissions would appear in the reseller's scope 3 emissions. Ultimately suppliers should voluntarily disclose scope 1, 2, *and* 3 emissions so that parity between different tiers of suppliers does not become an issue. This requires addressing the question of how far down the supply chain suppliers should be expected to gather and voluntarily disclose their scope 3 GHG emissions data. This issue warrants further review. As mentioned

[35] Pankaj Bhatia and Janet Ranganathan, *The Greenhouse Gas Protocol: A corporate accounting and reporting standard* (revised edition) (World Business Council for Sustainable Development, March 2004).

[36] The Climate Registry, *General Reporting Protocol*, Version 1.1 (May 2008), 12.

[37] The Climate Registry, *Annual Member Survey Results*, March 2010.

[38] Brad Kenney, "The 'What, Why, How and When' of Carbon Footprinting," *Industry Week* (May 2008): 48–55, http://www.industryweek.com/articles/the_what_why_how_and_when_of_carbon_footprinting_16138.aspx?Page=4?ShowAll=1, accessed March 18, 2010.

[39] See Footnote 34.

[40] For a more thorough description of scope 1, 2, and 3 emissions, please refer to Chapter 1, section 1.1.2.

previously, reporting scope 3 can entail considerable investment of resources, which is why suppliers should initially focus on scope 1 and 2 reporting, and then phase in scope 3 reporting at a later date.

As more organizations begin reporting GHG emissions and the availability of data improves along the supply chain, it is expected that more suppliers will be able to report scope 3 supply chain GHG emissions data.

Protecting Confidential Business Information

Of specific concern to the supplier community is the ability of the Federal Government to protect GHG emissions data that is considered confidential business information (CBI).[41] Today, the Federal Government has rules in place to protect procurement-sensitive information. It is feasible to extend protections afforded to procurement-sensitive data to GHG emissions data that may be used as part of the procurement process. Comparatively, under the Mandatory Greenhouse Gas Reporting Rule, EPA

> …will protect any information claimed as confidential business information (CBI) in accordance with regulations in 40 CFR [Code of Federal Regulations] Part 2, subpart B. However, in general, emissions data collected under CAA [Clean Air Act] sections 114 and 208 cannot be considered CBI. EPA intends to undertake a notice and comment process to establish those data elements that are "emissions data" and therefore will not be afforded the protections of CBI.[42]

It is uncertain whether supplier GHG emissions data that is submitted during the procurement process in response to a solicitation can be protected as procurement-sensitive.

There is also a concern that, because obtaining scope 3 supply chain GHG emissions data necessitates the disclosure of business data between companies, the reporting of scope 3 emissions could have unanticipated competitive consequences. In addition, companies that operate internationally or have foreign suppliers may encounter trade regulation issues due to the sharing of GHG emissions information. These issues warrant further review.

3.1.1.2 What Suppliers Will Be Included?

It is feasible for all Federal suppliers to ultimately voluntarily disclose and track their scope 1, 2, and 3 GHG emissions; however, this must be a phased initiative to account for suppliers' current capability to accurately report all three scopes of GHG emissions data and the Government's capability to use portions of that data as part of the procurement process.

Consider the fact that the Federal Government has a significant number of suppliers. CCR currently has almost 600,000 companies registered to do business with the Federal Government.[43] The reporting capabilities of these Government suppliers vary, and, as already noted, the supplier base is just beginning to accurately report GHG emissions data. At the same

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[41] National Association of Manufacturers, "Comments on the proposed rule for Mandatory Reporting of Greenhouse Gases [74 *Federal Register* 16448 (April 10, 2009)]," submitted to the EPA on June 9, 2009, 7.

[42] EPA, "Rule Implementation—How will confidential business information be handled?," *Frequently Asked Questions: Mandatory Reporting of Greenhouse Gases Rule*, http://www.epa.gov/climatechange/emissions/ghg_faq.html#confidential (accessed 15 March 2010).

[43] Central Contractor Registration, https://www.bpn.gov/ccr/default.aspx (accessed March 30, 2010).

time, the Government has not yet identified a data collection system that suppliers can use to voluntarily disclose relevant GHG emissions data for use in the Federal procurement process.

3.1.1.3 What Incentives Are in Place for Suppliers?

Incentives are a key component in encouraging suppliers to conduct an inventory of their GHG emissions and then voluntarily disclose corporate-level aggregate GHG emissions inventory data to the Federal Government. Recent research indicates companies find that there are significant cost savings realized when they work to optimize their supply chains.

> We've been studying the sustainability initiatives of 30 large corporations for some time. Our research shows that sustainability is a mother lode of organizational and technological innovations that yield both bottom-line and top-line returns. Becoming environmentally-friendly lowers costs because companies end up reducing the inputs they use. In addition, the process generates additional revenues from better products or enables companies to create new businesses.[44]

Cisco is a prime example of a company that generated additional revenue by optimizing its supply chain; Cisco even built a new, highly profitable business unit to maximize its profits.

> Cisco, for example, had traditionally regarded the used equipment it received as scrap and recycled it at a cost of $8 million a year. Four years ago it tried to find uses for the equipment, mainly because 80% of the returns were in working condition. A value-recovery team at Cisco identified internal customers that included its customer service organization, which supports warranty claims and service contracts, and the labs that provide technical support, training, and product demonstrations. In 2005 Cisco designated the recycling group as a business unit, set clear objectives for it, and drew up a notional P&L [profit and loss] account. As a result, the reuse of equipment rose from 5% in 2004 to 45% in 2008, and Cisco's recycling costs fell by 40%. The unit has become a profit center that contributed $100 million to Cisco's bottom line in 2008.[45]

Investments in sustainable companies are also growing at a rapid pace. A 2007 United Nations Environment Program report illustrated that "investment in sustainable energy worldwide has more than doubled in…2 years, from $27.5 billion in 2004 to $49.6 billion in 2005 and $70.9 billion in 2006."[46]

Beyond the incentive of reducing costs and increasing profits through supply chain management, Government incentives for suppliers can range from recognition programs to no-cost procurement evaluation factors. (Chapter 3, section 3.5, of this report addresses the use of recognition and outreach-oriented incentives.)

The most significant incentive for a Federal supplier to voluntarily disclose elements of its GHG emissions inventory data is the desire to remain competitive in the Federal marketplace.

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[44] Ram Nidumolu, C.K. Prahalad, and M.R. Rangaswami. "Why Sustainability Is Now the Key Driver of Innovation." *Harvard Business Review OnPoint,* Spring 2010, 79–86.

[45] See Footnote 44.

[46] Chris Greenwood and others, *Global Trends in Sustainable Energy Investment 2007* (United Nations Environment Programme and New Energy Finance Ltd., 2007). http://sefi.unep.org/fileadmin/media/sefi/docs/publications/GlobalTrends07.Dataset.pdf (accessed March 25, 2010).

Under Section 9 of EO 13514, Federal agencies are required to track certain scope 3 GHG emissions and, under Section 2 of EO 13514, to set overall scope 3 reduction targets. Agencies can leverage industries' trend of reducing supply chain inefficiencies and associated costs as part of the agencies' scope 3 GHG emissions reduction strategies. With agencies looking for ways to reduce their GHG emissions, suppliers will look for opportunities to help agencies reduce those emissions.

3.1.1.4 Specific Impacts

Section 13 of EO 13514 tasks GSA to consider the impact in three specific areas when asking suppliers to report GHG inventory data: impact to suppliers, impact to small businesses, and impact to the procurement process.

Impact to Suppliers

While there is a growing trend of companies completing and reporting GHG emission inventories, suppliers should be afforded the opportunity to phase in GHG emissions reporting, especially as it pertains to scope 3 emissions. Implementing vendor outreach programs to encourage GHG emissions reporting will increase suppliers' capability. In addition, many trade organizations have outreach programs to build a reporting capacity across their industry.

A large portion of any outreach and support should be focused on the first 2 years of a supplier reporting its GHG emissions. Companies that have completed emissions inventories report the first year of conducting an emissions inventory requires the most effort because they needed to locate the required data and learn the inventory calculation processes. Subsequent annual inventories benefit from the processes and procedures put in place during previous inventories.[47]

There are added positive impacts for suppliers that disclose their GHG emissions. Suppliers can gain a competitive advantage with not only their Federal customers, but also with their commercial customers and the public, who are increasingly seeking "greener" companies when making procurement decisions. Customers are increasingly "demanding information on what's in everything you sell them, where it comes from, and how it's made."[48]

Because of the changing customer landscape, companies are altering the "way they think about products, technologies, processes, and business models. The key to progress, particularly in times of economic crisis, is innovation. Just as some internet [*sic*] companies survived the bust in 2000 to challenge incumbents, so, too, will sustainable corporations emerge from today's recession to upset the status quo."[49] Suppliers that voluntarily disclose their GHG emissions can gain a lasting competitive edge.

Impact on Small Businesses

According to a small business round table hosted by the Small Business Administration's (SBA's) Office of Advocacy in January 2010, there can be a disproportionate cost (when compared to corporate revenue) for small businesses to collect, calculate, and report GHG

[47] Interview with The Climate Registry, March 3, 2010.

[48] Daniel C. Etsy and Andrew S. Winston, *Green to Gold*, (Hoboken: John Wiley and Sons, Inc., 2009).

[49] See Footnote 44 on p. 21.

emissions inventories, especially scope 3 supply chain GHG emissions inventories. Although the recommended approach helps minimize the negative impact, small businesses that decide to participate may need support in developing their GHG emissions inventory. Federal agencies will need to promote specific small business outreach programs and consider additional targeted programs to help small businesses build a reporting capability.

While small businesses will need support in building an emissions reporting capability, the public and private markets have shown they can provide this support at a reduced cost to small businesses. The Climate Registry's annual membership fee for commercial organizations with revenue under $20 million is $600; the fee for non-profit organizations with revenue under $20 million is $450.[50] Another registry, the Chicago Climate Exchange, bases its membership fees on annual emissions: $25,000 (250,000–500,000 mts) to $50,000 (greater than 1 million mts) for the first year of annual dues.[51] A third global registry, the Global Reporting Initiative, sets fees on a sliding scale based on annual turnover: €100 (turnover below €1 million) to €10,000 (turnover of €1 billion and above).[52]

The Government can minimize the burden on small businesses by providing a phased timeline for the supplier base to complete and report its GHG emissions inventories. The small business community may find the process of identifying GHG emissions in their supply chains results in recognizing and addressing business inefficiencies. In addition, the Government can leverage its buying power to negotiate lower fees charged by reporting registries and provide GHG emissions inventory tools and training at no cost to small business suppliers.

While some small businesses will need assistance from a resource perspective, as previously mentioned, companies that have completed emissions inventories reported that the first year of conducting an emissions inventory requires the most effort because they needed to locate the required data and learn the inventory calculation processes. Small businesses typically have less complex operations than their larger counterparts, and therefore small businesses may find it easier to calculate their GHG inventories. Small businesses can also "be more nimble than their larger competitors" and "can move quickly to take advantage of changing circumstances."[53]

Impact on the Procurement Process

Using GHG emissions data in procurement decisions will require the acquisition workforce to understand how to use this data to conduct a fair procurement competition. Today's acquisition workforce already faces a complex business process and significant workload.[54] The Federal Government will need to extend training and other relevant support to the acquisition workforce

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[50] The Climate Registry, *Membership Options*, http://www.theclimateregistry.org/how-to-join/membership-options/ (accessed March 16, 2010).

[51] Chicago Climate Exchange, CCX Registry Participant Membership, p. 2, http://www.chicagoclimatex.com/membership/pdf/CCXRegistryPartMembership10.1.09.pdf (accessed March 16, 2010).

[52] Global Reporting Initiative, *Join GRI/OS*, http://www.globalreporting.org/AboutGRI/JoinGRI/ (accessed March 16, 2010).

[53] See Footnote 48 on p. 22.

[54] *Acquisition Workforce Development Strategic Plan, Fiscal Years 2010-2014, A Framework for Enhancing the Capacity and Capability of the Acquisition Workforce* (October 2009), http://www.whitehouse.gov/omb/procurement_index_workforce/ (accessed Mar. 30, 2010).

in order to effectively and fairly use GHG emissions data in Federal procurement decision-making. Contracting officers will require clear guidance and decision rules for interpreting and using these data in procurement actions.

Federal online purchasing systems, such as GSA Advantage! and DOD Electronic Mall (EMALL), may need to be modified to accept, and then provide to agency customers, supplier GHG emissions data. Such systems may need to highlight low GHG emissions products. GSA Advantage! already has the Green Aisle catalog to guide buyers to environmentally preferred products and DOD EMALL uses a distinctive logo with coding to identify products with environmental attributes. Changes to online purchasing systems should help agency customers include GHG emissions as a selection factor in their procurement decision-making.

In order to implement supplier reporting of completed GHG emissions inventories in the CCR, the Online Representations and Certifications (ORCA), or another system, may require a change to the FAR.[55] The time that it takes to complete a FAR change, which is dependent on the complexity of the proposed change, may impact how quickly GHG emissions factors are included as part of Government-wide procurements.

3.1.2 Opportunities

Working with the supplier community to collect information about agency scope 3 supply chain emissions, the Government will have the data it needs to develop an accurate scope 3 emissions inventory. This provides a solid foundation for setting and achieving agency reduction goals.[56]

Further, the supplier community can realize business benefits, as well. The most common economic benefit from supply chain GHG emissions reduction is the cost savings created through reduced energy use. Industry leaders in GHG emissions management have found 2 percent reductions in logistics and transportation costs, 6 percent reductions in energy costs, and 2 percent reductions in operational costs.[57]

Savings can be quite significant, and they typically come from more efficient transportation and packaging; more product can be shipped per gallon of fuel consumed. One company's improvement program generated millions of dollars in savings as well as other benefits, including innovation, risk reduction, employee engagement, and stakeholder engagement.[58] Many other companies tout the business benefits of supply chain GHG emissions reductions, both in terms of more efficient operations and better customer and supplier relationships.[59,60]

In working with the supplier base, the Government can recognize similar economic and efficiency benefits.

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[55] 48 C.F.R. § 4.12.

[56] EO 13514, § 2(b), October 5, 2009.

