

The GSA logo consists of the letters "GSA" in a white, sans-serif font, positioned inside a solid blue square.

U.S. General Services Administration

# Federal Acquisition Service

The background of the lower half of the slide is a close-up, slightly blurred image of the American flag, showing the stars and stripes in shades of blue, white, and red.

**Responding to Executive  
Order 13514**

**GSA Carbon Footprint Tool**

**October 7th, 2010**

**Jennifer Hazelman, GSA FAS  
Mile Corrigan, Noblis**

## Federal Acquisition Service

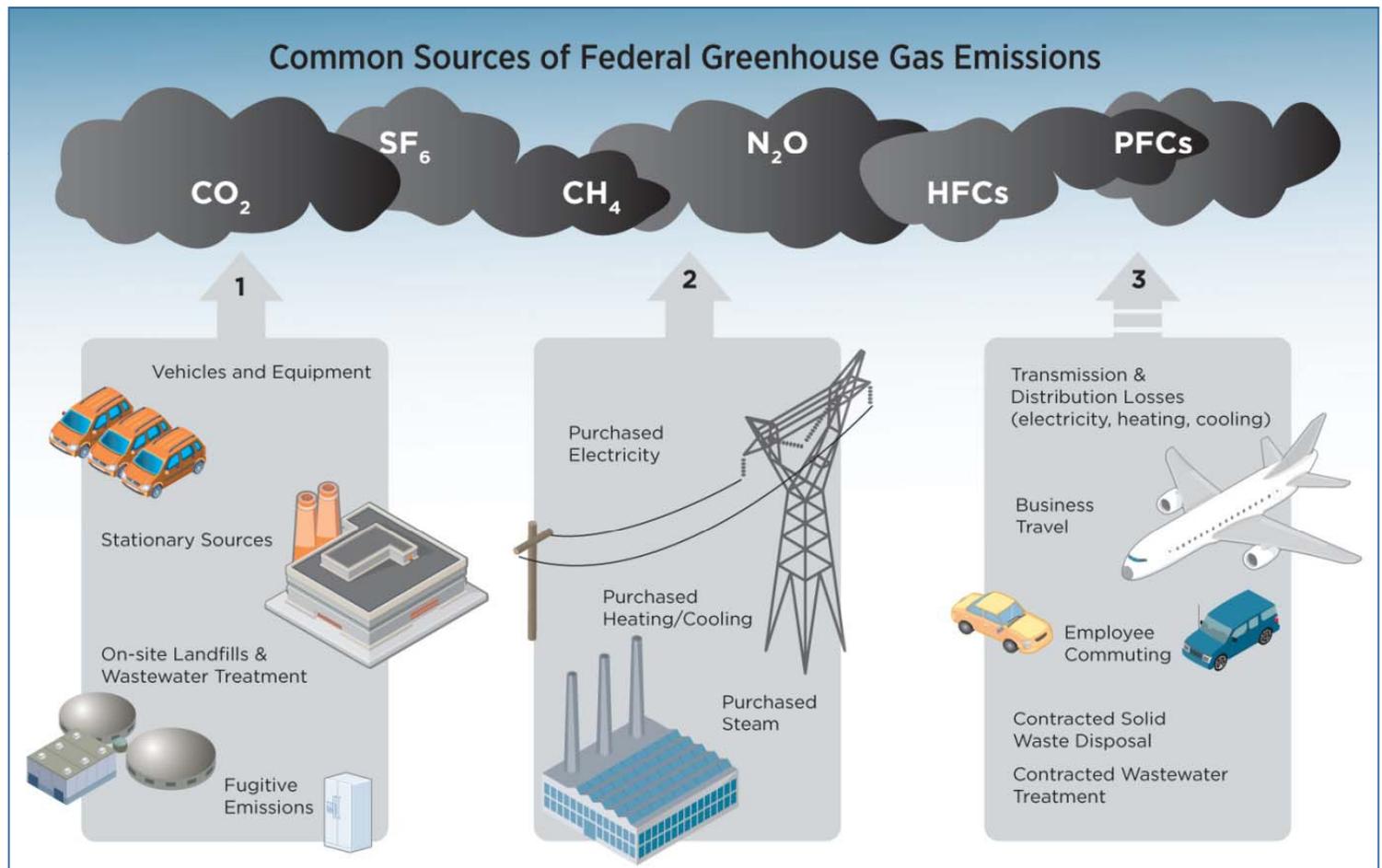
*“GSA has to embrace a zero environmental footprint goal. We should set our sites on eliminating the impact of the federal government on our natural environment. The words were “eliminate” not “limit.” I’m not kidding. Zero Footprint. This is our moon shot. Yes, it is an unbelievable, wild, magnificent, over the top goal. It has to be.”*

Remarks by:

GSA Administrator Johnson  
at the Coalition for Government Procurement  
Partnership Dinner in Orlando, FL  
May 5, 2010

# Categories of Greenhouse Gas (GHG) Emissions

*“...rising energy use imperils the planet we will leave to future generations...”*  
 - President Obama



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# GHG Inventory Approaches

## Top-Down (Centralized) Approach

Existing Data Systems, Data Sets



**Formulas Calculated in the GHG Inventory**

**Scope 1: Direct Emissions**  
 (Required: direct GHG emissions) – Emissions from sources that the company owns or controls, includes direct emissions such as direct fuel use

**Total Carbon Emissions**

Scope 1	12,204
Scope 2	1,144,208
Scope 3	1,173,621
Other	0
<b>Total</b>	<b>2,330,033 metric tons CO<sub>2</sub>e</b>

**Additional Information**

**GHG Emissions or Offset Factors:** Refer to "Formulas Calculate emission factors"

**Input of Quantities:** These are specific offset or registry programs. These are all collecting data and using emission factors, rights and shares from the exact nature method. Specific GHG programs can be based on data that is not accurate

**Scope 2: Indirect Emissions**

**Total CO<sub>2</sub>e emissions**

- = 0.000 lbs CO<sub>2</sub>
- = 26,905,458 Lbs CO<sub>2</sub>e
- = 12,204 MT CO<sub>2</sub>e

**GHG Reports**

Fiscal Year	Scope 1	Scope 2	Scope 3	Total
2008	1,192.74	3,728.82	2,020.64	6,942.20

## GHG Reports

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## Site Specific Data (Utility Bills, Meter Readings, Sources)

**Water Valley Water District**

**Electric Utility**

**Gas Utility**

**Payment Coupon**

**Total Amount Due: \$33.64**

## Bottom Up (Decentralized) Approach

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## GSA Collaboration with DOE FEMP

## DOE FEMP GHG Reporting Portal

get started | references | helpful tools | admin | sign in

**GSA** Carbon Footprint and Green Procurement Tool

Welcome

**NOTICE:** On June 29, we will archive any data you may have input into the tool during the Road Test of the Public Sector Standard and agency preview period. This data will still be available upon requesting approval by your agency's Senior Sustainability Officer (SSO), please send all data transfer requests with supporting documentation showing that you received prior approval from your SSO to carbonfootprint@gsa.gov.

