



CLIMATE LEADERS

SETTING THE STANDARD IN GREENHOUSE GAS MANAGEMENT

GHG Management for Small Businesses: Measuring and Reducing Your Carbon Footprint

GSA Pilot Program Training

Part 2: December 15, 2010



Climate Leaders

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How to Calculate your Carbon Footprint

Developing a Company-Wide GHG Inventory for a Small Business



What is your carbon footprint?

For most small businesses the majority of their GHG emissions will come from their purchased electricity and vehicles. For others, especially small manufacturers, additional emissions will result from use of refrigerants, waste gases, or onsite combustion. A business's carbon footprint has three components for purposes of developing a company-wide GHG inventory:

1. Direct emissions (known as Scope 1): from onsite combustion and mobile sources
2. Indirect emissions (Scope 2): from purchased electricity and steam
3. Optional emissions (Scope 3): product transport, employee business travel and employee commuting.

Climate Leaders offers three tools to help you develop your corporate wide inventory and establish a plan to ensure GHG data consistency as you track progress towards reaching an emissions reduction goal.



Step 1: Select an operational or financial approach and define your organizational boundaries. The [Small Business and Low Emitter Guide to Greenhouse Gas Management \(PDF\)](#) (22 pp, 1.7M, [About PDF](#)) explains how to approach measuring your GHG emissions, instructions for using the GHG Calculator and how to complete the Inventory Management Plan.

- [Glossary of Terms \(PDF\)](#) (6 pp, 76K, [About PDF](#)): further explanation of terms you will need to know when developing your company's GHG inventory.



Step 2: Calculate your GHG emissions using the [Simplified GHG Emissions Calculator \(MS Excel\)](#) (802K) Climate Leaders offers [specific guidance](#) for measuring emissions from onsite combustion, purchased electricity, refrigeration and air conditioning.



Step 3: Document how you developed your GHG inventory to ensure consistency as you collect data each year to track progress toward reaching an emissions reduction goal using the [Inventory Management Plan \(IMP\) for Low Emitters \(MS Word\)](#) (11 pp, 292K)

What Do I Do Next?

- Need help developing your GHG Inventory? [Ask a question.](#)

Consult EPA's *Guide to GHG Management for Small Businesses & Low Emitters* to get started:

www.epa.gov/climateleaders/documents/resources/lowemitter_guidance.pdf

The image shows the cover of a guide titled "CLIMATE LEADERS: PRACTICAL STEPS TO REDUCE YOUR ORGANIZATION'S GREENHOUSE GAS EMISSIONS". The cover features a blue header with the EPA logo and the text "United States Environmental Protection Agency". Below the header is a vertical navigation bar with four steps: 1. Get Started, 2. Calculate Greenhouse Gas Emissions, 3. Create an Inventory Management Plan, and 4. Set a Goal & Track Progress. The main title "CLIMATE LEADERS" is in large blue letters, followed by the subtitle "PRACTICAL STEPS TO REDUCE YOUR ORGANIZATION'S GREENHOUSE GAS EMISSIONS". Below the text is a photograph of a green landscape with rolling hills and a blue sky with white clouds. At the bottom, the title "Guide to Greenhouse Gas Management for Small Business & Low Emitters" is written in a smaller font.

EPA United States Environmental Protection Agency

CLIMATE LEADERS

PRACTICAL STEPS TO REDUCE YOUR ORGANIZATION'S GREENHOUSE GAS EMISSIONS

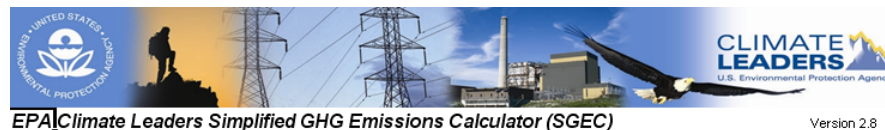
- 1 Get Started
- 2 Calculate Greenhouse Gas Emissions
- 3 Create an Inventory Management Plan
- 4 Set a Goal & Track Progress

Guide to Greenhouse Gas Management for Small Business & Low Emitters

Step 1: Fill out Simplified GHG Emissions Calculator

How to calculate emissions: Use the EPA Climate Leaders Simplified GHG Emissions Calculator.

- Excel-based
- Free download
- Automatically calculates overall carbon footprint from all GHG emissions sources



This calculator is designed as a simplified calculation tool to help organizations in estimating their greenhouse gas (GHG) emissions for reporting to the EPA's Climate Leaders program. All methodologies and default values provided are based on the most current Climate Leaders Greenhouse Gas Inventory Protocol guidance. The calculator will determine the direct and indirect emissions from all sources at a company when activity data is entered into the various sections of the workbook.