[57] Accenture, *Creating Value and Driving High Performance through Carbon Management in the Supply Chain* (2009), 2.

[58] Hewlett-Packard, *HP Global Citizenship Report*, "Global citizenship at HP: Our approach," http://www.hp.com/hpinfo/globalcitizenship/gcreport/globalcitizen/managinggc.html#business_case (accessed March 3, 2010).

[59] Dr. Paul A. Siracusa, Church and Dwight Co., Inc., *Sustainability*, a briefing, March 5, 2008.

[60] Ken Brown, Vice President, Sourcing and Productivity, Penske, *Sustainability*, a briefing.

3.1.3 Challenges

One of the more significant challenges that organizations face is in mapping and defining their supply chains. With multiple suppliers providing products and services that cross multiple industries, it can be difficult to define the supply chain, much less develop a structured approach for engaging suppliers regarding GHG emissions.[61] Fully mapping a supply chain means mapping the process of going from raw materials, to product production, and finally to product delivery. Considering all the products and services the Federal Government procures in a given year, the magnitude of the task is immense.

To address this challenge, GSA is working with the WRI to test the draft Scope 3 Reporting Standard. This experience will help GSA understand methods for mapping the Federal supply chain and develop standard procedures for conducting scope 3 supply chain emissions inventories.[62]

Setting goals for scope 3 emission reductions is another significant challenge. Effective goals require an organization to have a good understanding of its supplier community emissions profile as well as a clear strategic objective with respect to supplier GHG emissions. EO 13514, in conjunction with other executive communications, sets a clear commitment to reduce GHG emissions from agency operations. Each agency is charged with establishing unique emissions reduction goals that reflect their missions and operations.[63] Providing incentives to the supplier community to report their GHG emissions inventories will help provide the Government with the information it needs to calculate agency scope 3 supply chain emissions inventories and set reduction targets.

To address this challenge, the Federal Government should encourage suppliers to create and voluntarily disclose their emissions inventories over the next 2 years (through FY2012). Once the Government has sufficient data for analysis, agencies can start to set effective reduction targets and develop actionable plans to achieve those targets.

Finally, suppliers need a capacity for emissions reporting and management. One of the larger GHG emissions registries in North America has around 400 organizations reporting scope 1 and 2 data through its system.[64] This is approximately 0.07 percent of the almost 600,000 active registrants that are registered in CCR.[65] There is a clear need to build reporting capacity and capability.

As more agencies engage their suppliers and customers in supply chain GHG emissions reduction initiatives, the success of those initiatives will improve. The participation of more organizations will make the effort to measure and improve a GHG emissions inventory easier, which will then make it possible to reach back into the supply chain to reduce emissions.

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[61] World Resources Institute and World Business Council for Sustainable Development, *Supply Chain & Life Cycle Survey Results*, May 2008, http://www.ghgprotocol.org/files/survey-summary.pdf (accessed March 16, 2010).

[62] GSA is focusing on tier 1 suppliers when mapping its supply chain.

[63] EO 13514, § 2(b).

[64] Interview with Diane Wittenberg, Executive Director, and Denise Sheehan, Vice President, The Climate Registry, March 3, 2010.

[65] Central Contractor Registration (CCR), https://www.bpn.gov/ccr/ (accessed March 29, 2010).

3.1.4 Further Areas of Exploration

The following areas require further exploration.

- Research the status of GHG emissions inventories with respect to CBI.
- Identify the criteria for acceptable product-level standards and monitor market place for acceptable standards.
- Identify potential service-level standards or processes to estimate service-level GHG emissions.
- Identify how far down the supply chain suppliers should be expected to gather and voluntarily disclose their scope 3 GHG emissions data.
- Research and identify potential trade regulation issues that may impact the sharing of GHG emissions information between companies.

3.2 Voluntary Registries

> Executive Order 13514 October 5, 2009
> …requiring vendors and contractors to register with a voluntary registry or organization for reporting greenhouse gas emissions…

It is feasible for suppliers to collect and securely store their GHG inventory data by following identified reporting standards, eventually with third party verification. It is also feasible to use voluntary registries to store GHG inventories; however, it is not necessary for suppliers to use a voluntary registry.

The use of registries is a good solution, but it is not the only solution. Voluntary registries provide value-added services in the form of data management and GHG inventory assistance. These services are intended to help companies through the process of calculating and reporting a GHG inventory; however, all companies do not need these services. A company can calculate its inventory using an approved standard, verify the inventory with a certified third party, and make its inventory available to the Government without reporting to a registry. This approach allows suppliers to choose whether or not to use a registry, which may be more cost effective for some suppliers.

Agencies should use an approach in which suppliers are encouraged to collect and securely store their emissions in a database or registry using a reporting standard and third party verifier that is acceptable to the Government. Criteria should be defined for reporting standards and third party verifiers and based upon experience and industry best practices. There are two key requirements (standards and verification) for acceptable GHG emissions inventory reporting.

3.2.1 Current Trends

Reporting GHG emissions at the corporate-level and reporting entities that receive corporate-level data were established only recently. The idea for a disclosure framework for sustainability

information and the Global Reporting Initiative (GRI) were conceived in 1997–1998.[66] The CDP launched in 2000 and sent out its first request for climate change information in 2003.[67] The California Climate Action Registry (CCAR) was formed in 2001.[68]

The growth in such reporting has been greatest following release of the *GHG Protocol Corporate Accounting and Reporting Standard*. The GHG Protocol Initiative estimates that, since the publication of the first standard in 2001, more than 1,000 businesses and organizations have developed corporate emissions inventories using the standard.[69]

The field of required GHG emissions reporting expanded dramatically at the end of 2009 when the EPA mandatory reporting rule took effect. That rule requires all groups within the U.S. with GHG emissions greater than 25,000 metric tons CO_2-e (emissions of the Kyoto 6 gases weighted by their 100-year global warming potential)[70] to report annually to the EPA. Additional GHGs beyond the Kyoto 6, nitrogen trifluoride (NF_3) and hydrofluorinated ethers (HFE), are included in the mandatory reporting. With the advent of this rule, more than 10,000 facilities in the U.S. will be measuring and reporting their GHG emissions and gaining experience conducting inventories.[71]

On January 27, 2010, the SEC issued new guidance for corporations on disclosures related to climate change risk. One risk for corporations is the cost of regulations that require disclosure of GHG emissions or that require reductions in corporate emissions.[72] In response to this new guidance, some corporations may initiate efforts to complete GHG emissions inventories. Thus, it is expected that more corporations will develop the capacity to perform GHG emissions inventories.

On February 18, 2010, CEQ released a new draft of National Environmental Policy Act (NEPA) guidance to require agencies to consider climate change impacts as part of Federal environmental impact statements.[73] If this guidance goes into effect, it is likely that affected parties will be required to consider the GHG emissions associated with covered actions. This guidance may also have the effect of increasing the number of corporations that develop internal capacity to develop and report GHG emissions inventories.

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[66] Global Reporting Initiative, *History*, http://www.globalreporting.org/AboutGRI/WhatIsGRI/History/ (accessed March 30, 2010).

[67] CDP, *What We Do*, https://www.cdproject.net/en-US/WhatWeDo/Pages/overview.aspx (accessed March 30, 2010).

[68] The California Climate Action Registry, *Overview*, http://www.climateregistry.org/about.html (accessed March 30, 2010).

[69] Greenhouse Gas Protocol Initiative, *About the GHG Protocol*, http://www.ghgprotocol.org/about-ghgp (accessed March 18, 2010).

[70] Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report* (November 2007), 36.

[71] EPA, *Frequently Asked Questions: Mandatory Reporting of Greenhouse Gases Rule*, http://www.epa.gov/climatechange/emissions/ghg_faq.html#reportproposal (accessed March 17, 2010).

[72] U.S. Securities and Exchange Commission, *SEC Issues Interpretive Guidance on Disclosure Related to Business or Legal Development Regarding Climate Change* (January 27, 2010), http://www.sec.gov/news/press/2010/2010-15.htm (accessed March 16, 2010).

[73] White House Council of Environmental Quality, *Steps to Modernize and Reinvigorate NEPA*, par. 3, http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa (accessed March 17, 2010).

Beyond the Federal space, a mandatory cap-and-trade emissions program now operates in 10 northeastern states under the auspices of the Regional Greenhouse Gas Initiative (RGGI). RGGI requires utilities to report and reduce GHG emissions or purchase offsets.[74] RGGI utilities supply to Federal operations in these states and, because of the distributed nature of the electric grid, may supply agency facilities outside of these states.

Other states are developing GHG reporting or reduction programs. For example, both Massachusetts and Nevada have reporting rules. In these two states, facilities reporting under Title V of the Clean Air Act must also report GHG emissions to The Climate Registry.[75] California is developing a GHG cap-and-trade system that will affect all businesses operating in that state.[76]

The growing number of programs, some of which (e.g., World Economic Forum Global GHG Registrar, CCAR, Chicago Climate Exchange, and The Climate Registry) require third-party verification of emissions data, presents a correlative trend for the increasing numbers of verification companies and verifiers and represents one component of the growing number of "green jobs." This suggests that a sufficient number of verifiers will be available in the future to provide the services that will be required for GHG emissions reporting verification.

It is concluded from this brief overview of existing and pending programs that there is a growing emphasis on and increasing experience with GHG reporting. It is reasonable to assume the number of corporations developing GHG inventories will continue to increase.

3.2.1.1 Voluntary Registries

A GHG registry is "a public database of organizational GHG emissions and/or project reductions…each registry has its own rules regarding what and how information is reported."[77] These registries provide a repository of GHG emissions data for the participating organizations. Through the registry, the emissions information can be shared with multiple stakeholders from a single source.

Several voluntary registries have experience accepting GHG emissions inventories from commercial groups. Examples include EPA Climate Leaders, the DOE's 1605b Program, The Climate Registry, the GRI, the CDP, and the Chicago Climate Exchange.

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[74] Congressional Budget Office, *Economic and Budget Issue Brief: The Use of Offsets to Reduce Greenhouse Gases* (August 3, 2009), 5, http://www.cbo.gov/ftpdocs/104xx/doc10497/08-03-Offsets.pdf (accessed March 18, 2010).

[75] Massachusetts Department of Environmental Protection, "Greenhouse Gas Emissions Reporting," *Air & Climate*, http://www.mass.gov/dep/air/climate/#tcr (accessed March 18, 2010); Nevada Division of Environmental Protection, Bureau of Air Quality Planning, Program Management Branch, *Greenhouse Gas Emissions*, http://ndep.nv.gov/baqp/technical/ggemissions.html (accessed March 18, 2010).

[76] Preliminary Draft Regulation for a California Cap-and-Trade Program, November 24, 2009, http://www.arb.ca.gov/cc/capandtrade/meetings/121409/pdr.pdf.

[77] Samantha Putt Del Pino, Ryan Levinson, and John Larsen, *Hot Climate, Cool Commerce: A Service Sector Guide to Greenhouse Gas Management (*World Resources Institute, May 2006), 69, http://pdf.wri.org/hotclimatecoolcommerce.pdf.

For the purpose of voluntarily disclosing emissions inventory with Federal agencies, there are two important requirements that supplier GHG emissions inventories should ultimately meet:

- Reporting standards, or the use of an approved standard for collecting, calculating, and managing GHG emissions inventory data
- The verification of emissions data by a certified third party.

Not all voluntary registries have these two requirements. For example, GRI does not require third-party verification. GRI guidelines require that report makers self-declare their "application level" and choose whether to have the report checked by a third party or by GRI. [78] Further, a supplier can calculate an inventory using an approved standard and verify the inventory with a certified third party without reporting to a registry. Thus, requiring suppliers to register with a voluntary registry is not necessary for suppliers to voluntarily disclose reliable GHG emissions data to agencies.

Allowing suppliers to maintain their own data registries will lead to widely distributed storage of GHG emission inventory information. For the emissions inventory to be accessible to the agencies, they must be linked. The use of linked data principles is described in more detail in section 3.3.

3.2.1.2 Reporting Standards

A reporting standard establishes the methods and parameters for conducting a GHG emissions inventory with the intent of driving consistent results.[79] Suppliers can complete a GHG inventory using an approved reporting standard without the use of a GHG registry, and many companies do just that, either using in-house support or hiring outside expertise. Several existing standards for reporting are related to, or derive directly from, the *GHG Protocol Corporate Accounting and Reporting Standard*[80] created by the WBCSD.[81]

It is important to remember that standards for GHG emissions accounting are continuing to emerge, and scope 3 reporting standards are still under development.[82]

3.2.1.3 Verification

Verification is, "an independent assessment of the reliability (considering completeness and accuracy) of a GHG inventory."[83] A verification assessment may be conducted by either internal or external independent parties.[84] There are three basic types of verification assessments based

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[78] Global Reporting Initiative, *Application Levels*, http://www.globalreporting.org/grireports/applicationlevels (accessed March 18, 2010).

[79] Pankaj Bhatia and Janet Ranganathan, *The Greenhouse Gas Protocol: A corporate accounting and reporting standard* (revised edition) (World Business Council for Sustainable Development, March 2004), 3.

[80] See Footnote 79 on p. 29.

[81] These include ISO14064, EPA Climate Leaders Guidance, the CCAR Reporting Protocol, and the Public Sector Standard.

[82] World Resources Institute, *Sixty Corporations Begin Measuring Emissions from Products and Supply Chains* (January 20, 2010), http://www.ghgprotocol.org/files/ghgp-roadtesting-news-release-final2.pdf.

[83] See Footnote 79 on p. 29, 102.

[84] See Footnote 79 on p. 29, 69.

on who verifies the information. The verification types are defined in the draft of International Organization for Standardization (ISO) 14064 as, "…first party (internal), second party (GHG scheme administrator, client), or third party (independent external) verification…"[85]

The purpose of GHG accounting verification is to increase stakeholder confidence that reports of GHG emissions are complete, accurate, consistent, transparent,[86] and without material discrepancies.[87] In the case of supply chain GHG emissions of Federal agencies, verification serves three complementary purposes. First, verification provides a process by which organizations serving the Federal Government develop a reliable estimate of their GHG emissions. Second, it assures the Government that the information Federal agencies use to assess their scope 3 GHG emissions is reliable. Third, it assures all stakeholders that agencies compare suppliers to their competitors based on reliable information. Therefore, verification is an essential part of GHG management in the Federal supply chain.