**A Tool Specifically Designed for a Bottom-Up, Comprehensive GHG Inventory**

GSA has developed the GSA Carbon Footprint and Green Procurement Tool to assist agencies in managing their GHGs as required by Executive Order (EO) 13514 and recent energy laws. The tool can address a broad range of tasks including:

- Calculation of an agency's GHG baseline, broken down by different scopes
- Assistance with setting GHG reduction targets
- Compilation of a building-by-building GHG emissions inventory
- Preparation for reporting emissions to the Department of Energy's OIG Reporting Portal

[Click here to sign in to the GSA Carbon Footprint and Green Procurement Tool.](#)

**Product Highlights**

**Bottom-Up Calculations**  
This tool can assist agencies in compiling their GHG emissions inventory using a bottom-up calculation on facility level data with the capability of rolling up to annual agency aggregate level data. This allows an agency to create detailed baseline GHG data to enable the development of reduction targets in the future.

**Pre-population of Aggregate Data**  
With permission from your agency's Senior Sustainability Officer (SSO), GSA will pre-populate the tool with agency-specific data available from GSA business programs. This data includes building energy usage data from GSA's Public Building Service, fuel usage data from GSA's Fleet Program and air business travel data for those agencies using the GSA Travel Management Information Service.

**Enterprise Dashboard**  
The tool provides at-a-glance visualization of key metrics using 3D charts and sliders where agencies can analyze and forecast emissions by adjusting for specific scenarios.

**Common Sources of Federal Greenhouse Gas Emissions**

**Scope 1** GHG emissions resulting from sources that are owned or controlled by a Federal agency

**Scope 2** GHG emissions from generation of electricity, heat, or steam purchased by a Federal agency

**Scope 3** GHG emissions from sources not owned or directly controlled by a Federal agency but related to agency activities

**DOE Greenhouse Gas Reporting Portal**

While agencies can use the GSA Carbon Footprint Tool to calculate their emissions, they must use the DOE Greenhouse Gas Reporting Portal

- Aggregated outputs from the bottom up GSA Carbon Footprint Tool can be imported into the **mandatory** DOE FEMP GHG Reporting Portal
- Direct alignment to EO 13514 GHG Reporting and Accounting Guidance calculation methodologies
- Bottom up methodology **benefits:**
  - **level of granularity necessary to implement targeted reduction strategies**
  - **encourages site/department/region participation**
  - **helps agencies move beyond compliance**

<https://www.carbonfootprint.gsa.gov>

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## Key Benefits of the Tool

- **Free**, offered at no cost to Federal agencies
- Tool has both **manual** and **batch** data input capability
- Flexible input methods to assist with uncommon sources
- Pre-population of GSA data (Fleet, Travel, Building Energy)
- Intuitive user interface and **embedded guidance**
- **Dashboard views** for metrics, benchmarks, and forecasting
- GIS Map allows visualization of enterprise
- GHG emissions data will **import into mandatory DOE GHG Reporting Portal**
- In-person, web-based, and self-guided **training available**

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# Batch Upload/Download Capability

- Capability to bulk upload and download inventory data
- Each excel-based template provides an overview, detailed instructions, populated examples, and reference values

**GSA Carbon Footprint and Green Procurement Tool - Bulk Upload Utility (v1.1)**

Welcome to the GSA Carbon Footprint and Green Procurement Tool Bulk Upload Utility. The Bulk Upload Utility allows agencies to complete one-time uploads of large quantities of greenhouse gas emissions data into the Carbon Footprint Analyzer, a GSA tool developed to assist agencies in obtaining compliance with Executive Order (EO) 13514 and recent energy laws. To read more, go to (link: <http://edocket.access.gpo.gov/2009/pdf/E9-24518.pdf>).

To learn more about the GSA Carbon Footprint and Green Procurement Tool, request a demo or register for an account, please visit <http://www.carbonfootprint.gsa.gov>.

The Bulk Upload Utility v1.1 consists of 8 Microsoft Excel Workbooks:

File Number	Name	Current Workbook
1	GSACarbonToolUploader_File1_SitesandSiteGroups.xls	
2	GSACarbonToolUploader_File2_StationaryCombustion.xls	Yes
3	GSACarbonToolUploader_File3_MobileCombustion.xls	
4	GSACarbonToolUploader_File4_PurchasedElectricity.xls	
5	GSACarbonToolUploader_File5_PurchasedSteamHotChilledWater.xls	
6	GSACarbonToolUploader_File6_PurchasedCombinedHeatandPower.xls	
7	GSACarbonToolUploader_File7_ContractedWasteDisposal.xls	
8	GSACarbonToolUploader_File8_FugitiveEmissions-Common.xls	

In order to maximize the capability of the Bulk Upload Utility, please follow the instructions located in each of the files listed above, in order. The file order corresponds to the instructions found on the GSA Carbon Footprint and Green Procurement Tool website.

Each Excel **Workbook** consists of several **Worksheets**. Worksheets are located at the bottom of the screen. The common worksheets found in all workbooks are labeled "Introduction," "Workbook Instructions," "Data Dictionary," "Reference," "Example," and "Export and Upload Instructions."

Workbook-specific worksheets will appear between the "Example" and "Export and Upload Instructions" worksheets. Please see "Workbook Instructions" for more details.

To switch between worksheets, simply click on the desired tab at the bottom of the screen. If a worksheet tab is not currently visible, please use the left and right arrows on the bottom-left area of the screen to scroll worksheet tabs. The worksheets are intended to be traversed from left-to-right, and will walk users through the bulk upload process.

The ultimate goal of the GSACarbonTool Bulk Upload Workbooks is to guide users in generating comma-separated-value (.CSV) files for upload into the GSA Carbon Footprint and Procurement Tool. Microsoft Excel has the ability to generate these .CSV files from worksheets containing tabular data. The worksheets contained in each workbook are meant to walk users through this process, providing guidelines, constraints and tips along the way.