Tool Instructions:

- (A) Click on the grey boxes below to go to the appropriate Tool Sheet.
- (B) Enter data in Tool Sheet in ORANGE cells only. Final GHG emissions will be provided in CO₂ equivalent emissions in BLUE or GREEN cells. If data is not known or applicable, leave default value (blank, zero or other) in cell.
- (C) Enter data in appropriate units, if needed convert units prior to entering into tool.
- (D) Guidance for each calculation method is provided in the references at bottom of each sheet.

Tool Sheets:

Direct 1.0	Direct Emissions from Stationary Combustion Sources - Traditional Sources
Direct 2.0	Direct Emissions from Mobile Sources
Direct 3.0	Direct Emissions from Refrigeration and Air Conditioning Equipment
Direct 4.0	Direct Emissions from Fire Suppression Equipment
Direct 5.0	Direct Emissions from Stationary Combustion Sources - Gas Waste Streams
Indirect 1.0	Indirect Emissions from Purchase of Electricity
Indirect 2.0	Indirect Emissions from Purchase of Steam
Optional 1.0	Optional Emissions from Business Travel
Optional 2.0	Optional Emissions from Employee Commuting
Optional 3.0	Optional Emissions from Product Transport
Conversion Factors	Useful Conversion Factors

Access the Calculator at www.epa.gov/climateleaders/smallbiz/footprint.html

Step 2: Fill out the Inventory Summary & Goal Tracking Form



U.S. Environmental Protection Agency

ANNUAL GHG INVENTORY SUMMARY AND GOAL TRACKING FORM

Required: Optional: Calculated:

Partner Name:	XYZ Company		
Reporting Year:	2010		
Inventory Contact Person:	John Doe	Title:	Facilities Manager
Department/Division:			
Street Address:	ABC Boulevard, Suite 10		
City:	Columbus	State:	OH
Telephone Number:	123-456-7890	Fax Number:	
E-mail Address:	johndoe@xyzcompany.com		

Corporate Inventory - U.S.	Base Year	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year
Year		--	--	--	--	--	--	--
EMISSIONS - Annual CO₂-eq. (metric tons)								
<i>Direct Emissions</i>								
Stationary Combustion Sources	3,148							
Mobile Combustion Sources	16							
Refrigeration / AC Equip. Use	10							
Process / Fugitive (specify source):								
Insert Additional Process/Fugitive Source								
Total Direct Emissions	3,173	0	0	0	0	0	0	0
<i>Indirect Emissions</i>								
Purchased and Used Electricity	4,622							
Purchased and Used Steam								
Purchased and Used Hot Water								
Purchased and Used Chilled Water								
Total Indirect Emissions	4,622	0	0	0	0	0	0	0

Optional Emissions (specify source):

Step 3: Fill out the Inventory Management Plan

Document your company's process standard operating procedures.

An Inventory Management Plan:

- Institutionalizes inventory process
- Lowers costs by centralizing processes
- Increases accuracy and transparency
- Documentation of capital savings
- Captures continuous improvement

Access the IMP at

www.epa.gov/climateleaders/smallbiz/footprint.html



Climate Leaders Simplified Inventory Management Plan

Simplified Inventory Management Plan Form:

Under the Climate Leaders program Partners are required to complete an Inventory Management Plan (IMP) which details their greenhouse gas (GHG) emissions inventory process. The IMP is an internal process for the Partner to institutionalize the completion of a high quality inventory. As part of the Climate Leaders reporting requirements, Partners describe for EPA their company-specific approach for each IMP component listed below. EPA expects that an IMP be in place within a year of the Partner joining the program. The IMP must be updated periodically to reflect the most up-to-date information and should be maintained at the company headquarters.

This simplified IMP form is provided as an accompanying document to the Climate Leaders Simplified GHG Emissions Calculation (SGEC). The form covers all of the IMP requirements under the Climate Leaders program, however it is presented in a simplified format and some items have been pre-populated with default responses consistent with the use of the Climate Leaders SGEC.

Completion instructions for this IMP form are provided at the end of this document.

Version Information:

Item	Description	
A.	Version Number of IMP:	
B.	Date IMP Completed:	

Partner Information:

Item	Description	
1.	Company Name:	
2.	Corporate Address:	
3.	Inventory Contact:	
4.	Inventory Contact Information:	

Boundary Conditions:

Item	Description	Selection (Check one)	Boundary Selection Approach

Set a GHG reduction goal by September 2011:

- Goal must be to reduce total emissions by a minimum of 2% achieved in 2 years or less.
- Companies that set carbon neutral (net zero) goals must sustain carbon neutrality for a minimum of 2 years after setting a base year.
- The goal on the website www.epa.gov/climateleaders/smallbiz/smallbizmembers.html will read: “Company X pledges to reduce total U.S. GHG emissions by 2% from 2010 to 2012.”

Where to submit

Submit your:

- 1) Filled out Simplified GHG Emissions Calculator
- 2) Inventory Summary and Goal Tracking Form
- 3) Inventory Management Plan
- 4)and your goal!

To: climateleaders@epa.gov

No later than September 30, 2011