Not all voluntary registries require verification of GHG emissions inventories. In addition, verification can be done directly with the organization conducting the inventory without a registry as an intermediary. Therefore, the use of a voluntary registry is not required to conduct, nor does it guarantee, a verified GHG emissions inventory.

The ISO has prepared several standards, such as ISO 14044, ISO 14067, and ISO 14064, relevant to verification of GHG inventories.

3.2.2 Opportunities

Voluntary registries do provide value-added services in the form of data management and GHG inventory assistance. These services are intended to help companies through the process of calculating and reporting a GHG inventory; however, such services are not needed by all companies.

Using acceptable standards for reporting and verification offers advantages to the Federal Government and its suppliers. By allowing the use of accepted registries or supplier-maintained databases, each supplier can decide which method is most cost-effective in light of its own strategic needs, as long as the systems employed to produce and store the inventory data use an approved standard and are verified. This flexibility may encourage the market to develop its own cost-effective solutions.

3.2.3 Challenges

Allowing suppliers to determine their preferred method of storing GHG inventory data can result in a proliferation of distributed data sources that agencies will need to access to obtain the GHG emissions data necessary to calculate their scope 3 supply chain emissions. Also, companies may have concerns about investing in the resources needed to calculate emissions against a standard that as yet has not been approved by the Government.

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[85] International Organization for Standardization, ISO 14064, Greenhouse gases.

[86] In this instance, "transparent" refers to being able to show a clear calculation path between raw data and GHG emissions inventory.

[87] For brevity, we call a GHG report that satisfies these five criteria (complete, accurate, consistent, transparent, and without material discrepancies) reliable.

3.2.4 Further Areas of Exploration

The following areas require further exploration.

- Investigate the criteria necessary for a standard to be approved for use by suppliers.
- Investigate methods for collecting distributed supplier GHG inventory data so that agencies can collect scope 3 supply chain emissions data.
- Review and seek legal review on the Paperwork Reduction Act (44 U.S.C. 3501 et seq.) and determine if it applies to the collection of voluntarily disclosed GHG emissions data.

3.3 Making Inventories Available

> Executive Order 13514 October 5, 2009
> …requiring contractors, as part of a new or revised registration under the Central Contractor Registration or other tracking system, to develop and make available its greenhouse gas inventory and description of efforts to mitigate greenhouse gas emissions

Having suppliers make their GHG emissions available via the CCR is technically feasible but not preferred. CCR collects general information on companies that wish to do business with the Federal Government, including business size, goods and services information, financial information, and points of contact. CCR collects what is considered required information; voluntary data, like top-level GHG emissions data, does not fit with this paradigm.

Instead, exploring other online databases in which suppliers can voluntarily disclose their corporate-level GHG emissions inventory data to the Government is recommended. One option includes the ORCA system. With this option, suppliers could assert whether they have reported their GHG emissions inventory, what scopes they reported, whether the GHG emissions inventory data is self or third-party verified, and where their GHG emissions inventory data is located (either in a registry or other location), along with the other certifications that are collected within ORCA. Federal Government suppliers for both services and products already must go online and make certification declarations in the ORCA system.[88] To log into the system, suppliers need a Data Universal Number System (DUNS) number and a Marketing Partner Identification Number (MPIN), a code created during CCR registration. A DUNS number is a unique nine-digit identification number provided by Dun & Bradstreet (D&B), and it is the universal standard for identifying and keeping track of more than 100 million businesses worldwide.[89] An MPIN is a personal code that allows suppliers to access other Government applications, such as the Past Performance Information Retrieval System (PPIRS) and ORCA.[90]

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[88] Federal Acquisition Regulation, Clause 52.212-3, *Offeror Representations and Certifications—Commercial Items.*

[89] Dun & Bradstreet, Inc., *About D&B*, par. 1, http://www.dnb.com/us/duns_updateabout/index.html?link=dunscm_re=Homepage*Header*AboutDB (accessed March 15, 2010).

[90] Central Contractor Registration, "Guide to Codes," *FAQs: CCR Codes*, https://www.bpn.gov/ccr/FAQ.aspx#mpin (accessed March 15, 2010).

Another option is to use the GSA Carbon Footprint Tool, which was developed by GSA to help agencies complete their comprehensive GHG emissions inventory. If suppliers insert their corporate-level absolute GHG emissions data into the tool, agencies will benefit from having scope 3 supply chain data included in their comprehensive GHG emissions inventory. The GSA Carbon Footprint Tool is available for use by all agencies and adheres to the Public Sector Standard.

It is also feasible to explore additional system options beyond ORCA and the GSA Carbon Footprint Tool. Supplier GHG emissions data needs to be readily accessible both to contracting officers for procurement decision-making and to agency sustainability officers for facilitating agency scope 3 supply chain GHG emissions tracking and reductions. Agencies may also want to combine supplier GHG emissions data with other environmental data for analytical purposes.

While it is feasible to request descriptions of mitigation efforts, concerns need to be addressed. Suppliers may view information about specific mitigation efforts as proprietary information, especially as they are just beginning to complete GHG emissions inventories. As such, suppliers may report only broad, general statements about mitigation efforts that provide the Government with no actionable or verified information. Agencies may find value in understanding suppliers' plans for operational or process improvements that will enable meeting overall goals for reduction of scope 3 emissions. Agencies could collect this information through the procurement process, similar to past performance statements, where it might be protected as procurement sensitive information.

3.3.1 Current Trends

A key initiative of the Obama Administration is to "ensure the public trust and establish a system of transparency, public participation, and collaboration" because this "openness will strengthen our democracy and promote efficiency and effectiveness in Government." In a memorandum to the heads of executive departments and agencies, President Obama stated the following:

> Transparency promotes accountability and provides information for citizens about what their Government is doing. Information maintained by the Federal Government is a national asset. My Administration will take appropriate action, consistent with law and policy, to disclose information rapidly in forms that the public can readily find and use. Executive departments and agencies should harness new technologies to put information about their operations and decisions online and readily available to the public. Executive departments and agencies should also solicit public feedback to identify information of greatest use to the public.[91]

Suppliers' GHG emissions data can be of value to citizens, and especially to the academic community in their pursuit to provide effective research and solutions in this area.[92] The WRI

[91] President Barack Obama, Transparency and Open Government, Memorandum for the Heads of Executive Departments and Agencies, par. 2, http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment/ (accessed March 15, 2010).

[92] Discussions with the Section 13 academic round table, February 25, 2010.

published reasons for transparent and timely public disclosure of company GHG emissions in response to the EPA's development of a mandatory GHG reporting program:

- Ensures an efficient and well-functioning market in which all market participants have access to transparent, up-to-date information.
- Builds public confidence in the program by transparently documenting emissions trends and compliance.
- Provides public accountability, such that public perception becomes an additional driver for companies and facilities to reduce emissions.[93]

There is a current technology trend in business and Government to use shared data across organizations. One such example is linked open data.[94]

> Linked open data is a recent refinement and application of more general "Semantic Web" technology. The Semantic Web means using the web as a publishing environment for "machine-readable" data (meaning, the data have been annotated with information about the data; this extra information is invisible to our eyes when we browse the web, but it is readable by algorithms which can automatically search the web to gather and process data.) Semantic web technologies enable the web to serve as a system in which very flexible and expandable data sharing and integration can take place.[95]

Linked open data is currently being used by data.gov,[96] recovery.gov,[97] and the Census Bureau[98] to make their data more accessible.[99,100]

British Prime Minister, Gordon Brown, in a March 22, 2010, speech recognized the importance of linked open data in making Government data accessible to citizens.

> Underpinning the digital transformation that we are likely to see over the coming decade is the creation of the next generation of the web - what is called the semantic web, or the web of linked data.

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[93] World Resources Institute, "GHG Emissions Registries," *The Bottom Line On…,* Issue 2, March 2008, 2, http://pdf.wri.org/bottom_line_ghg_emissions_registries.pdf.

[94] Linked Data Research Center, *Linked Data: Connect Distributed Data across the Web*, http://linkeddata.org (accessed March 19, 2010).

[95] Greg Norris, *Linked Open Data and its Value for Sustainability Reporting*, March 2010.

[96] Data.Gov, http://www.data.gov/ (accessed March 17, 2010).

[97] Recovery.Gov, http://www.recovery.gov/Pages/home.aspx (accessed March 17, 2010).

[98] U.S. Census Bureau, http://www.census.gov/ (accessed March 17, 2010).

[99] Resource Development Framework, *The 2000 U.S. Census: 1 Billion RDF Triples* (August 14, 2007) www.rdfabout.com/demo/census (accessed March 16, 2010).

[100] Linked Data Research Center, *Open Governmental Datasets*, January 27, 2010, http://linkeddata.deri.ie/node/72 (accessed March 16, 2010).

> This next generation web is a simple concept, but I believe it has the potential to be just as revolutionary - just as disruptive to existing business and organisational [*sic*] models - as the web was itself, moving us from a web of managing documents and files to a web of managing data and information - and thus opening up the possibility of by-passing current digital bottlenecks and getting direct answers to direct requests for data and information.[101]

Other examples of data sharing include electronic data interchange (EDI)[102] and extensible markup language (XML),[103] both of which are used to share data between organizations. Although the trend is to make data openly available the challenge is how to do so and remain sensitive to proprietary information concerns of data providers.

3.3.2 Opportunities

If ORCA is used by suppliers to assert they have completed their GHG emissions inventory and other GHG emissions–related data, the acquisition workforce should already be familiar with and have access to the system. Because ORCA is a Government system, agencies will have ready access to the data needed to track agency scope 3 supply chain GHG emissions. In addition, ORCA contains existing mechanisms to protect supplier CBI.

If the GSA Carbon Footprint Tool is used by suppliers, even those on non-GSA procurement vehicles, to input their corporate-level GHG emissions data, agencies that use the Tool would be able to track their scope 3 supply chain GHG emissions without having to initiate a separate process to gather the data from their suppliers and would benefit from having this data included as part of their overall comprehensive GHG emission inventory.

Not requiring suppliers to input their data into a central data repository and, instead, using either an automatic method or another approach to access supplier data as needed (e.g., linked data, EDI, or XML) will alleviate the burden on suppliers to manually enter the data into a system and will reduce data entry errors.[104] Because the trend is for companies and stakeholders to request GHG emissions information from their suppliers, maintaining a separate repository outside of current procurement systems will allow for the use of this data beyond the Federal Government procurement process and allow companies to answer other requests with the same data source.

3.3.3 Challenges

Not all suppliers currently submit GHG emissions inventory information to the Government, so an approach to the voluntary disclosure of this information should be established. If CCR or ORCA is used to accept supplier GHG emissions inventory data, they will need to be modified to accept this new data. In addition, agencies may need to establish data links from CCR, or ORCA or the GSA Carbon Footprint Tool to the systems used for procurement and scope 3 emissions inventory.

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[101] Official website of UK Prime Minister's Office, http://www.number10.gov.uk/Page22897, Accessed March 24, 2010.

[102] Kenneth Copeland and C. Jinshong Hwang, "Electronic Data Interchange: Concepts and Effects," *Internet Society*, http://www.isoc.org/INET97/proceedings/C5/C5_1.HTM (accessed March 17, 2010).

[103] XML.Gov, http://xml.gov/index.asp (accessed March 17, 2010).

[104] U.S. Department of Housing and Urban Development, *The EDI Alternative*, http://www.hud.gov/offices/cpd/systems/idis/edi/index.cfm (accessed March 18, 2010).

Other solutions, such as linked data, EDI, or XML, would introduce a new approach. Therefore, both suppliers and the Government will need to agree upon standards and technology to facilitate information sharing.

Depending on the solution selected, there may be more costs associated with standing up a new system to share inventory data versus modifying an existing system. The approach to voluntary GHG inventory information disclosure should also take into account the needs of small businesses, which may not have the resources to implement the proposed data-sharing approach.

3.3.4 Further Areas of Exploration

The following areas require further exploration.

- Research and select a method for the voluntary disclosure of supplier GHG emissions inventories inventory data to Federal agencies (e.g., using CCR, ORCA, GSA Carbon Footprint Tool, linked open data, EDI, XML, or some other solution).
- Research and select a method to ensure supplier GHG emissions data is easily accessible to both contracting officers for procurement evaluation purposes and agency sustainability officers for agency supply chain emissions tracking.
- Evaluate the difficulty to suppliers, especially small and socioeconomically disadvantaged businesses, in submitting relevant GHG emissions data.

3.4 Using Purchasing Preferences

> Executive Order 13514 October 5, 2009
> …using Federal Government purchasing preferences or other incentives for products manufactured using processes that minimize greenhouse gas emissions…

It is feasible to use purchasing preferences or other incentives based on either corporate-level or product-level GHG emissions data. However, implementing any preference program based on GHG emissions data cannot be accomplished until a sufficient number of suppliers are reporting data and there is a reliable process for incorporating that data into the acquisition system.

Federal agencies should use suppliers GHG emissions reporting status as an evaluation factor in contract awards. Eventually, agencies can use a more robust and holistic measure that simply and credibly illustrates a supplier's sustainability.

The reasoning behind recommending an evaluation factor instead of a purchasing preference or mandatory contracting goal is an evaluation factor allows agencies the discretion to trade the price of a given procurement against the GHG emissions associated with that procurement and thereby enable reductions in agency scope 3 GHG emissions through the acquisition system.