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# Data Pre-population

- GSA will pre-populate agency data upon approval for business travel data in the Travel MIS system, GSA-owned/leased vehicles data, and GSA building energy data

**traveltrax**



**FAST Vehicle Fleet**

**STAR, EUAS Building Energy**

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# Current Agency Adoption

## Official Commitments:

- General Services Administration
- Department of Homeland Security
- Department of Treasury
- Health and Human Services
- Department of Commerce
- Department of Transportation
- National Capital Planning Commission
- Department of Education





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### Target User Community

- **SSO or Agency designee(s) assigned to compile the official GHG inventory for an agency**
  
- **Support staff assisting the SSO or agency designee with data collection and loading activities:**
  - **Federal Facility and Building Managers**
  - **Energy Managers**
  - **Fleet Managers**
  - **Contractor Support**



## Training Resources and GHG Inventory Services

### Offered by GSA with official registration:

- (1) In-person or web-based “Welcome Aboard” and basic training session
- (1) In-person or web-based “Train the Trainer” session
- Self-guided video tours available through the tool

### Additional Services:

- **Professional Energy Services**

*For further information go to [www.gsa.gov/energyservices](http://www.gsa.gov/energyservices)*

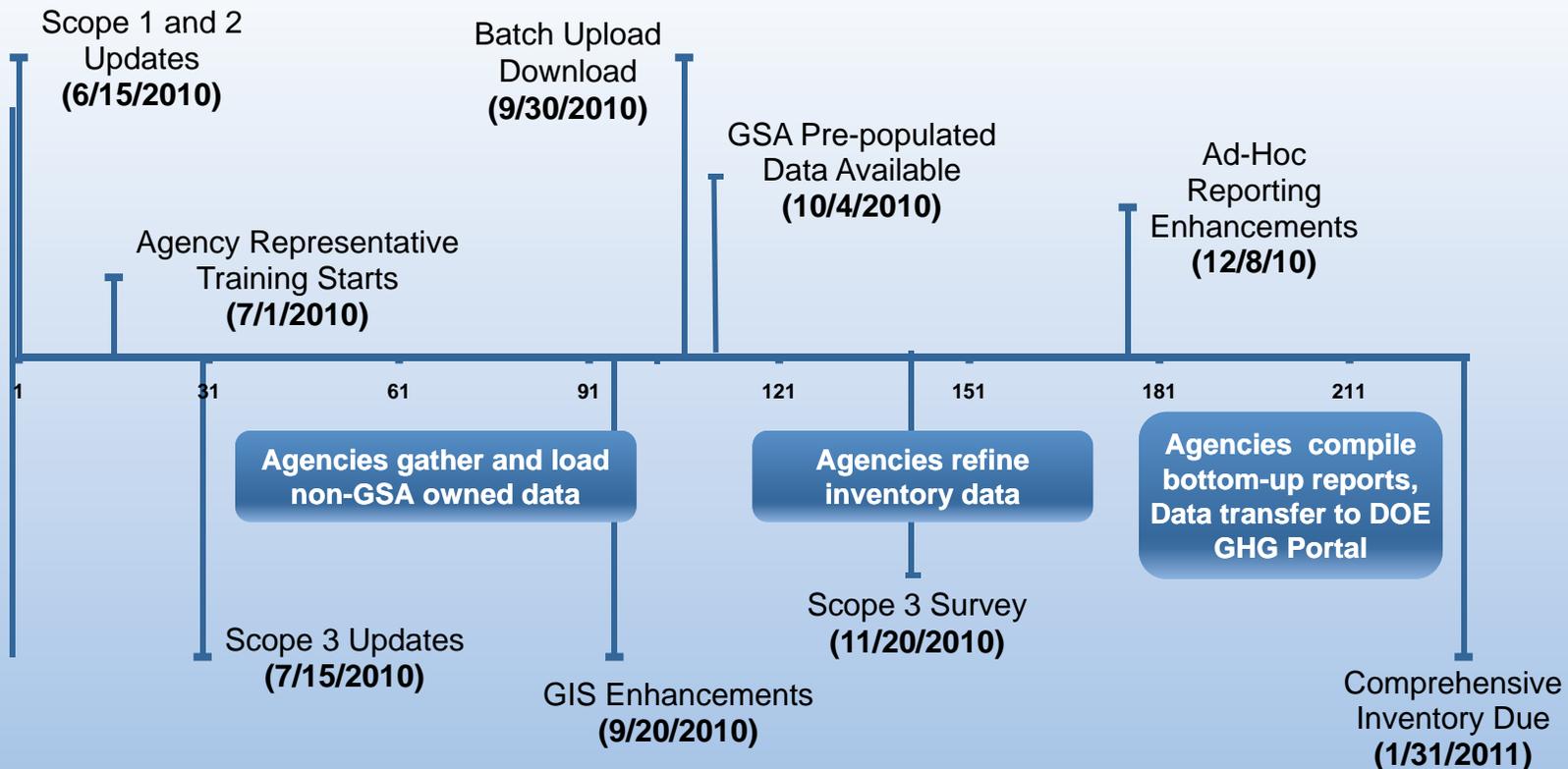
- **Travel Management Information Services**

*For further information go to [www.gsa.gov/travelprograms](http://www.gsa.gov/travelprograms)*

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# Target System Roadmap – 230 day timeline

## GSA Carbon Footprint Tool - Target Roadmap





U.S. General Services Administration

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# GSA Carbon Footprint Tool Demonstration

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# Key GHG Inventory Principles

## Relevance

- **Inventory approach reflects agency decision-making needs to inform GHG management and mitigation strategies**

## Completeness

- **Inventory accounts for and reports all GHG sources and activities within the defined boundary**

## Consistency

- **Consistent methodologies are used in developing your GHG Inventory for meaningful comparisons over time**
- **Changes in emission data, boundaries, methods are documented**

## Transparency

- **Calculations, relevant assumptions, references, and data sources are disclosed and documented**

## Accuracy

- **GHG emissions are quantified properly, neither overstating nor understating true emissions**
- **Inventory results have reasonable assurance**

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## Tool GHG Inventory Process



***GHG Emissions Measurement, Management, and Reduction***

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# Design Inventory: Create Agency & Site Profiles