3.4.1 Current Trends

There is an historical precedent for use of this evaluation factor. On May 31, 1995, an interim FAR rule was published with the following requirement:

> Environmental objectives, such as promoting waste reduction, source reduction, energy efficiency, and maximum practicable recovered material content (see part 23), shall also be considered in every source selection, when appropriate.[105]

This language was changed slightly when the final rule was published on August 22, 1997:

> Environmental objectives, such as promoting waste reduction and energy efficiency (see Part 23), also shall be considered in every source selection, when appropriate. These considerations may be expressed in terms such as resource or energy conservation, pollution prevention, waste minimization, and recovered material content.[106]

Currently, Part 15 of the FAR does not specifically address environmental factors, but it provides that agencies can tailor evaluation factors to the acquisition.[107] The Part 15 rewrite case, which resulted in a final rule published on September 30, 1997,[108] removed "environmental objectives" as an evaluation factor. The team report for the case provides the following rationale:

> [L]ists of "approved" factors would undermine the coverage's intent of strictly identifying critical areas important to the source selection decision to *reduce evaluation time*.[109]

Efficiency in the Federal acquisition system is most often thought of in the context of the contract award process. It is recommended that the concept of efficiency in the acquisition system be expanded to include the efficiencies contained within the result the process produces. Time to award is undoubtedly an important aspect of the procurement process, and the recommended evaluation factor is as time-effective as possible.

A mandatory sustainability-based evaluation factor may add an additional time component to the procurement process, but it will almost certainly lead to a *more efficient Government*.

The Federal acquisition system currently contains mandatory contracting goals for certain sizes of companies[110] and purchasing preferences for certain types of products.[111] There is no guarantee that existing purchasing preference or mandatory contracting goal programs are effective in moving the market in the ways contemplated by the EO.

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[105] 48 C.F.R. § 15.605(b)(1)(iv) (1995).

[106] 48 C.F.R. § 15.605(b)(1)(iv) (1997).

[107] 48 CFR § 15.304.

[108] FAR Case 95-029, 62 *Federal Register* 51,224 (1997), Federal Acquisition Circular 97-02.

[109] FAR Case 95-029, case file, on file with GSA FAR Secretariat (emphasis added).

[110] U.S. Small Business Administration, *Goaling Program*, http://www.sba.gov/aboutsba/sbaprograms/goals/SBGR_2006_GOALING_OVERVIEW.html (accessed March 23, 2010).

[111] 48 C.F.R. §§ 4, 7, 8, 10, 11, 12, 23, 36, and 42.

The GHG emissions reporting status evaluation factor should be made mandatory for all acquisitions using the recommended phased approach.[112] Agencies should retain discretion over the weight given to the evaluation factor in each solicitation, and an offeror should be evaluated as neither favorable nor unfavorable if they have not reported completion of a GHG emissions inventory.[113]

To conduct fair and meaningful comparative evaluations during source selection between and among competing suppliers, the contracting officer must base any comparison on credible, consistent information. Unfortunately, the fidelity of information required to conduct fair comparative source selection evaluations based on GHG emissions data is not consistently available from the Federal supplier base at this time. After the Government decides which measurement standard and disclosure process companies should use, the supplier base's GHG emissions data availability and consistency will reach a level at which it can be used appropriately in comparative source selection evaluations.

In the initial use of the evaluation factor, the GHG emissions reporting status of an offeror should be evaluated by comparing offerors based on their answer to a series of yes or no questions (e.g., "check-box" answer to whether the supplier measures and verifies its GHG emissions). These "yes or no" check-box questions could include:

- Has a GHG emissions inventory been completed?
- Does the inventory include just scopes 1 and 2, or also scope 3?
- What verification level is used by the inventory: 1st, 2nd, or 3rd party?
- Where is the GHG emissions inventory located (name of registry or online location of data if not in a registry)?

Currently, only 11 percent of organizations participating in the CDP supply chain survey use supplier GHG emissions as a procurement preference or evaluation factor; however, 31 percent expect to be using GHG emissions information within 5 years.[114]

For most Government operations, agencies are the end customer of the supply chain, receiving and using products and services provided by suppliers. Government managers leverage the procurement process to enter into long-term agreements with suppliers that provide lower prices

[112] Suggested exceptions to applicability, if any, should align with those in the final rule promulgated as a result of FAR Case 2010-001, which is currently in progress. FAR Case 2010-001 implements, among other things, EO 13514. There is also a strong argument to exempt micro-purchases (transactions valued at less than $3,000, most of which are accomplished through the purchase card) from the requirement because the reporting mechanisms to assess agency compliance with such a requirement in micro-purchases is non-existent, and the amount of dollars spent through the micro-purchase program is small in relation to the entire Federal contracting spend. A thorough cost-benefit analysis should be performed prior to devoting the significant resources required to implement this requirement in micro-purchases.

[113] At least until the GHG measurement and reporting standards are developed and more of the Federal supplier base is participating in measurement and reporting of GHG emissions.

[114] Carbon Disclosure Project, *Supply Chain Report 2010* (2010), 9.

with better service terms, often as part of a strategic sourcing initiative.[115] At the same time, agencies have outsourced supply chain–related activities to commercial service providers to benefit from commercial operational efficiencies.

The EPA uses environmental performance as a procurement preference for all EPA meetings and conferences. The EPA requires all potential suppliers of meeting or conference services to supply information about environmentally preferable measures or practices that a supplier has in place to support the event. It also requires all proposals include answers to 14 questions about such environmental factors as recycling, energy use, and water conservation.[116]

A critical tool for agencies in managing scope 3 supply chain GHG emissions is the ability to make procurement decisions based on the emissions attributable to a supplier or a given product. The FAR gives agency acquisition officials broad discretion as far as evaluation factors are concerned.[117] With the recommended approach, much of this discretion remains with the agency, as does the mandate to address the sustainability-related factors that will accomplish the goals of the EO. Whether the evaluation factor addresses energy efficiency, GHG emissions, water conservation and protection, waste elimination, recycling, pollution prevention, or any combination thereof is, at least at the start of the phased approach, the prerogative of the procuring agency.

By selecting suppliers or products with lower GHG emission inventories, an agency can reduce its overall scope 3 supply chain emissions in its pursuit of reduction targets. Today, any agency can use GHG emissions information as an evaluation factor, but making this a mandatory source selection factor for all contract awards would send a strong signal to the supplier base and would begin to move the market to a position where gaining insight to a suppliers's sustainability would be possible.

The current acquisition system employs past performance evaluations of suppliers submitting offers for certain procurements. The use of past performance information is the closest corollary to the recommended approach to using GHG emissions data in contract awards.

Past performance is the best analog for several reasons. First, the Government Accountability Office (GAO) has found it reasonable (i.e., a protest was denied) to award a contract to an offeror with a good past performance record but a higher price.[118] As agencies are required to reduce scope 3 supply chain emissions, they should be able to achieve those reductions through the procurement system. Agencies should retain the discretion to trade price against sustainability to accomplish agency goals (e.g., paying a higher price for an offer that has lower GHG emissions).

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[115] GSA, *Federal Strategic Sourcing Initiative* (FSSI), http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_OVERVIEW&contentId=24089 (accessed March 17, 2010).

[116] EPA, 48 CFR Parts 1523 and 1552, EPAAR Prescription and Solicitation Provision—EPA Green Meetings and Conferences, *Federal Register* 72, No. 20 (April 12, 2007), 18401, http://edocket.access.gpo.gov/2007/pdf/E7-6856.pdf (accessed March 16, 2010).

[117] 48 C.F.R. §§15.3, 15.304.

[118] USA Elecs., Comp. Gen. Dec. B-275389, 97-1 CPD ¶ 75.

Second, when evaluating past performance of suppliers, if a supplier has no relevant, recent past performance, the agency must evaluate the supplier as "neither favorable nor unfavorable" so the supplier is not prejudiced for its lack of experience. A similar approach is desirable for evaluating a supplier's GHG reporting status. Because some suppliers already calculate their GHG emissions inventories, they would have an advantage if agencies are *required* to evaluate the GHG emissions reporting status in every contract award; all other factors being equal, the supplier that *does* have the "GHG emissions inventory completed" box checked would be awarded the contract. By ensuring the use of GHG emissions reporting status is not an all-or-nothing selection criterion (e.g., a responsibility factor), the recommended approach aligns with the principle of creating incentives instead of a compliance system or barrier to entry, particularly for small businesses.

Third, while not required by the FAR, past performance is frequently evaluated because it is a good way to gauge a supplier's performance risk. GHG emissions reporting status may also be a good indicator of a supplier's performance risk, because GHG emissions are a function of energy use. If a supplier is highly reliant on energy (i.e., high emissions), but is not employing all available means to reduce energy consumption (i.e., reduce emissions), it is more exposed to fluctuations in the price of energy and more at risk for non-performance of the contract.

3.4.2 Opportunities

Companies that are using GHG emissions as a factor in supplier selection are finding significant benefits to working with more efficient suppliers. The first advantage is cost. As mentioned earlier, managing GHG emissions typically leads to better operational efficiency. This efficiency drives cost reductions that can be passed along from suppliers to the Federal Government.

Aside from cost, companies have realized innovations after working with suppliers that manage their GHG emissions.[119] Suppliers that manage their GHG emissions tend to have better-defined operational processes, resulting in higher quality products and services with more reliable delivery.

The improvement in a company's GHG emissions will make that company more competitive domestically and internationally because other governments, such as the United Kingdom and Japan,[120] are starting to encourage GHG emissions reductions, as well.

Figure 3-2 Example of the Carbon Reduction Label

Source: What's a Carbon Reduction Label? 2010. 25 March 2010 http://www.carbon-label.com/individuals/label.html

The United Kingdom's Department for Environment, Food, and Rural Affairs (Defra) is "working with the Carbon Trust and British Standards on a methodology for capturing the carbon footprint of a whole range of consumer items. The Trust's Carbon Reduction Label is being piloted on a range of items, though decisions about more

[119] Maurice Berns and other, "The Business of Sustainability: Findings from the First Annual Survey and Interview Project," *MIT Sloan Management Review*, 2009.

[120] *Carbon Footprint of Products* (2010) http://www.cfp-japan.jp/english/ (accessed March 25, 2010).

widescale carbon labeling lie in the future."[121] A number of products, from groceries to clothing to paving products, display the Carbon Reduction Label (see Figure 3-2).[122]

Walkers Snacks Limited is an example of a company that worked with the Carbon Trust to reduce GHG emissions in its products. The company realized a 7 percent reduction in GHG emissions.

> Our recent carbon emission reductions have saved us an estimated £400,000[123]… we're reinvesting the money we've saved into more environmental initiatives, for example hosting Sustainability Summits with suppliers.[124]

In 2008, Japanese Ministry of Economy, Trade, and Industry published its *Action Plan for Achieving a Low-carbon Society*. The plan promoted the establishment of a Carbon Footprint of Products (CFP) system. Japan decided to set basic rules for the calculation and labeling of GHG emissions to ensure the reliability of calculated CFPs. The CFP "is calculated as the quantity of GHG emissions throughout the life cycle" and two study groups were formed to also evaluate the need for third party verification.[125] Japan launched a pilot CFP labeling program in 2009.

Under the pilot program, companies develop the product category rules (PCR) that define the criteria for CFP calculation and labeling for a certain product category, and request the approval of PCR. Companies then calculate their products' CFP and receive the third-party verification for the calculation results and labeling methods by the PCR Committee. If the result and the method are appropriate, companies can market their product with the CFP label. Products carrying the CFP label (which resembles a kitchen scale, see Figure 3-3) were put on the market in October 2009.[126]

Figure 3-3 Example of the CFP Label

Source: About Carbon Footprint of Products Label. 2010. 25 March 2010 http://www.cfp-japan.jp/english/system/label.html

Using the CFP label or the Carbon Reduction Label suppliers can find multiple preference opportunities when disclosing their GHG emissions.

3.4.3 Challenges

A significant challenge in implementing the use of a recommended mandatory GHG reporting status evaluation factor is the use of information must be fair and consistent enough to withstand

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[121] Defra, *Green Product Labeling in the UK* (2010) http://www.defra.gov.uk/environment/business/marketing/glc/greenuk.htm (accessed March 25, 2010).

[122] Carbon Trust, *Product Directory* (2010) http://www.carbon-label.com/individuals/product.html.

[123] "This is the savings achieved by the 7% reduction in carbon footprint. Each footprint is based on one full year of data so this savings figure relates the manufacturing energy spend in the 09 carbon footprint to the energy spend in the 07 carbon footprint." (Walkers Carbon Savings, see below)

[124] *Walkers Carbon Savings*, http://www.walkerscarbonfootprint.co.uk/walkers_carbon_trust.html (accessed March 30, 2010).

[125] *About Carbon Footprint of Products* (2010) http://www.cfp-japan.jp/english/about/about.html (accessed March 25, 2010).

[126] About Carbon Footprint of Products Pilot Project (2010) http://www.cfp-japan.jp/english/system/project.html (accessed March 25, 2010).

judicial and oversight scrutiny. If the information used to conduct comparative evaluations is not credible and verifiable, suppliers will protest contract awards based on the evaluation.

Also the Government has little or no experience using GHG emissions data as a procurement evaluation factor, the feasibility of using a GHG emissions in a procurement hinges on the Government's ability to request the best and most reliable information, measure that data against appropriate standards, and include a mechanism in the contract so that, post-award, the supplier has continued incentive to meet those standards.

The use of GHG emissions data as an evaluation factor for contract award raises several issues. As discussed, there is no Federal approved standard for suppliers to follow when measuring and disclosing GHG emissions data. One important reason for the phased approach is that this market needs to mature. By taking the actions recommended, the Government can identify criteria for an acceptable standard.

Another significant challenge is how to define a set of GHG emissions data that would enable fair and reasonable comparative evaluations in contract award decisions. The phased approach allows time for the Government to engage in a deliberative process to determine the data set that would be workable. One approach, which also correlates to the use of past performance information in source selections, is to define and implement industry sector–specific elements and employ those elements in procurement actions being conducted in that sector.[127]

An associated challenge is to determine the relevance of disclosed data to a particular acquisition. It may be problematic to say that agencies are reducing scope 3 supply chain GHG by using corporate-level data that is not allocated to the agency doing the procurement or the items being purchased in the specific contract for which the data is being requested.

Finally, the disclosure of potentially sensitive company information to the Government may be problematic. Suppliers considering voluntary disclosure of GHG emissions data will likely be concerned about the confidentiality of the information they disclose. Such information could be subject to release to third parties under the Freedom of Information Act (FOIA).[128] The FOIA generally provides that any person has a right, enforceable in court, to obtain access to Federal agency records, except to the extent such records are protected from public disclosure by one of nine exemptions. Exemption 4 might protect some or all of a supplier's voluntary GHG emissions submission.