**Enterprise Profile**

**Enterprise Profile**

Analyzer

Dashboard

Reports

Carbon

**User Profile**

- [Update Password](#)
- [Update Information](#)

**Agency**

- [Agency Profile](#)
- [Agency Sites](#)
- [Agency Site Groups](#)
- [Agency Users](#)

**Locations**

**GSA ITS Emissions**

Category	2008 CO <sub>2</sub> e Emission	2009 CO <sub>2</sub> e Emission	2010 CO <sub>2</sub> e Emission
<b>Enterprise</b>			<b>982</b>
Scope 1: Direct Emissions			53
Scope 2: Indirect			
Scope 3: Other			

All values are in metric tons

**GSA ITS Benchmarking**

**Sites (Add)**

You are here: Enterprise Profile >> Manage Agency Sites

Action	Site Name	Address 1	Address 2	City	State	Zip	eGRID Subregion	Area		Building Ownership	Lease Type	LEED Cert	Staff Size	Fiscal Year	Point of Contact	
								Building	Occupied						Name	Phone
	Crystal City	2200 Crystal Drive		Arlington	VA	22202	SERC Virginia/Carolina	250000	24388			None	114	2008	Tisa Richardson	(202) 219-1905
	Test - Mobility Paper	1800 F St NW		Washington	DC	20405	RFC East	764125	522368	Unknown		None	1000	2010		
	Willow Wood	10304 Eaton PI		Fairfax	VA	22030	SERC Virginia/Carolina	134915	69744			None	165	2008	Lisa Hurst	(202) 501-3859

Profile page provides benchmarking and key metrics

Automated eGrid lookup by zip code and geocoding of locations for display on GIS Map

## Design Inventory: Manage & Group Sites

**Enterprise Profile** | Analyzer | Dashboard | Reports | Carbon Profile Map | ROI Ca

You are here: [Enterprise Profile](#) >> [Manage Site Groups](#) >> Site Form

Fields marked with \* are required for submission.

**Site Group Name: \***

**Description: \***

**Add/Remove Sites**

**Other Sites**  
*Not in a group*  
Test - Mobility Paper

**Sites in this Site Group**  
Crystal City  
Willow Wood

Submit Cancel

Capability to group sites into a campus, region, department or custom grouping

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# Collect Data & Calculate Emissions: Create Scenarios and Manage Inventory Data

**Carbon Footprint Analyzer: Scenario List**

Embedded filters allow you to quickly jump to specific data

Sort by fields to easily find inventory data

**Crystal City (edit)**

You can create multiple scenarios for greater flexibility when analyzing changes to emissions, energy and water use

Year	Site Group	Site	User
2008	No Site Group	1000 2ND AVENUE	JamesCarter
2008	No Site Group	ADMINISTRATION	erika.larsen
2008	No Site Group	...	erika.larsen
2008	No Site Group	DFC BLDG 41	erika.larsen
2008	No Site Group	FED BLDG NO 1	erika.larsen
2008	No Site Group	FED BLDG NO 2	erika.larsen
2008	No Site Group	FG LANHAM FED BLDG	erika.larsen
2008	No Site Group	GSA CENTRAL OFFICE	erika.larsen
2008	No Site Group	GSA CENTRAL OFFICE	erika.larsen
2008	No Site Group	GSA-ROB	erika.larsen
2008	No Site Group	JACOB K. JAVITS FB/CIT	erika.larsen
2008	No Site Group	JFK FEDERAL BUILDING	erika.larsen
2008	No Site Group	JOHN C. KLUCZYNSKI	erika.larsen
2008	No Site Group	FED. BLDG.	erika.larsen
2008	No Site Group	JOHN C. KLUCZYNSKI	Yaniv
2008	No Site Group	FED. BLDG.	erika.larsen
2008	No Site Group	PEACHTREE SUMMIT FB	erika.larsen
2008	No Site Group	PHILLIP BURTON.FB CT	erika.larsen

Selected	Scenario Name	Scope 1	Scope 2	Scope 3	Total
<input checked="" type="radio"/>	2010 GSA ITS Demo	53	726	202	982
<input type="radio"/>	BI-Weekly Commuting Report - Week 1(SAMPLE)	0	0	170	170
<input type="radio"/>	BI-Weekly Commuting Report - Week 2 (SAMPLE)	0	0	134	134

Selected	Scenario Name	Scope 1	Scope 2	Scope 3	Total
<input type="radio"/>	Baseline (COMMUTING TEST)	0	0	0	0
<input type="radio"/>	BWass - Demo Scenario	124	1,447	847	2,418
<input type="radio"/>	copy of Demo	63	1,447	847	2,357
<input type="radio"/>	copy of Demo	42	1,447	876	2,364
<input type="radio"/>	copy of OFFICIAL - Acad modifi	0	402	260	662



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# Collect Data & Calculate Emissions: Enter Site Activity Data

Enterprise Profile > Scenarios List

EO 13514 Section 9 Recommendations  
Analyzer Calculations and Assumptions

**Total Emissions FY 2008**  
70 metric tons CO<sub>2</sub>e

**Scope 1** | Scope 2 | Scope 3

Scope 1 Navi > Scope 1 Navi

**Scope 1: Direct**

**Combustion**

**Stationary Combustion**

- Natural gas
- Petroleum
- Coal
- Biofuel/Biomass

**Mobile Combustion**

- Fossil Fuels
- BioFuels

**Fugitive Emissions**

**Common Fugitive Emissions**

- Hydrofluorocarbons
- Hydrochlorofluorocarbons
- Chlorofluorocarbons
- Perfluorocarbons
- Sulfur Hexafluoride
- Methane

**Hydrofluorocarbons**

Enter your total HFC emissions in lbs

HFC-23	10	lbs
HFC-32	0	lbs
HFC-125	0	lbs
HFC-134a	0	lbs
HFC-143a	0	lbs
HFC-152a	0	lbs
HFC-227ea	0	lbs
HFC-236fa	0	lbs
HFC-245fa	0	lbs
HFC-43-10mee	0	lbs
HFC-365mfc	0	lbs

Describe the emissions source for HFCs (i.e., refrigeration, air conditioning):

refrigerant lost during maintenance

**Total Emissions FY 2008**  
70 metric tons CO<sub>2</sub>e

**Scope 1**

- Combustion
  - Stationary Combustion 0.20
  - Mobile Combustion 17.10
- Fugitive Emissions
  - Common Fugitive Emissions 53.07**
    - Hydrofluorocarbons
    - Hydrochlorofluorocarbons
    - Chlorofluorocarbons
    - Perfluorocarbons
    - Sulfur Hexafluoride
    - Methane
    - Nitrous Oxide
  - Uncommon Fugitive Emissions
  - Industrial Process Emissions
  - Wastewater Treatment
  - Landfills and Solid Waste Facilities

**Scope 2**

- Purchased Electricity
  - Building Energy
  - Data Center
  - IT Equipment

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# Collect Data & Calculate Emissions: Use Embedded Guidance

The screenshot shows the 'Enterprise Profile > Scenarios List' interface. The main content area is titled 'Fugitive Emissions > Common Fugitive Emissions' and 'Chlorofluorocarbons'. It includes a table for entering CFC emissions in lbs, a technical support document snippet, and a description field. A sidebar on the right shows a progress indicator and a list of emissions categories.