FOIA Exemption 4 precludes the Government from disclosing "trade secrets and commercial or financial information obtained from a person and privileged or confidential."[129] To fit within Exemption 4, the information must be a trade secret or information that is commercial or financial, obtained from a person, and privileged or confidential. It seems unlikely GHG emissions data

[127] For example, past performance evaluations use several subjective elements in evaluation which have been found reasonable (e.g., history of cooperative behavior and customer satisfaction). 48 C.F.R. § 42.1501.

[128] 5 U.S.C. § 552 (2010).

[129] 5 U.S.C. § 552(b)(4). Congress designed Exemption 4 to prevent use of the FOIA to inflict competitive harm. Senate Report No. 813, 89th Cong., 1st Sess. 9 (1965); *see also* House Report No. 1497, 89th Cong., 2d Sess. 10 (1966) ("[T]he purpose of Exemption 4 is to "protect the confidentiality of information which is obtained by the Government…but which would customarily not be released to the public by the person from who it was obtained.").

could be considered financial information, but such data could certainly be considered "commercial"[130] or "a trade secret." Consequently, whether the information satisfies the requirements of Exemption 4 depends on whether the information is "confidential" or a "trade secret." If the information is a trade secret, then it must be protected from release.

If the information is not a trade secret, Federal courts interpreting Exemption 4 have focused on whether the information was provided voluntarily or by mandate. If the agency receives the information voluntarily, the information is considered "confidential" if the person from who it was obtained would not customarily release the information to the public.[131] However, if the agency's receipt of the information was due to an obligation, the test for whether the information is confidential turns on whether public disclosure would harm the Government's ability to obtain similar information in the future, or cause substantial competitive harm to the business or person.[132]

It is probable that courts will consider a supplier's decision to submit information to the Government in compliance with a contract clause that mandates disclosure to be an involuntary act. Therefore, creating a mandatory GHG emissions reporting rule for Federal suppliers could affect the Government's ability to protect the data, which may have a chilling effect on supplier entry to the Federal market and may be perceived as another barrier to entry for small businesses.

Some companies interviewed by the Working Group indicated they consider their GHG inventories (even aggregate, corporate-level numbers) to be highly sensitive commercial information and confidential trade secrets. They also indicated a general reluctance to provide that information to the public. However, many companies that measure GHG emissions already make those inventories publicly available. Indeed, membership in some of the registries even requires some form of public disclosure of GHG emissions information. It is likely that, if the Government requires suppliers to provide GHG emissions data, many of them would also choose to make that information public; however, the Government should not make public disclosure mandatory at this time.

Instead, to encourage all suppliers to submit information they might consider to be proprietary or confidential, the submitted information should be maintained confidentially by the Government to the extent permitted by law. The ability to publicize the information (through data.gov or some other appropriate source) should be made available to companies, but should not be mandatory for any company that chooses to voluntarily disclose the information.

3.4.4 Further Areas of Exploration

The following areas require further exploration.

- Identify what steps are needed to create a GHG emissions–based procurement process that is compatible, to the extent possible, with international programs.

[130] "Commercial" means "pertaining to or relating to or dealing with commerce." *American Airlines, Inc, v. Nat'l Mediation Board*, 588 F.2d 863, 870 (2d Cir. 1978).

[131] *Critical Mass Energy Project v. Nuclear Regulatory Comm'n*. 975 F.2d 871, 879 (D.C. Cir. 1992).

[132] *Nat'l Parks & Conservation Ass'n v. Morton*, 498 F.2d 765, 770 (D.C. Cir. 1974).

- Review the effect of using supplier GHG emissions inventories in the procurement process within the current FAR regulations and determine if a change to the FAR is required.

- Clarify whether procurement law or the Clean Air Act will take precedence in determining whether suppliers' GHG emissions data is considered CBI.

- Determine if and how EO 13514 Section 2(h) requirements affect the development of GHG evaluation factors.

3.5 Encouraging Sustainable Practices

> Executive Order 13514 October 5, 2009
> …other options for encouraging sustainable practices and reducing greenhouse gas emissions…

Most of Section 13 deals with supplier GHG emissions inventories and agency scope 3 supply chain reporting; however Section 13(d) asks for the feasibility of using, "other options for encouraging *sustainable practices* [emphasis added] and reducing greenhouse gas emissions." This question predominantly addresses the feasibility of using outreach and non-procurement incentive programs with suppliers. There is value in exploring the use of supplier sustainability metrics in the procurement process in more detail, and a discussion on the topic is found in Chapter 5 of this report.

The Government currently operates successful outreach programs through agencies and in coordination with industry groups. For example, initiatives like EPA's Climate Leaders are geared toward helping companies improve their sustainability. With these programs already in place and similar programs available through industry trade associations, it is feasible to use outreach and non-procurement incentives to encourage sustainable practices in supplier operations and across Government agencies.

3.5.1 Current Trends

Recognition and outreach related to reducing GHG emissions and encouraging sustainable practices has grown significantly in recent years.[133] Taking advantage of this trend can help the Federal Government encourage suppliers to report their emissions and support agency GHG reduction goals.

Both the Federal workforce and supplier community will need information on the emerging area of supply chain GHG emissions and sustainability. A large-scale communications and outreach strategy similar to those employed by other Government agencies, such as EPA, DOE,[134] Center for Disease Control (CDC), U.S. Department of Agriculture (USDA), and Health and Human Services (HHS),[135] will address the information and motivation for stakeholders to improve supplier sustainability. An effective outreach and communication program is audience-focused

[133] See Footnote 119 on p. 39.

[134] Federal Energy Management Program, *Outreach*, http://www1.eere.energy.gov/femp/services/outreach.html.

[135] S. Grier and C.A. Bryant, "Social marketing in public health," *Annual Review of Public Health*. 26 (2005): 319–339, http://www.ncbi.nlm.nih.gov/pubmed/15760292 or http://www.toniyancey.com/is19/110706a.pdf.

and includes steps to overcome the barriers to change.[136] The following are among the key outreach steps that could increase the effectiveness of a supplier sustainability program:

- Explain the objectives of improved sustainability.
- Solicit commitment to sustainable procurement.
- Outline necessary actions to meet the goal.
- Prompt Federal employees and suppliers to complete the action.
- Use social norms to encourage non-participants to take action.
- Demonstrate the rewards for sustainable purchasing.[137]

Encouraging voluntary behavioral changes through outreach programs has been applied successfully by Government agencies, particularly in the field of public health. Organizations like the CDC, USDA, and HHS have used communication strategies to promote healthy behaviors, such as nutritional snacking and physical fitness.[138] Encouraging behavioral changes through outreach is also making headway in energy and environmental fields. The Energy Star program has relied heavily on targeted outreach to encourage the redesign and purchase of products that are more energy efficient.[139]

GSA has taken a leadership position in providing social media tools to the Federal Government,[140] and these tools are expected to become an integral part of Government operations.

> Most agencies will appoint directors of new media to determine how they can use social networking tools to meet mission goals and comply with President Obama's open Government directive, said Sheila Campbell, team leader of Web best practices for the Government portal USA.gov and co-chair of the Federal Web Managers Council.[141]

[136] CDC, *Social Marketing for Nutrition and Physical Activity Web Course: Introduction*, http://www.cdc.gov/nccdphp/dnpa/socialmarketing/training/pdf/course/Basics.pdf (accessed March 11, 2010).

[137] Laura Poole and Stephen Sylvan, *Guidelines for Designing EPA Partnership Programs*.

[138] See Footnote 135 on p. 43 (p. 319).

[139] See Footnote 137 on p. 44.

[140] GSA, *Landmark Agreements Clear Path for Government New Media* (March 25, 2009), http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_BASIC&contentId=25954.

[141] Jill R. Aitoro, "GSA signs deals for agencies to use social networking sites," *NextGov* (March 25, 2009), http://www.nextgov.com/nextgov/ng_20090325_5490.php

In addition, the use of social media tools is growing within the population at large.

> May 2009 data from Nielsen Online shows that people continue to spend more time on social networking and blog sites than ever before, with total minutes increasing 82 percent year-over-year and the average time per person increasing 67 percent year-over-year in May 2009.[142]

The Government should use social media tools to reach out to relevant audiences and prompt actions that will result in a reduction of GHG emissions.

Industry and Governments are looking increasingly toward recognition awards and competitions to find novel solutions to large-scale challenges.[143] An example is the GreenGov Challenge, which called on Federal employees to develop actionable ideas for improving Government sustainability. The GreenGov Challenge collected 5,300 ideas for collaboratively improving Government sustainability.[144] Other similar programs have been used by USDA,[145] Defense Advanced Research Projects Agency (DARPA),[146] EPA,[147] and private organizations to identify solutions for a wide variety of challenges. Using competitions to address sustainability seems to be a natural outgrowth of this trend.

Green labeling in both the Government and in the private sector has become much more common in the past years as public interest in GHG emissions and other sustainability issues has increased. Green labels have grown from less than a dozen in 1992 to hundreds today.[148] There are currently more than 400 environmentally related product labels in use with varying degrees of scope and reliability in their claims.[149] Labels have even been used to inform the acquisition workforce and consumers of environmentally preferable products, while rewarding suppliers with an advertising advantage. A few of these, including the Energy Star and USDA Organic labels, are widely recognized by the public.[150]

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[142] Nielsen Online, http://blog.nielsen.com/nielsenwire/nielsen-news/twitter-grows-1444-over-last-year-time-on-site-up-175/ (accessed March 16, 2010).

[143] Jeffrey D. Zients, Executive Office of the President, OMB, *Guidance on the Use of Challenges and Prizes to Promote Open Government*, March 8, 2010, http://www.whitehouse.gov/omb/assets/memoranda_2010/m10-11.pdf.

[144] White House, *GreenGov Challenge*, par. 2, http://www.whitehouse.gov/greengov (accessed March 8, 2010).

[145] USDA Office of Communications, *USDA to Sponsor Web-based Nutrition Gaming Contest in Support of the President's Open Government Initiative*, http://www.cnpp.usda.gov/Innovations/innovations-release-12-09-09.pdf, (accessed March 18, 2010).

[146] DARPA, *DARPA Network Challenge*, https://networkchallenge.darpa.mil/Default.aspx (accessed March 18, 2010).

[147] EPA Water Quality Video Contest, http://www.epa.gov/owow/videocontest.html (accessed March 18, 2010).

[148] Scot Case, National Institute of Governmental Purchasing, "The Future of Green Labels," *Go Pro* (October/ November 2009), http://www.nigp.org/EWEB/docs/GoPro/OctNov2009/GreenLabels.pdf.

[149] Greenbiz Staff, *Most Green Labels Fail to Catch Shoppers/ Eyes, Survey Finds*, September 23, 2009, par. 1, http://www.greenbiz.com/news/2009/09/23/most-green-labels-missing-mark-survey-finds (accessed March 6, 2010).

[150] In its *2009 Conscious Consumer Report*, BBMG reports that, of 13 environmental certification seals, 2 of the 3 most familiar to consumers were created by the Federal Government—Energy Star (87 percent familiar) and USDA Organic (62 percent familiar). The other, most familiar seal is the recyclable symbol, with 89 percent familiarity. Outside of those three, consumers were largely unaware of certification seals. *BBMG Conscious Consumer*, "BBMG Finds That Every Few Green Certification Having an Impact," September 22, 2009, par. 4, http://www.bbmg.com/index_news.html.

Initiating a program to encourage Federal supplier sustainability aligns well with the Closing the Circle (CTC) Awards,[151] an Office of the Federal Environmental Executive (OFEE) program to reward Federal employees, Federal teams, and Federal and non-Federal partnerships for their strides in environmental stewardship. The CTC awards program has recognized more than 300 outstanding environmental projects.[152] The award criteria can be expanded to include supply chain GHG emissions factors and encourage reductions.

Several Federal agencies also administer their own award programs with categories similar to the CTC award.[153] These awards can be modified to include supply chain GHG emissions factors.

Studies show that reward—monetary or otherwise—and recognition programs can induce significant innovation.[154] Federal agencies, such as DOD, DOE, EPA, HHS, and National Aeronautics and Space Administration (NASA), use well-established rewards programs to spur innovative technology projects through the private sector.[155] The same concept can be applied to sustainability. Several business associations are rewarding members for sustainability initiatives, and some corporations are rewarding their suppliers for sustainable practices. For example, the Association for Retail Environments (ARE)[156] and the Specialty Coffee Association of America (SCAA)[157] both have sustainability awards. The GSM Association has a Green Mobile Award for the telecommunications industry.[158] McDonald's Restaurant[159] and Wal-Mart[160] also award suppliers for sustainability each year.

3.5.2 Opportunities

Pairing an outreach program with a recognition program builds stronger incentives for Federal suppliers and employees to work toward improved supplier sustainability. If implemented well, outreach and recognition can provide more than information; it can convey a clear path to the desired results. The Government can leverage existing programs to reach out to suppliers

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[151] The Closing the Circle Awards program will be rebranded in the near future.

[152] Federal Facilities Environmental Stewardship & Compliance Assistance Center, *Previous White House Closing the Circle Awards Winners* (updated December 23, 2009), http://www.fedcenter.gov/opportunities/awards/ctcawarrds/ctcawards/prevctcwinners/ (accessed March 1, 2010).

[153] Agencies that have in-house recognition programs include USDA, DOC, DOD, DOE, DOI, HHS, DHS, HUD, DOJ, DOL, DOS, DOT, Treasury, VA, EPA, GSA, JWOD, NASA, NRC, NSF, OMB, OPM, SBA, SSA, TVA, UNICOR, and USPS. Federal Facilities Environmental Stewardship and Compliance Assistance Center, *White House Closing the Circle Awards* (updated December 23, 2009), http://www.fedcenter.gov/opportunities/awards/ctcawards/ (accessed March 17, 2010).

[154] Liam Brunt, Josh Lerner, and Tom Nicholas, *Inducement Prizes and Innovation*, Center for Economic Policy Research (2008), https://nber15.nber.org/c/2008/si2008/DAE/lerner.pdf; and Deborah Stine, "Federally Funded Innovation Inducement Prizes," Congressional Research Service (June 29, 2009), 1.