CFC Type	Emissions (lbs)	Unit
CFC-11	33	lbs
CFC-12	0	lbs
CFC-13	0	lbs
CFC-113	0	lbs
CFC-114	0	lbs
CFC-115	0	lbs

Describe: Alias: Chloropentafluoroethane, Monochloropentafluoroethane, Molecular Formula: C2ClF5, CAS Number: 76-15-3  
refrigerant lost during installation

Technical Support Document: Chlorofluorocarbons (CFCs) are any of various gaseous compounds of carbon, hydrogen, chlorine, and fluorine, used as refrigerants, aerosol propellants, solvents, and in foam.

EO 13514 Section 9 Recommendations  
Analyzer Calculations and Assumptions

Legend: Incomplete (red), In Progress (yellow), Complete (green)

Total Emissions FY 2009: 246.22

Scope 1: Combustion (Stationary, Mobile), Fugitive Emissions (Common, Uncommon)

Scope 2: Purchased Electricity (Building Energy, Data Center)

Links to Reference Documentation

Embedded guidance on emissions categories and general instructions

Embedded Tooltip definitions to guide the user

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# Collect Data & Calculate Emissions: Enter User Defined Sources

The screenshot displays the 'User Defined Emissions' form within the 'Enterprise Profile > Scenarios List' navigation. The form includes fields for 'Fugitive Emission Name', 'Total emissions' (0 lbs), and 'Global Warming Potential' (0, 100 year time horizon). A text area is provided to 'Describe the emissions source'. A callout bubble points to the form with the text: 'Flexible capability to enter user defined sources for uncommon Scope 1 emissions'. Another callout bubble points to a link in the form: 'If you do not know the Global Warming Potential (GWP), look it up on the EPA Mandatory Reporting Rule, Table A-1 to Subpart A of Part 98'. On the right, a summary dashboard shows 'Total Emissions FY 2008' as 2,512 metric tons CO2e. A 'Scope 1' breakdown lists: Stationary Combustion (116.98), Mobile Combustion (116.98), Common Fugitive Emissions (5.90), and Uncommon Fugitive Emissions (5.90). A callout bubble points to the 'Uncommon Fugitive Emissions' category with the text: 'Lookup references for GWP values to assist with user defined sources inputs'. A PDF icon and link for 'Draft Federal GHG Accounting and Reporting Guidance Analyzer Calculations and Assumptions' are also visible.

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# Collect Data & Calculate Emissions: Scope 3 Commuting Survey

Web-based Scope 3 Commuting Survey collects data needed to calculate employee commuting emissions

The image displays five overlapping screenshots of the 'Employee Survey' web application, showing pages 1 through 5. Each page contains various input fields, radio buttons, and checkboxes for collecting commuting data. A blue speech bubble points to the survey interface.

- Page 1 of 5 - Employee Status:** Includes 'Reporting Year: 2008', a progress bar (Employee Status, Work Status, Commute TO Work), and questions about employee information as of fiscal year 2008 (full-time, part-time, or neither), primary GSA region, city, and work site. It also asks about commuting during peak hours and teleworking.
- Page 2 of 5 - Work Status:** Includes 'Reporting Year: 2008', a progress bar, and questions about full-time information (average days per pay period, alternative work schedule participation, and AVMS days) and commuting information (method of commuting TO work).
- Page 3 of 5 - Commute:** Includes 'Reporting Year: 2008', a progress bar, and questions about automobile information (average days per pay period, carpooling/vanpooling, average number of miles, and fuel source) and walk/bike information (average days per pay period and average number of miles).
- Page 4 of 5 - Commute:** Includes 'Reporting Year: 2008', a progress bar, and questions about commuter train information (average days per pay period and average number of miles).
- Page 5 of 5 - Commuting Habits:** Includes 'Reporting Year: 2008', a progress bar, and questions about commuting habits (how often the primary method of commuting felt relaxed or tense).

Navigation buttons like 'Save' and 'Next Page' are visible on the first page. A 'contact support' link is at the bottom of the first page. The GSA logo is present in the top right of each page.

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# Collect Data & Calculate Emissions: Scope 3 Commuting Survey

- Surveys are launched and managed through the tool
- Can be deployed at the site/facility, site group, or agency level
- Produces downloadable excel file of commuting data and associated emissions per employee

**GSA Carbon Footprint and Green Procurement Tool**

get started | enterprise tools | 2\_green, sign out

**New Employee Survey**

Enterprise Profile | Analyzer | Dashboard | Re

**Create Survey**

Survey Title: GHG Emission  
 Survey Scope: Enterprise  
 Upload List of Invited Survey Participants (.txt file format - one email per line): All\_GSA\_Em  
 Survey Start Date and End Date: 04/26/2010  
 Reporting Fiscal Year: 2010

Submit

---

**All Sites** Print Report

Survey Span: 2009-04-14 to 2009-05-01

**Survey Metrics**

Survey Summary:	Total Survey Users	Surveys Completed	Percent Completion
	306	154	50.33

**Commute Metrics**

Telecommuters: 48.05%  
 Contractors: 5.84%  
 Alternate Work Schedule: 52.00%  
 Peak Travelers: 87.66%

**To Work Commute Type:**

Car	Bike/Walk	Metro	Train	Bus
114	4	32	7	16

**From Work Commute Type:**

Car	Bike/Walk	Metro	Train	Bus
112	5	33	7	17

**To Work Commute**

**From Work Commute**

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# Report Emissions: Run GHG Reports

Carbon Footprint and GHG Report

## Annual GSA ITS Emissions Report

Site: Willow Wood

Generated on: July 13, 2010, 10:25 am

### Agency

**Reporting Agency:** GSA ITS

**Agency Description:** GSA leverages the buying power of federal taxpayers and our federal employees to deliver superior solutions. We develop innovative solutions for our customers.