[155] Deborah Stine, "Federally Funded Innovation Inducement Prizes," Congressional Research Service (June 29, 2009), 3.

[156] ARE Sustainability Awards, http://www.retailfix.com/awards_10Categories.cfm (accessed March 30).

[157] SCAA Award Programs and Competitions, http://www.scaa.org/?page=awards (accessed March 30, 2010).

[158] Global World Congress, *Global Mobile Awards 2010*, http://www.globalmobileawards.com/ (accessed March 30, 2010).

[159] McDonalds, *Values in Practice* (2009), http://www.aboutmcdonalds.com/mcd/csr/report/sustainable_supply_chain.html (accessed March 30, 2010).

[160] Wal-Mart Corporate, *Sustainability*, http://walmartstores.com/Sustainability/ (accessed March 30, 2010).

EPA's Climate Leaders program already works closely with companies to encourage sustainable practices. In addition, there are some industry-specific programs, such as EPA's SmartWay Transport Partnership,[161] that identify industry specific solutions to sustainability challenges. These programs could be replicated or expanded to serve as outreach and education tools to share best practices with the broader supplier community.

Leveraging the CTC awards to include supply chain GHG emissions factors provides a forum for agency recognition that goes beyond the primary goal of achieving the agency emissions reduction goals. By publishing award winners' achievements, other Federal teams could view Federal Government best practices and make efforts to take similar actions.

A Green 100 program would provide extra incentives for suppliers who are leaders in GHG reductions to continue making strides toward sustainability. It uses recognition and visibility—particularly powerful motivators[162]—to reward their efforts and encourage creativity in finding new ways to be good stewards of the environment and society.

Outreach and incentive programs also provide opportunities for suppliers. Recognition in a Federal program can be used to market sustainable practices. Suppliers can also benefit from the Government outreach to learn how to improve operations and better serve all of their customers.

3.5.3 Challenges

The current outreach programs related to GHG emissions are voluntary and operate on a limited scale. Applying these programs across the Federal supplier base will require the Government to invest the resources needed for these programs.

Minimizing confusion regarding Government sustainability initiatives when communicating with Federal suppliers should be a goal. This goal highlights the need for the Government to coordinate messaging and outreach activities. To effectively communicate with suppliers, the Government will likely need a Government-wide communication plan that harmonizes relevant actions and messages.

Finally, while product labels are used in Government procurement today, the recent proliferation of green labels has made it difficult to select products based on labels alone. Fourteen of the 32 labels on GSA Advantage! are environmental labels. With such a large number of these labels, it is difficult for consumers to become familiar with them, and few consumers will subsequently base their purchases on them.[163]

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[161] EPA, Smartway, http://www.epa.gov/SmartwayLogistics/index.htm (accessed March 16, 2010).

[162] Liam Brunt, Josh Lerner, and Tom Nicholas, *Inducement Prizes and Innovation*, Working Paper (Center for Economic Policy Research), 2008.

[163] *BBMG Conscious Consumer*, "BBMG Finds That Every Few Green Certification Having an Impact," September 22, 2009, par. 4, http://www.bbmg.com/index_news.html.

3.5.4 Further Areas of Exploration

The following area requires further exploration:

- Evaluate the potential to leverage existing Federal labeling programs as a mechanism for suppliers to provide their GHG emissions to agencies.

- Explore existing Federal GHG outreach programs and their capacity for growth as suppliers become more interested in this area.

Chapter 4
Suggested Path Forward

In deciding upon the feasibility of the questions asked in Section 13, GSA identified actions that illustrate the feasibility of achieving the goal of working with suppliers to provide GHG emissions information that will assist Federal agencies in tracking and reducing scope 3 GHG emissions. These actions constitute the "suggested path forward."

The fields of GHG emissions reporting, especially scope 3 reporting and sustainable supply chain management, are still emerging. As has been previously noted, a lack of clarity remains in relevant areas, such as standards, verification methods, and data management processes. With such a high level of variability, GSA was able to identify some clear near-term actions that are suggested to occur in FY2011–FY2012; but, when moving beyond FY2012, GSA believes any specific proposed actions may become irrelevant because of a changing paradigm. Therefore, the actions identified for FY2012–FY2016 are more general. The two proposed phases are framed to be flexible and employ an iterative process that builds upon advancements in the fields of supply chain management and sustainability.

In keeping with the recognition of industry's trend toward tracking GHG emissions to identify areas for cost reductions and other gains, GSA decided that an incentive-based approach, and one that leverages actions already being implemented by the Federal supplier base, would be most effective in providing agencies with supplier GHG emissions data. This incentive approach uses supplier-provided GHG emissions data as a procurement preference. The approach acknowledges the importance of outreach, training, and direct assistance, especially for small businesses and participants of other socioeconomic programs.

The first phase, covering FY2011–FY 2012, largely comprises encouraging Federal suppliers through incentives to begin voluntarily disclosing their GHG emissions, requiring Federal agencies to begin estimating their scope 3 supply chain GHG emissions, and using suppliers' GHG emissions data as an evaluation factor in procurements.

Some standards for calculating product emissions exist, but the majority are either being developed or need to be developed. It is important to note that GSA's interviews with representatives from academia, EPA, the European Commission, Japan, Wal-Mart, Google, 3M, Timberland, and other organizations revealed that efforts are underway to develop standards for capturing emissions data specific to individual products and industry sectors.

With this being the case, GSA believes suppliers should be allowed to voluntarily disclose both corporate and product-level emissions data the moment they are able to do so. Product-level emissions data provides Federal agencies with the most accurate supply chain emissions information, and GSA believes capturing the most accurate data should be the Federal Government's ultimate goal.

Data gained from a product-level approach should be used during the Federal procurement process once the data, standards, and capabilities within both the Government and its supply base

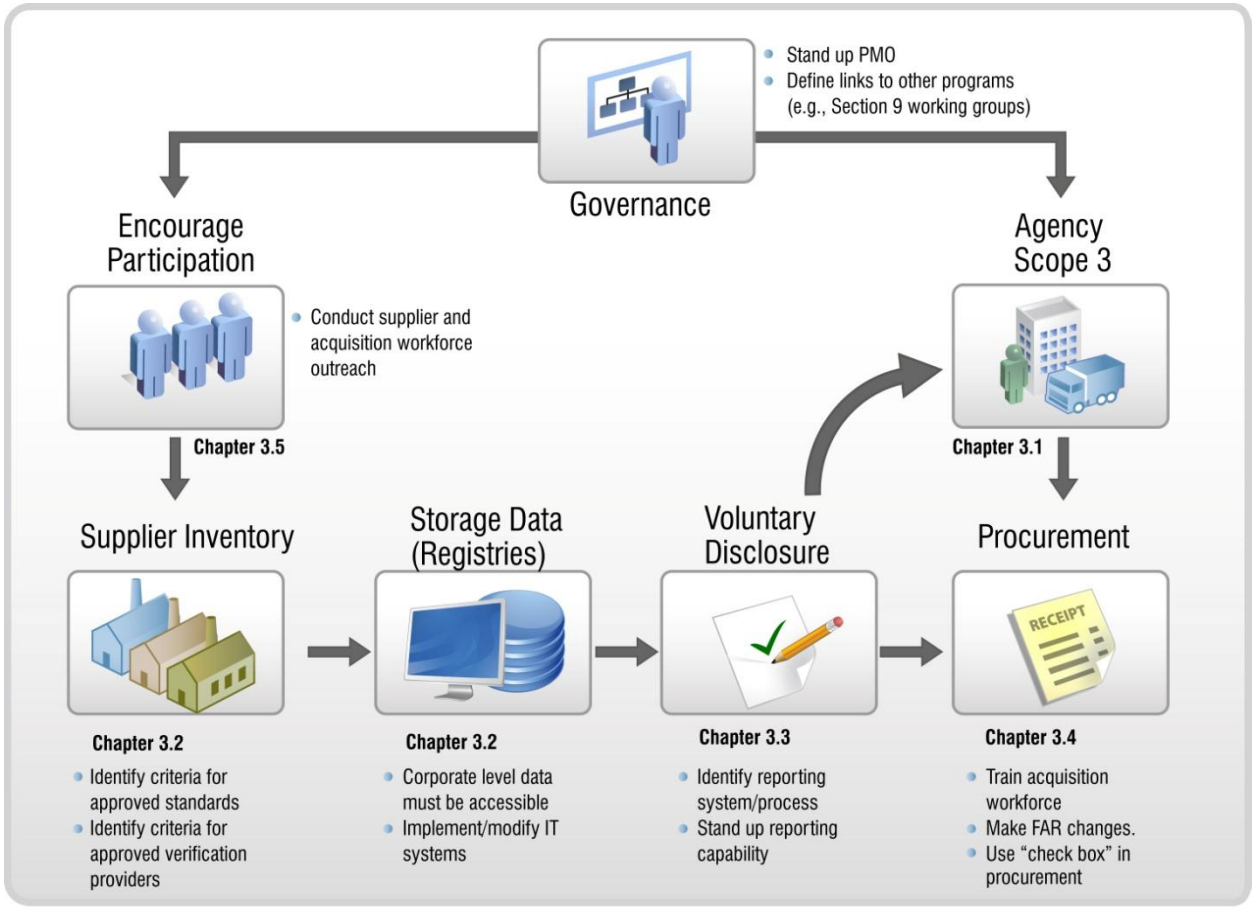
are mature enough to do so. Equally important is the ability to capture the GHG emissions associated with the services the Government procures. GSA is not aware of any currently available standards for calculating emissions from services. At this time, agency scope 3 emissions from services can only be captured using a corporate-level approach.

The remainder of this chapter describes phase activity categories that define activities that take place in each of the recommended phases.

4.1 Phase 1: FY2011–FY2012

Phase 1 focuses on standing up a PMO to manage (1) the connections between suppliers and agencies to facilitate sustainable procurement, (2) acquisition workforce training, and (3) supplier and agency outreach. The key activities of Phase 1 are outlined in Figure 4-1.

Figure 4-1 Key Phase 1 Activities



4.1.1 Governance

A PMO is needed to ensure the necessary actions for using suppliers' GHG emissions information to inform agency scope 3 inventories and procurement activities occur. GSA, in coordination with other agencies, would manage the PMO.

- Because it is the lead agency for Section 13, GSA is well positioned to continue working with the interagency Section 13 Working Group members to facilitate the actions identified in this suggested path forward. GSA is leading an interagency group that has engaged the CDP to survey suppliers regarding their GHG emissions.
- The PMO will coordinate with the DOE in establishing the Vendor and Contractor Emissions sub-committee under the GHG Accounting and Reporting Working Group proposed in the EO 13514 Section 9 recommendations. DOE recommends that GSA lead this sub-committee.
- The PMO will manage the resolution of the items identified in the "Further Areas of Exploration" in Chapter 3, which include the following:
  - Research the status of GHG emissions inventories with respect to CBI.
  - Identify the criteria for acceptable product-level standards and monitor the marketplace for acceptable standards.
  - Identify potential service-level standards or processes to estimate service-level GHG emissions.
  - Identify how far down the supply chain suppliers should be expected to gather and voluntarily disclose their scope 3 GHG emissions data.
  - Research and identify potential trade regulation issues that may impact the sharing of GHG emissions information between companies.
  - Investigate the criteria necessary to approve a standard for use by suppliers.
  - Investigate methods for collecting distributed supplier GHG inventory data so that agencies can collect scope 3 supply chain emissions data.
  - Review and seek legal review on the Paperwork Reduction Act (44 U.S.C. 3501 et seq.) and determine if it applies to the collection of voluntarily disclosed GHG emissions data.
  - Research and select a method for the voluntary disclosure of supplier GHG emissions inventories inventory data to Federal agencies (e.g., using CCR, ORCA, GSA Carbon Footprint Tool, linked open data, EDI, XML, or some other solution).
  - Research and select a method to ensure supplier GHG emissions data is easily accessible to both contracting officers for procurement evaluation purposes and agency sustainability officers for agency supply chain emissions tracking.

- Evaluate the difficulty to suppliers, especially small and socioeconomically disadvantaged businesses, in submitting relevant GHG emissions data.
- Identify what steps are needed to create a GHG emissions–based procurement process that is compatible, to the extent possible, with international programs.
- Review the effect of using supplier GHG emissions inventories in the procurement process within the current FAR requirements and determine if a change to the FAR is required.
- Clarify whether procurement law or the Clean Air Act will take precedent in determining whether suppliers' GHG emissions data is considered CBI.
- Determine if and how EO 13514 Section 2(h) requirements impact the development of GHG evaluation factors.
- Evaluate the potential to leverage existing Federal labeling programs as a mechanism for suppliers to provide their GHG emissions to agencies.
- Explore existing Federal GHG outreach programs and their capacity for growth as suppliers become more interested in this area.

4.1.2 Encourage Participation

A Government-wide communications plan should be developed to guide outreach and incentive activities. The PMO, through the development and coordination of an interagency communications working group, will develop the communications plan. GSA proposes that EPA chair the communications working group, because EPA has significant experience in developing highly effective, environmentally relevant outreach programs, especially for industry.

The PMO will coordinate with OFPP, GSA, DOD, NASA, DOE, EPA, the Veterans Administration (VA), SBA, agency Offices of Small Business Utilization, and other appropriate entities to leverage existing communication channels with suppliers.

The communications plan should include methods that motivate suppliers to begin tracking their GHG emissions through the use of awards, recognition programs, competitions, and social media tools. Existing awards and recognition programs should be leveraged to minimize costs. The communications plan should also include methods to encourage agencies to begin tracking their scope 3 supply chain emissions as soon as possible.

4.1.3 Supplier Inventory and Registries for Storing Data

Criteria need to be developed to identify approved standards and third party verifiers. Because of their GHG emissions data expertise, GSA suggests that DOE and EPA should lead the effort to identify the criteria upon which approved GHG emissions inventory standards will be based.

Further exploration is needed to determine which agency should ultimately lead the effort to identify the criteria used to qualify which entities can be an "approved" third party verifier. The GHG emissions inventory verification process functions much like a financial auditing process,

and knowledge of accounting principles, auditing procedures, and GHG emissions will be important in developing the criteria. No Federal agency naturally fits into this niche. GSA, in coordination with the appropriate experts, might lead the effort to identify the criteria.