**Agency Website:** <http://www.gsa.gov>

**Report Preparer:** Mile Corrigan

**Reporting Period:** The base year for this report is 2009.

**Organizational Boundaries:** The operational boundaries consist of purchased electricity, direct fuel consumption, and employee commuting. The Willow Wood facility consist of purchased electricity, direct fuel consumption, and employee commuting.

### Formulas Calculated in the GHG Inventory

**Scope 1: Direct Emissions**

(Required; direct GHG emissions) – Emissions from sources that the company has direct control over. Includes direct emissions such as direct fuel consumption.

**Vehicles**

$$= \left( \frac{\text{total monthly miles for large car in city} + (\text{total monthly miles for small car in city})}{\text{avg number of vehicles}} \right) \times \text{emission factor}$$

$$= \left( \left( \frac{0 \text{ miles per month} + 0 \text{ miles per month} + 0 \text{ miles per month}}{3} \right) \times 2062.88 \text{ lbs CO}_2 / \text{U.S. gallons fuel used} \right) / 18 \text{ n}$$

$$= 0.000 \text{ Lbs CO}_2$$

**Total CO<sub>2</sub>e emissions**

$$= 0.000 \text{ lbs CO}_2$$

$$= 26,905.458 \text{ Lbs CO}_2\text{e}$$

$$= 12.204 \text{ MT CO}_2\text{e}$$

**Scope 2: Indirect Emissions**

### Total Carbon Emissions

Scope 1	12.204
Scope 2	1,144.295
Scope 3	1,173.521
Other	0.000
<b>Total</b>	<b>2,330.020 metric tons CO<sub>2</sub>e</b>

### Additional Information

**Quantification Methodologies:** Refer to "Formulas Calculated in the GHG Inventory" to view scenario-specific quantification methodologies.

**GHG Emission or Offset Factors:** Refer to "Formulas Calculated in the GHG Inventory" to view scenario-specific emission factors. These emission factors are the accepted values from the World Resources Institute (WRI, 2006) ([www.ghgprotocol.org](http://www.ghgprotocol.org))

**GHG Offsets Quantified in CO<sub>2</sub>e:** The following removals have been quantified in CO<sub>2</sub>e: (Your "answer" about emission offsets will automatically be placed here.)

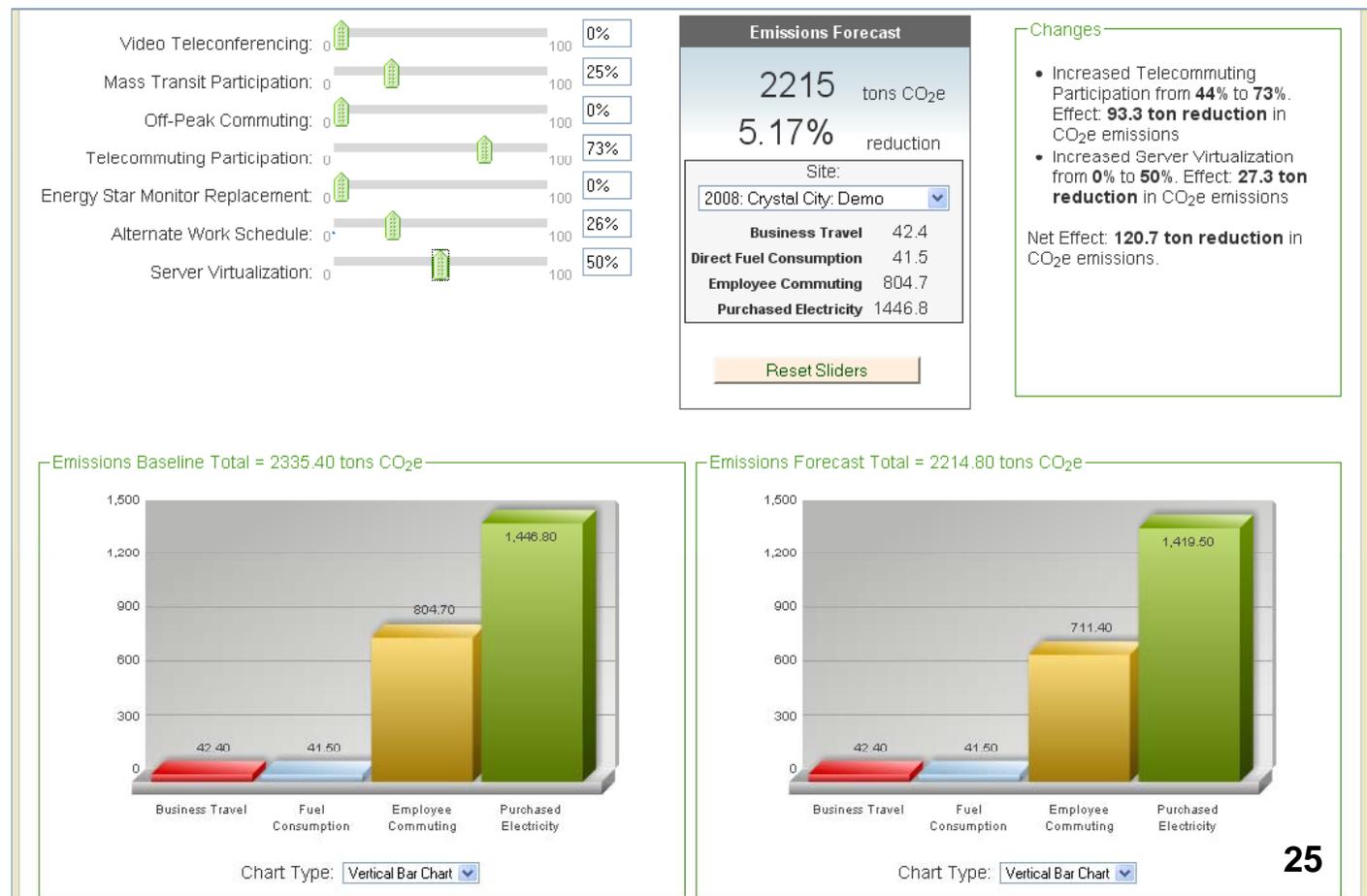
**Impact of Uncertainties:** There are specific inherent uncertainties recognized and accepted by most GHG registry programs. These inherent uncertainties are associated with the inexact nature of collecting data and calculating GHG emissions (i.e. metering equipment calibration, emission factors, significant digits, rounding errors, etc.). Inherent uncertainties also derive from the inexact nature of using registry-permitted simplified estimation methods. Specific GHG programs require that no more than 5 percent of the total emissions can be based on non-registry-approved simplified estimation methods. Given that inherent uncertainties are generally accepted, the impact on the accuracy

Transparency of calculations and estimation methods

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# Set Targets: Senior Management Dashboard

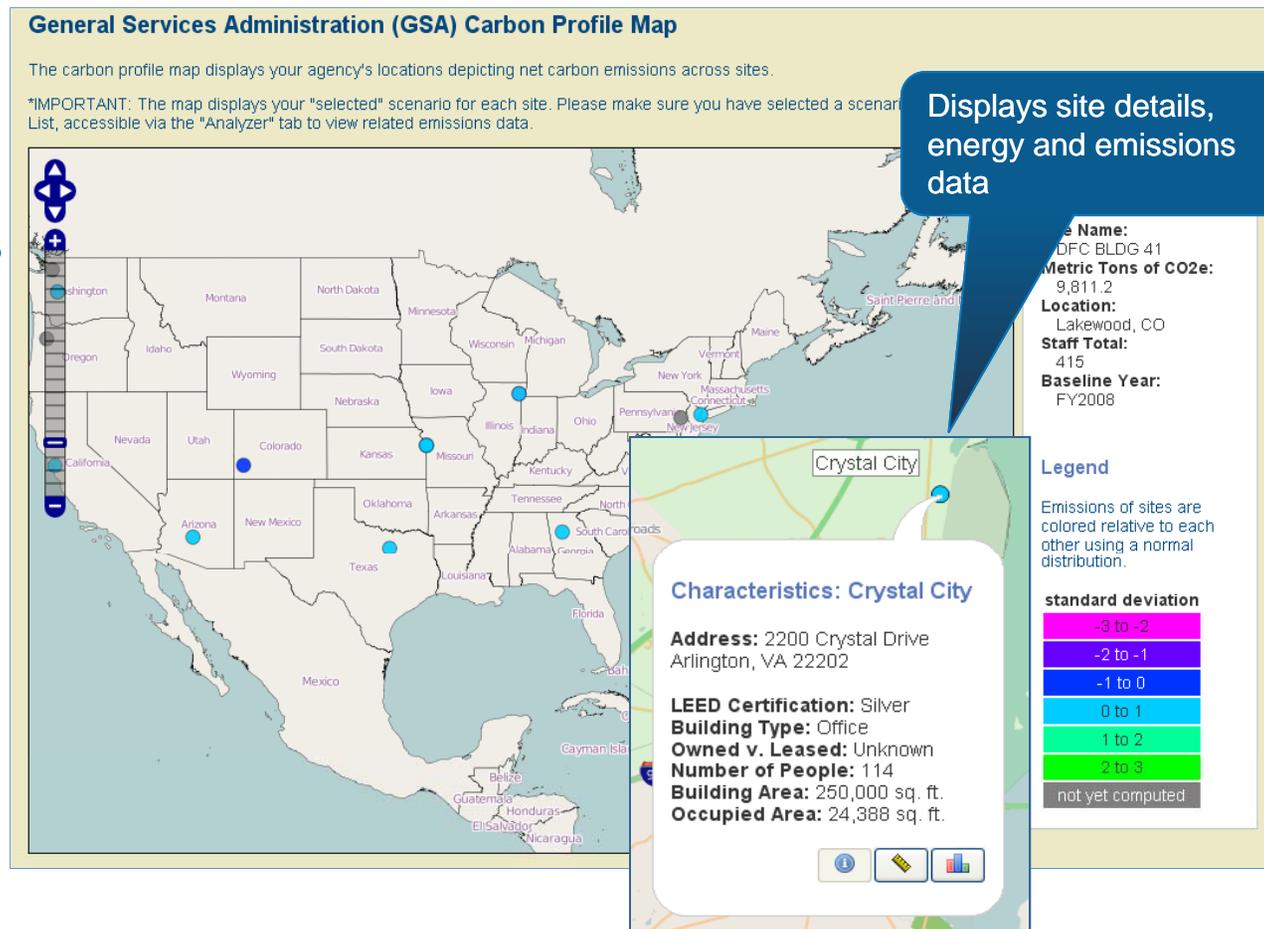
- Easy way for senior managers to visualize Agency GHG emissions
- “Sliders” let you see impact of using different technologies (*server virtualization*) or business processes (*telework*) to reduce footprint