The EPA, in conjunction with other relevant agencies or programs, such as Sustainable and Lifecycle Information-based Manufacturing (SLIM) at the National Institute for Standards and Technology (NIST), should lead a thorough review of available product-level supply chain GHG emission standards. The EPA, in conjunction with other relevant agencies or programs, should also investigate possible service-level supply chain GHG emissions standards.

GSA will begin planning for the implementation of modifications to GSA Advantage! and Global Supply so that customer agencies can view product-level GHG emissions data when suppliers provide it. DOD could undergo the same process for DOD EMALL.

4.1.4 Voluntarily Disclose GHG Data

GSA will identify the reporting system or processes through which suppliers voluntarily disclose their GHG emissions information to the Federal Government. During Phase 1, the data disclosed should include corporate-level scope 1 and 2 emissions that are at least first-party verified.

4.1.5 Procurement

Prior to implementing the use of GHG emissions data in the procurement process, the acquisition workforce must be trained on how to use GHG emissions data as either a procurement preference or an evaluation factor.

GSA has begun developing training content for the acquisition workforce, and it should work collaboratively with EPA and DOE to develop this acquisition-focused training, as well as the training content for Federal employees outside of the acquisition workforce. The training content should also be modified so it is relevant to Federal suppliers. The Federal Acquisition Institute (FAI) and Defense Acquisition University (DAU) should be the lead entities to disseminate the acquisition-focused training, while GSA should consider the development of dissemination platforms for Federal employees outside of the acquisition workforce. Other training platforms or entities should be explored to maximize dissemination.

Changes to the FAR may be needed if the GHG emissions data is to be used in procurements Government-wide. Implementation of any FAR changes will be necessary before preferences can be applied. GSA, in coordination with DOD, NASA, and other agencies as appropriate, will manage the development of proposed FAR language. GSA will take direction from the Office of Federal Procurement Policy (OFPP) to develop the specifics of the envisioned procurement preference.

GSA recommends the use of a “check box” within an identified reporting system for suppliers to indicate whether they have completed a GHG emissions inventory that encompasses scope 1 and 2 emissions. During phase 2, GSA expects suppliers’ GHG emissions inventories will include scope 3 emissions. Suppliers would also have the means to note within the reporting system whether their inventory data was verified and to what level. Suppliers’ responses to specific

GHG emissions “check box” questions could eventually be used as an evaluation factor for contract award.

4.1.6 Agency Scope 3 Activities

As suppliers begin disclosing their GHG emissions data, agencies should be encouraged to begin tracking their scope 3 supply chain emissions. Individual agency assessments of which tier 1 suppliers are reporting is critical in helping agencies identify what portion of supply chain emissions make up their scope 3 emissions. It will also help agencies define where the greatest emission reductions can take place within their supply chain.

The scope 3 inventory working group should establish the methods for agencies to calculate scope 3 supply chain emissions from the supplier inventories disclosed.

4.1.7 Specific Activities

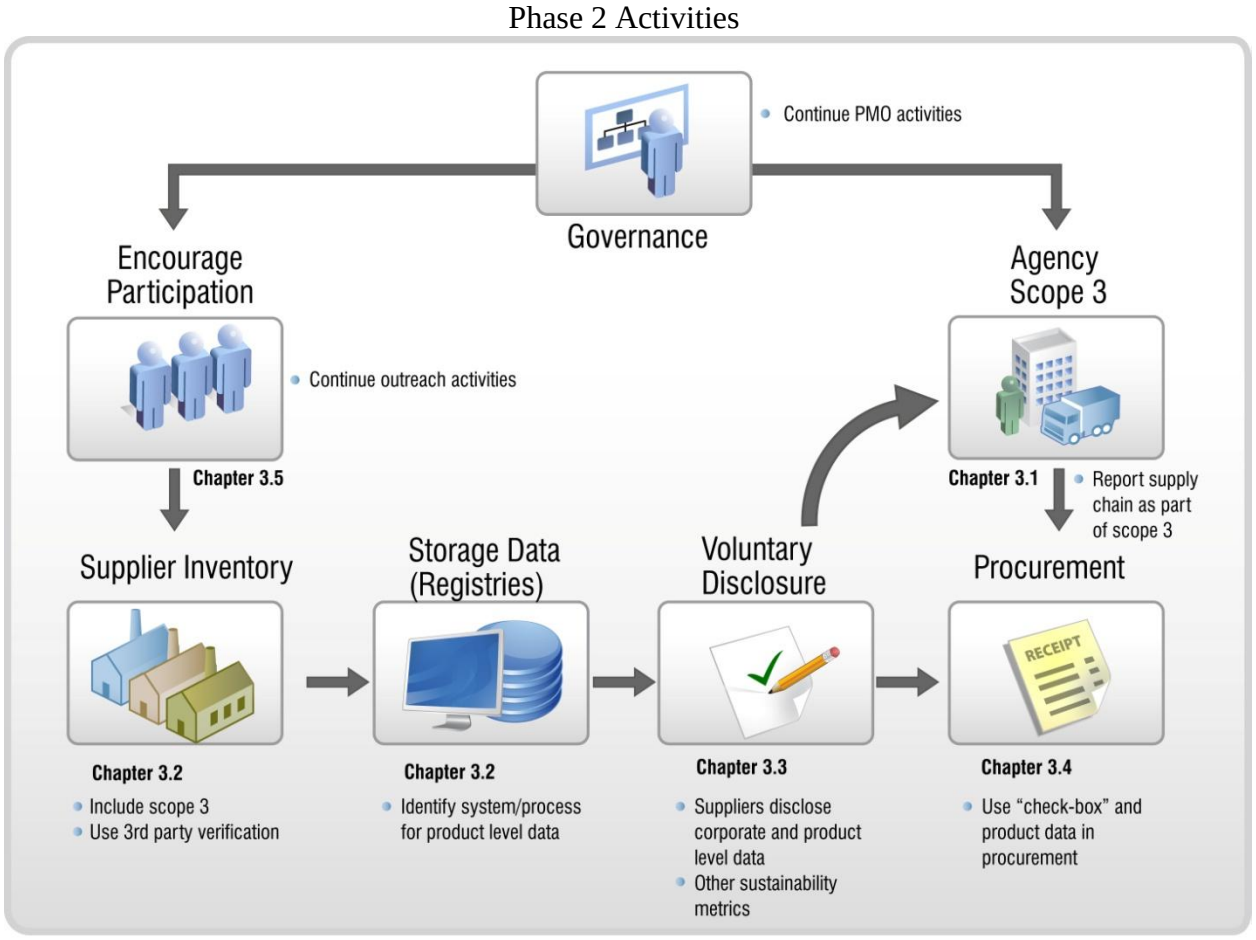
Table 4-1 Timeline of Suggested Activities for Completion During Phase 1

FY2011	FY2012
Governance	
• Stand up program management office. • Define links to other programs (e.g. Section 9 working groups). • Manage the resolution of items identified in the "further areas of exploration" in Chapter 3. • Assume PMO remains active and is chaired by GSA through phase 2.	• Operational PMO. • Continue to coordinate with the Section 9 working group on scope 3 inventories. • Build relationships with other programs identified in FY2011. • Continue managing the resolution of items identified in the "areas of further exploration."
Encourage Participation	
• Establish interagency communications working group, led by EPA, to develop communications plan to guide outreach and incentive activities. • Coordinate with GSA, DOD, DOE, EPA, NASA, VA, SBA, agency Offices of Small Business Utilization, and other agencies as appropriate to leverage existing communication channels with suppliers. • Identify existing award and recognition programs that should be leveraged to motivate agencies and suppliers. • Identify new methods for motivating agencies and suppliers, such as competitions, social media, mentor-protégé programs, and default "Green Aisles" on procurement systems.	• Continue execution of communications plan, led by communications working group. • Continue coordinating activities with GSA, DOD, DOE, EPA, NASA, VA, SBA, agency Offices of Small Business Utilization, and other agencies as appropriate to leverage existing communication channels with suppliers. • Coordinate with award and recognition programs identified in FY2011 to build appropriate award and recognition categories into existing programs. • Begin implementing new incentive strategies.
Supplier Inventory and Registries for Storing Data	
• Develop criteria to identify approved reporting standards. (Effort to be led by DOE and EPA.) • Develop criteria used to qualify who can be an approved third party verifier. (Lead agency to be identified.) • Conduct review, led by EPA, NIST, and other agencies as appropriate, of available product-level supply chain GHG emission standards. • Plan for implementing online ordering system modifications to allow for display of product level emissions data; GSA and DOD should both begin planning.	• Disclose approved criteria for reporting standards and identify current compliant standards. • Disclose approved criteria for third party verifiers and identify current compliant verifiers. • Identify acceptable product level supply chain GHG emission standards for use by Federal agencies. • Continue planning and implementation of online system modifications. • Make information-sharing arrangements with registries.
Voluntarily Disclose GHG Data	
• Identify the reporting system or process through which suppliers voluntarily disclose their scope 1 and 2 GHG emissions. (Effort to be led by GSA.)	• Implement the reporting system or process through which suppliers voluntarily disclose their scope 1 and 2 GHG emissions. (Effort to be led by GSA.)
Procurement	
• Develop training content for the acquisition workforce. (Effort to be led by GSA.) • Coordinate with FAI and DAU on dissemination of training. • Explore other training platforms and entities. • Coordinate on the identification and development of FAR changes and OFPP policy letter on the use of GHG emissions data as an evaluation factor. • Plan for implementing a "check box" in the identified reporting system for suppliers to indicate scope 1 and 2 reporting status and level of verification.	• Begin disseminating training for acquisition workforce. • Coordinate with training platforms and entities identified in FY2011. • Continue coordination, based on OFPP direction, on the development and insertion of any needed FAR language. • Implement "check box" in the identified reporting system.
Agency Scope 3 Activities	
• Encourage agencies to begin tracking scope 3 supply chain emissions. • Assess which tier 1 suppliers are critical for each agencies scope 3 supply chain emissions. Assessments to be performed by each individual agency.	• Tracking of scope 3 supply chain emissions continue for agencies. • Assessing of critical tier 1 suppliers continues for each individual agency.

4.2 Phase 2: FY2013–FY2016

Phase 2 activities include the reporting of agencies' scope 3 supply chain emissions and using suppliers' GHG emissions data as an evaluation factor in procurements. The key activities of phase 2 are outlined in Figure 4-2.

Figure 4-2 Key Phase 2 Activities



4.2.1 Governance

The PMO continues to ensure completion of the necessary actions to use suppliers' GHG emissions information to assist agencies with their scope 3 inventories and procurement activities.

4.2.2 Encourage Participation

The PMO should continue the outreach activities planned and conducted during phase 1. The PMO should also update the communications plan in coordination with the interagency communications working group.

4.2.3 Supplier Inventory and Registries for Storing Data

Suppliers voluntarily disclosing GHG emissions information will be expected to disclose scope 1, 2, and 3 corporate-level GHG emissions data and have that data verified by a third party. Suppliers should report the same select set of scope 3 emissions that Federal agencies are directed to report according to EO 13514 Section 9 guidance.

4.2.4 Voluntarily Disclose GHG Data

GSA will identify the reporting system or process through which suppliers voluntarily disclose their product-level GHG emissions information to the Federal Government.

4.2.5 Procurement

Depending on the results of the phase 1 activities, procurement evaluation factors could be implemented for certain product categories. Suppliers will be expected to provide GHG emissions data for as many products as possible. Agencies could consider product-level GHG emissions data as a procurement evaluation factor.

Changes in FAR language will likely be needed if agencies use suppliers' product-level GHG emissions data in contract award decisions. Implementation of any FAR changes will be necessary before evaluation factors can be applied. GSA should manage the development of proposed FAR language in cooperation with OFPP to develop the specifics of the envisioned procurement preference.

4.2.6 Agency Scope 3 Activities

During this phase, Federal agencies should report their baseline scope 3 supply chain emissions inventory. Agencies can use data they have received from participating suppliers and estimate the remainder of their supply chain emissions. GSA expects that, in future years, suppliers will disclose more comprehensive GHG emissions data, resulting in more accurate agency scope 3 supply chain inventories. EO 13514 Section 9 guidance may need to address whether agencies should update their scope 3 supply chain emissions baseline data.

4.2.7 Specific Activities

A timeline of specific activities by fiscal year for phase 2 will be determined in concert with advancements in the fields of supply chain management and sustainability.

Chapter 5
Encouraging Sustainability in the Federal Procurement Process

EO 13514 defines sustainability as "creating and maintaining conditions, under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations."[164] Overall, sustainability entails a systems approach for the creation and distribution (i.e., the supply chain) of innovative products and services that minimizes resources (e.g., materials, energy, water, and land), eliminates toxic substances, and produces zero waste that effectively reduces GHGs.[165] GHG emissions is just one, albeit an important, component of sustainability. To achieve the larger state of sustainability, it is feasible to pursue a longer-term strategy of identifying and integrating additional sustainability metrics as part of the Federal procurement decision-making process and agency sustainability performance tracking process.

5.1 Current Trends

Section 13 of EO 13514 asked GSA to explore the feasibility of other options for encouraging sustainable practices. As the Government seeks to benefit from industry's trend toward tracking and reducing GHG emissions as part of its supply chain optimization activities, it should also benefit from corporations' increasing move toward internalizing and reporting on sustainability initiatives. GSA finds it feasible to explore how Federal suppliers could, over the ensuing years, share their performance on a broader scope of sustainability metrics, such as those currently incorporated by a number of *Fortune* 100 corporations as part of their triple bottom line or corporate social responsibility reporting.[166] Such explorations can potentially assist Federal agencies in developing their strategic sustainability performance plans, which requires agencies to "take into consideration environmental measures as well as economic and social benefits and costs in evaluating projects and activities based on lifecycle return on investment,"[167] among other requirements.

Current sustainability trends reflect companies' use of "triple bottom line accounting," a reporting tool that expands the criteria for measuring corporate success beyond the financial to include ecological and social metrics and attempts to link the social and environmental impact of an organization's activities—in a measurable way—to its economic performance.[168] Use of triple bottom line accounting is part of the larger trend toward corporate social responsibility, in which a company integrates public interest issues as part of its daily decision-making and operates in a

[164] EO 13514, §19 (l), October 5, 2009.

[165] Ram Sriram, "Sustainable and Lifecycle Information-based Manufacturing," National Institute of Standards and Technologies presentation, 2010.

[166] Ceres, "Ceres Companies," http://www.ceres.org/Page.aspx?pid=426#list (accessed March 13, 2010).

[167] EO 13514, §8(f), October 5, 2010.

[168] John Elkington, *Cannibals with Forks: The Triple Bottom Line of 21st Century Business (*New Society Publishers, September 1, 1998).

manner that meets or exceeds the ethical, legal, commercial, and public expectations that society has of that company. "Information about sustainability impacts and sustainability performance can help managers to incorporate deliberative, sustainable thinking into their decision-making, planning, implementation, and control activities."[169]

A focus on sustainability can create value in ways that support growth, improve returns on capital, reduce risk, or improve management quality. A Summer 2009 McKinsey Consulting report on the value of sustainability highlighted some of the reasons companies are pursuing and reporting on sustainability initiatives, such as growth, return on capital, risk management, and management quality, as shown in Table 5-1.

Table 5-1 Value in Environmental, Social, and Governance Programs

Financial value created	Value driver	Value created
Growth	New markets	Access to new markets through exposure from ESG programs
	New products	Offerings to meet unmet social needs and increase differentiation
	New customers/market share	Engagement with consumers, familiarity with their expectations and behavior
	Innovation	Cutting-edge technology and innovative products/services for unmet social or environmental needs; possibility of using these products/services for business purposes (e.g., patents and proprietary knowledge)
	Reputation/differentiation	Higher brand loyalty, reputation, and goodwill with stakeholders
Returns on capital	Operational efficiency	Bottom-line cost savings through environmental operations and practices (e.g., energy and water efficiency and reduced need for raw materials)
	Workforce efficiency	Higher employee morale through ESG; lower costs related to turnover or recruitment
	Reputation/price premium	Better workforce skills and increased productivity through participation in ESG activities Improved reputation that makes customers more willing to pay price increase or premium
Risk management	Regulatory risk	Lower level of risk by complying with regulatory requirements, industry standards, and demands of nongovernmental organizations
	Public support	Ability to conduct operations, enter new markets, reduce local resistance
	Supply chain	Ability to secure consistent, long-term, and sustainable access to safe, high-quality raw materials/products by engaging in community welfare and development
	Risk to reputation	Avoidance of negative publicity and boycotts
Management quality	Leadership development	Development of employees' quality and leadership skills through participation in ESG programs
	Adaptability	Ability to adapt to changing political and social situations by engaging local communities
	Long-term strategic view	Long-term strategy encompassing ESG issues

Source: Sheila Bonini, Timothy M. Koller, and Philip H. Mirvis, "Valuing social responsibility programs," *McKinsey on Finance*, Summer 2009.

[169] Stefan Schaltegger, Martin Bennett, and Roger Burritt, eds., *Sustainability Accounting and Reporting*, (Springer: Dordrecht, Netherlands, 2006).

Recognizing that companies incorporating both environmentally and economically sustainable manufacturing processes gain competitive advantages, the U.S. Department of Commerce's Manufacturing and Services unit created an interagency working group on sustainable manufacturing—the Interagency Working Group on Manufacturing Competitiveness (IWG-MC), Subgroup on Sustainable Manufacturing—to work with U.S. manufacturers on sustainability issues. The Department of Commerce also launched the Sustainable Business Clearinghouse, an online portal for information on Federal Government programs and resources that support sustainable business.[170]

While there are known benefits to reporting on sustainability initiatives, having suppliers voluntarily disclose that information to the Federal Government for use in agency reporting or procurements has challenges similar to those faced in voluntarily disclosing GHG emissions information, namely a lack of consensus on a single sustainability standard and associated third party verification processes.

In addition to ISO 14000, [171] ISO 26000[172] (which is scheduled to be released in 2010), and British Standard 8900,[173] the GRI Sustainability Reporting Guidelines are among the current international sustainability standards. GRI is a globally applicable set of guidelines for reporting on the economic, environmental, and social performance by corporations, Governments, and non-governmental organizations. Some companies have used the GRI Sustainability Reporting Guidelines to identify criteria relevant to their organization and include them in yearly stakeholder reporting.

For example, Hewlett-Packard (HP), one of the world's largest information technology companies, used GRI standards in 2003 to develop its *Social and Environmental Responsibility Supplier Code of Conduct*, which links HP's supply chain with human rights and environmental protection:

> HP suppliers are located mainly in emerging and developing countries, where prevailing norms related to human rights standards and labor and environmental practices may differ from those in the developed world. Our priorities include protecting workers' rights, raising health and safety standards, and reducing suppliers' environmental footprint.[174]

HP specifically reports on its supply chain sustainability activities in its yearly *Global Citizenship Report*.

The Coalition for Environmentally Responsible Economies, an organization that comprises investors, environmental groups, and other stakeholders, developed the GRI. The guidelines

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[170] International Trade Administration, *Sustainable Manufacturing Initiative and Public-Private Dialogue*, http://www.ita.doc.gov/competitiveness/sustainablemanufacturing/index.asp (accessed March 25, 2010).

[171] ISO, *ISO 14000 essentials*, http://www.iso.org/iso/iso_14000_essentials.

[172] ISO, *About ISO SR* [Social Responsibility], http://isotc.iso.org/livelink/livelink/fetch/2000/2122/830949/3934883/3935096/07_gen_info/about.html.

[173] BSi, *BS 8900:2006: Guidance for managing sustainable development*, http://shop.bsigroup.com/ProductDetail/?pid=000000000030118956 (accessed March 17, 2010).

[174] HP, *Supply Chain Social and Environmental Responsibility Introduction*, www.hp.com/hpinfo/globalcitizenship/supplychain/index.html (accessed March 17, 2010).

currently being used by 1,300 organizations, including several *Fortune* 100 firms, provide a starting point for what the Federal Government could review as a source for additional sustainability metrics. GRI uses 40 core indicators, which are organized into six major criteria and associated sub-criteria, as shown in Table 5-2.[175]

Table 5-2 GRI Reporting Criteria

Criteria	Sub-criteria
Economy	Economic performance, market presence, indirect market impacts
Environment	Materials, energy, water, biodiversity, emissions, compliance
Product responsibility	Customer health and safety, product and service labeling, marketing communications
Labor practices and decent work	Employment, labor/management relations, occupational health & safety, training and education, diversity and equal opportunity
Human rights	Investment and procurement practices, non-discrimination, freedom of association and collective bargaining, child labor, forced and compulsory labor
Society	Community, corruption, public policy, compliance

A 2009 report by the Boston College Center for Corporate Citizenship identified from interviews with seven companies some challenges associated with GRI.[176]

> A key complaint about the GRI was that the indicators represented a "laundry list" of information for companies to report on. The sheer number of indicators and resources required to report against them all deterred some companies from applying the guidelines in full. At a certain point, the additional resources required to respond to more indicators outweigh the benefit from greater disclosure. This concern was keenly felt by Seventh Generation, the smallest and only privately held company in the study. Although Seventh Generation is committed to transparency, it experimented with a "GRI-lite" report to reduce the burden of producing a full report. The ambiguity of the indicators was also cited as a negative aspect of the GRI. While the benefit of ambiguity may be that it allows standards of best practice to emerge, it reduces the comparability (and therefore the competitive opportunity) of reports.[177]

Among the sustainability reporting criteria used by GRI are criteria already used by the Federal Government as regulations to which agencies must adhere, such as diversity and equal opportunity[178] and occupational health and safety.[179] In considering which sustainability metrics suppliers should track, the Government should focus on the metrics that are easiest to track and are relevant to the Government. Since the Federal Government has many regulatory

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[175] GRI, *What is GRI?* www.globalreporting.org/AboutGRI/WhatIsGRI (accessed March 16, 2010).

[176] The companies interviewed were Baxter, Gap, Nestle, Novo Nordisk, Seventh Generation, State Street and Telefonica.

[177] Belinda Richards and Richard Wood, *Value of Social Reporting* (Boston College Center for Corporate Citizenship, April, 2009), 18.

[178] U.S. Equal Employment Opportunity Commission, *Laws Enforced by EEOC*, http://www.eeoc.gov/laws/statutes/index.cfm (accessed March 14, 2010).

[179] U.S. Department of Labor, Occupational Safety and Health Administration, http://www.osha.gov (accessed March 14, 2010).

programs that track aspects of sustainability, it may be helpful to identify the metrics already required by regulation and leverage those to the greatest extent possible.

As with GHG emissions reporting standards, the Government should review the criteria for existing sustainability standards and determine what constitutes "acceptable Government standards" for future sustainability initiatives.

There are also organizations that have developed product-specific sustainability metrics. Among the many examples is the Sustainable Packaging Coalition, an industry working group, which released in December 2009 the Sustainable Packaging Indicators and Metrics Framework (or SP Metrics Framework). That framework offers a common approach to benchmark and measure progress toward sustainable packaging.[180]

5.2 Path Forward

Any movement to incorporate sustainability metrics into procurement decision-making should be implemented using a phased approach and in strong partnership with relevant agencies and the Federal supplier base. The implementation process should broadly mirror the process recommended in Chapter 4 of this report to implement GHG emissions data. That process should include

- Identification of desired sustainability metrics;
- Decision about what standards, verification criteria, and third party verification providers are relevant;
- Decision on what applicable procurement factors can be used as part of the procurement evaluation process that would raise small businesses or other socioeconomic programs to a participating level; and
- Identification of the systems or approaches the Government will employ for suppliers to disclose relevant sustainability performance data and how those systems can be accessed by the acquisition workforce and other appropriate agency members.

Section 13 Working Group discussions highlighted the need for additional significant research to identify relevant sustainability metrics before implementing those metrics in the Federal procurement process and agency sustainability reporting. The NIST program on SLIM has taken significant steps towards doing just that.[181] NIST, along with the EPA and DOE, is beginning to identify relevant sustainability metrics.

Just as with integrating GHG emissions data as part of Government-wide procurement, a change to the FAR will be required. In addition, there may be a need for specific outreach and training, to both the acquisition workforce and supplier base, on how these new sustainability

[180] Sustainable Packaging Coalition, www.sustainablepackaging.org/ (accessed March 15, 2010).

[181] The SLIM objective is to, "define the standards landscape in the area of sustainable manufacturing, including such concerns as design for disassembly, carbon footprint determination, resource tolerancing, remanufacturing, recycling, energy resource management, and hazardous and toxic materials standards." NIST, *Sustainable and Lifecycle Information-based Manufacturing*, www.mel.nist.gov/programs/slim.htm.

metrics can be used within the procurement process. Similarly, the process for suppliers to provide the sustainability data and the process for accessing the data by relevant Government staff would also need to be developed. The processes (outlined in Chapter 4) for disclosing supplier GHG emissions information with Federal sustainability and procurement staff can be leveraged for the inclusion of sustainability factors.

Although there are many real challenges associated with identifying and reporting on a set of federally relevant sustainability factors, and then using the sustainability data as part of the agency reporting and Federal procurement processes, GSA believes the next step is to undertake additional research, as already outlined. Such research should be conducted in coordination with the NIST SLIM program. Research could begin as early as FY2011, with the expectation that it may take 24 months or longer to identify and then come to consensus on suitable sustainability metrics that would work as part of the agency reporting and Federal procurement processes.

5.3 Further Areas of Exploration

GSA identified the following areas in need of further exploration.

- Review sustainability metrics that are currently in use by corporations and those being proposed for use by other Governments as part of their reporting or procurement process.
- Review existing efforts by EPA, DOE, NIST, and other relevant agencies and international bodies to coordinate and consolidate existing sustainability standards.
- Identify specific sustainability metrics that support the Federal Government's sustainability goals.
- Review existing sustainability standards and identify the criteria that would have to be contained within a Government-approved sustainability reporting standard.
- Assess the incentives that drive companies to integrate sustainability metrics as part of their organizational decision-making process, and identify how these incentives could be leveraged by the Federal Government.

Appendix A
Abbreviations

ARE	Association for Retail Environments
CBI	confidential business information
CCR	Central Contractor Registration
CCAR	The California Climate Action Registry
CDC	Center for Disease Control
CDP	Carbon Disclosure Project
CEQ	Council on Environmental Quality
CFP	Carbon Footprint Product
CTC	Closing the Circle
D&B	Dun & Bradstreet
DARPA	Defense Advanced Research Projects Agency
DAU	Defense Acquisition University
Defra	U.K. Department of Environment, Food, and Rural Affairs
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DUNS	Data Universal Number System
EDI	electronic data interchange
EMALL	Electronic Mall
EO	Executive Order
EPA	Environmental Protection Agency
FAI	Federal Acquisition Institute
FAR	Federal Acquisition Regulations
FOIA	Freedom of Information Act
FY	fiscal year
GAO	Government Accountability Office
GHG	greenhouse gas
GRI	Global Reporting Initiative

GSA	General Services Administration
HFC	hydroflourocarbon
HFE	hydroflourinated ethers
HHS	Health and Human Services
HP	Hewlett-Packard
ISO	International Organization for Standardization
MAS	Multiple Award Schedules
MPIN	Marketing Partner Identification Number
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NIST	National Institute for Standards and Technology
OEM	original equipment manufacturer
OFPP	Office of Federal Procurement Policy
OMB	Office of Management and Budget
ORCA	Online Representations and Certifications
PCR	product category rules
PFC	perfluorocarbon
PMO	program management office
PPIRS	Past Performance Information Retrieval System
RGGI	Regional Greenhouse Gas Initiative
SBA	Small Business Administration
SCAA	Specialty Coffee Association of America
SEC	Securities and Exchange Commission
SEEP	Supplier Energy Efficiency Project
SLIM	Sustainable and Lifecycle Information-based Manufacturing
USDA	United States Department of Agriculture
VA	Veterans Administration
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute
XML	extensible markup language