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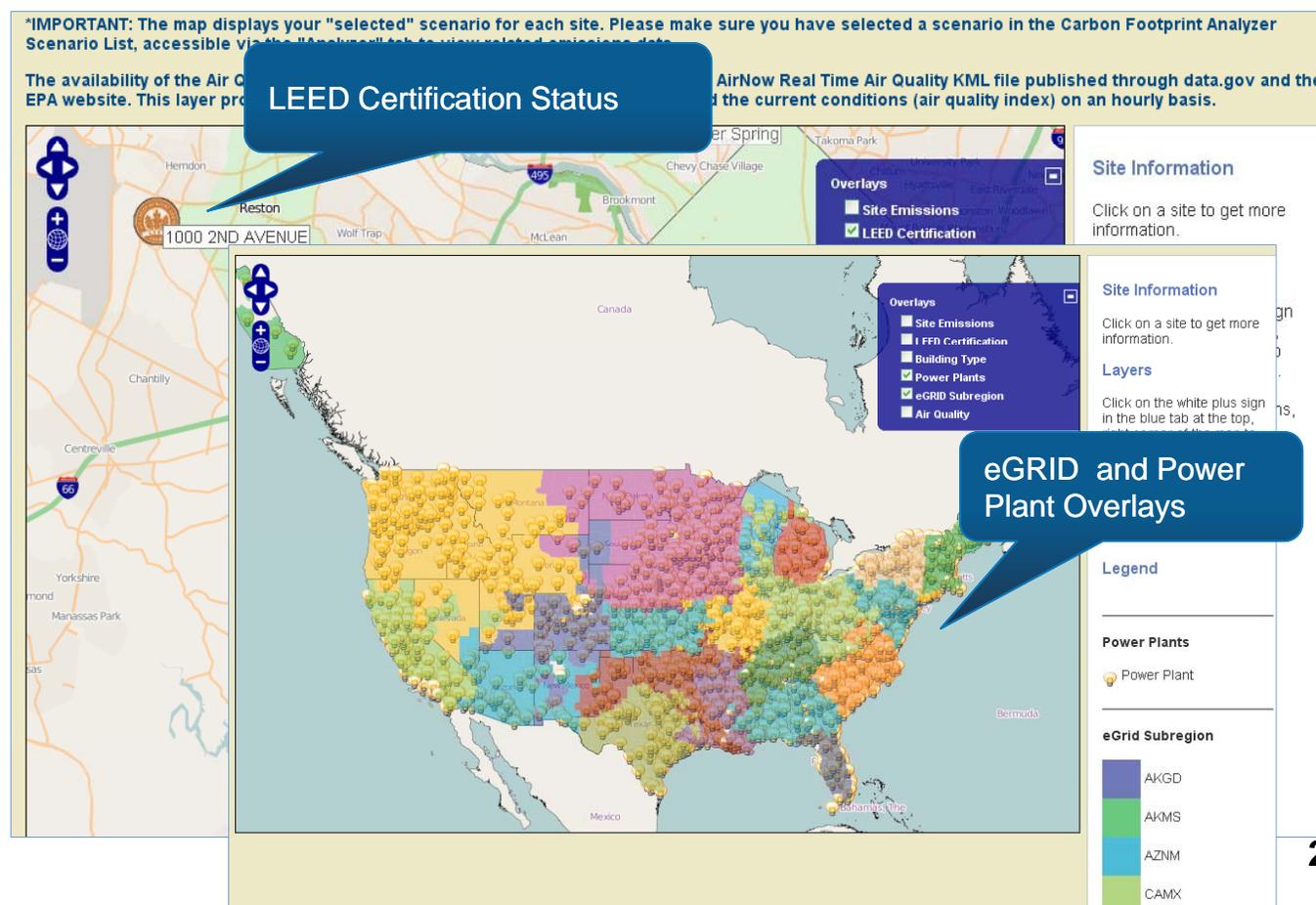
# Set Targets: Agency Facilities GIS Map

- Facilities that you input show up on the map
- Rollover facilities to view site information such as emissions data, metrics, and energy intensity
- Color coding compares emissions across sites



# Set Targets: Sustainable Building Metrics

- Site overlays tied to your bottom-up inventory data. EPA Air Quality data, and EPA eGRID
- GIS layers for LEED certification, building type, power plants, and air quality





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# Set Targets: Return on Investment Calculator

- Built-In ROI Calculator
- Annual Savings, Ten Year Savings, ROI, and Payback are calculated for common green investment types

ROI Calculator								
Interior Lighting Investments								
Investment Name	Quantity	Initial Cost (dollars)	Annual Savings		Ten-Year Savings		ROI and Payback	
			Cost Savings (dollars/year)	CO2 Reduction (MT/year)	Cost Savings (dollars)	CO2 Reduction (MT)	Ten Year ROI (percent)	Payback (years)
Compact Fluorescent (25W)	<input type="text" value="1000"/>	\$3,500.00	\$5,616.78	29.65	\$56,167.80	296.51	1,504.79%	0.62
Compact Fluorescent (32W)	<input type="text" value="0"/>	\$0.00	\$0.00	0.00	\$0.00	0.00	0.00%	0.00
LED Exit Sign	<input type="text" value="0"/>	\$0.00	\$0.00	0.00	\$0.00	0.00	0.00%	0.00
<b>Totals:</b>		\$3,500.00	\$5,616.78	29.65	\$52,667.80	296.51	1,504.79%	0.62
Exterior Lighting Investments								
Investment Name	Quantity	Initial Cost (dollars)	Annual Savings		Ten-Year Savings		ROI and Payback	
			Cost Savings (dollars/year)	CO2 Reduction (MT/year)	Cost Savings (dollars)	CO2 Reduction (MT)	Ten Year ROI (percent)	Payback (years)
Metal Halide High Eff. pulse-start	<input type="text" value="0"/>	\$0.00	\$0.00	0.00	\$0.00	0.00	0.00%	0.00
Six 40W twin-tube, electronic ballast, 1.04 BF	<input type="text" value="0"/>	\$0.00	\$0.00	0.00	\$0.00	0.00	0.00%	0.00
Four 55W twintube, electronic ballast, 1.00 BF	<input type="text" value="0"/>	\$0.00	\$0.00	0.00	\$0.00	0.00	0.00%	0.00
Four 54W highoutput, electronic ballast, 1.00 BF	<input type="text" value="0"/>	\$0.00	\$0.00	0.00	\$0.00	0.00	0.00%	0.00
<b>Totals:</b>		\$0.00	\$0.00	0.00	\$0.00	0.00	0.00%	0.00
Solar Power Investments								
Investment Name	Quantity	Initial Cost (dollars)	Annual Savings		Ten-Year Savings		ROI and Payback	
			Cost Savings (dollars/year)	CO2 Reduction (MT/year)	Cost Savings (dollars)	CO2 Reduction (MT)	Ten Year ROI (percent)	Payback (years)
PhotoVoltaic Solar Panel (75W)	<input type="text" value="0"/>	\$0.00	\$0.00	0.00	\$0.00	0.00	0.00%	0.00
PhotoVoltaic Solar Panel (2000W)	<input type="text" value="0"/>	\$0.00	\$0.00	0.00	\$0.00	0.00	0.00%	0.00



## How Can an Agency Use the Tool?

- Register by sending an email to:  
**[carbonfootprint@gsa.gov](mailto:carbonfootprint@gsa.gov)**

Approval will be required by the agency Senior Sustainability Officer (SSO)

- To gain access to the tool for previewing, go to **[https://www.carbonfootprint.gsa.gov!](https://www.carbonfootprint.gsa.gov)**

## Federal Acquisition Service

## Key Takeaways

- Free Web-based Tool for Federal Agency Use
- Tool data seamlessly migrates to DOE GHG Reporting Portal
- Full support for Scope 1-3 emissions calculations (per Section 9 guidance) including **default** and **advanced** methodologies
- Ability to input uncommon Scope 1 sources