

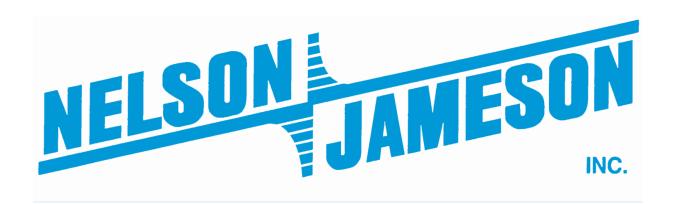
WISCONSIN CHEESE MAKERS ASSOCIATION

EST. 1891

Setting, Measuring and Reporting on GHG Goals: Industry Tools for Dairy Processors

March 20, 2025

Thank you, sponsors!





Visit Us at Booth #1117 at 2025 CheeseCon!

Agenda

- Overview of the Greenhouse Gas Reporting Landscape
- Innovation Center for U.S. Dairy Tools and Resources
- Greenhouse Gas Calculation Tools
- A & Q <

Overview of the Greenhouse Gas Reporting Landscape

Liz Harder, Director of Sustainability Harbor Environmental, Inc.

WCMA: Setting and Reporting GHG Goals

March 20, 2025



GHG Reporting Landscape: Frameworks and Standards

















Sustainable Development Goals (SDGs)

- Created by United Nations in 2015
- "The Global Goals"
- 17 goals to be reached by 2030
- Companies can choose which goals where they can have an impact.





Sustainable Development Goals (SDGs)

By tracking and reporting GHG emissions, you take important steps towards making process on SDG 13.





Frequency of prioritized SDGs (2022)















50%





50%







58%







SDGs

3,275 N100 Companies identify specific SDGs they consider most relevant for their businesses









Task Force on Climate related Financial Disclosure (TCFD)

- Companies disclose climate-related financial risks to investors, lenders and insurers
- TCFD is made up of 11 Recommended Disclosures divided into four pillars. The four pillars are:
 - Governance: How does the organization's governance bodies, and management manage, assess and oversee climaterelated risks and opportunities?
 - Strategy: What are the tangible material impacts of climaterelated risks and opportunities on the whole business, including strategy and financial planning?
 - Risk Management: How does the organization define, assess and manage climate-related risks?
 - Metrics & Targets: What are the measurements in assessing material climate-related risks and opportunities?





TCFD

While challenges remain, the GHG Protocol methodology is the most widely recognized and used international standard for calculating GHG emissions. Organizations may use national reporting methodologies if they are consistent with the GHG Protocol methodology.

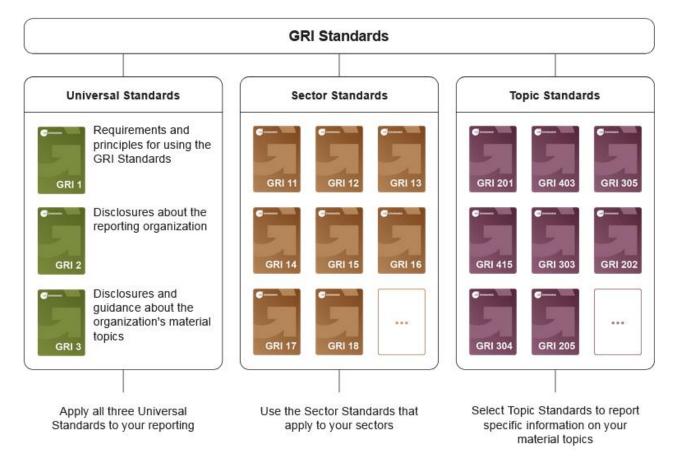


Source: Final Report. Recommendations of the Task Force on Climate-related Financial Disclosures.





Global Reporting Initiative (GRI)



- Economic

 GRI
 200

 Environmental

 GRI
 300

 Social

 GRI
 400
- Global common, standardized, language to communicate ESG impacts
- GRI consists of core standards to help organizations understand and report their outward impacts on the environment, society, and economy.
- The standards specify indicators, known as disclosures, required for transparent reporting on an organization and its impact



GRI 305: Emissions

Excerpt from GRI 305:

The requirements for GHG emissions in this Standard are based on the requirements of the 'GHG Protocol Corporate Accounting and Reporting Standard' ('GHG Protocol Corporate Standard') and the 'GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard' ('GHG Protocol Corporate Value Chain Standard').





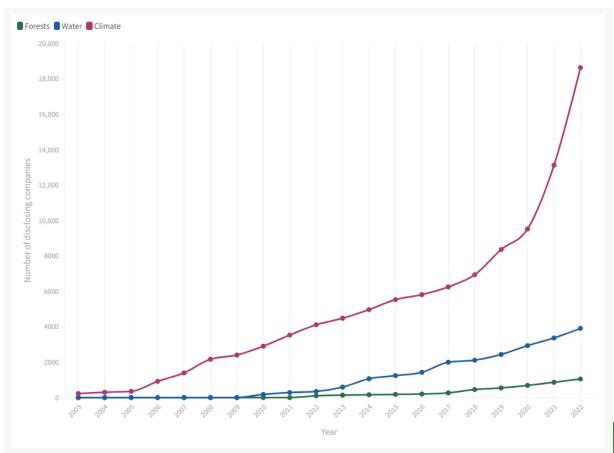


CDP (formerly Carbon Disclosure

Project)

 Voluntary reporting framework that companies use to disclose environmental information to their stakeholders

- Scored and used to assess a company's performance
- Scoring incentivizes and guides companies on a journey through disclosure to awareness, management and finally leadership.
- Used as part of supplier evaluations and performance reviews





CDP: Standard, Protocol, or Methodology used to collect activity data and calculate emissions

- There are a variety of standards, methodologies, and protocols available for collecting and reporting GHG data, but the large majority of companies refer to the GHG Protocol.
- The appropriateness of an emissions calculation methodology should be determined on a case-by-case basis, and it is good practice for the methods used to estimate emissions and the underlying data to be externally verified.
- CDP makes no judgments on standards or methodologies applied by companies to
 produce their inventories. However, we expect that any tool used will follow the best
 practice and observe important aspects such as the accuracy and completeness
 principles of standards similar to the GHG Protocol. CDP encourages companies to
 use the GHG Protocol Corporate Standard when national standards are not specified.
- If the metholology(ies) you have used is not listed, select "Other, please specify;" and indicate the methodology(ies) used.

Source: CDP 2024 Corporate Questionnaire Guidance Module 7







Sustainability Accounting Standards Board (SASB)

- SASB sets standards for the disclosure of financially material sustainability information by companies to their investors.
- It track ESG issues and performance across 77 industries as set out in the SASB Materiality Map
- "The SASB Materiality Map®," an interactive tool that identifies and compares disclosure topics across different industries and sectors

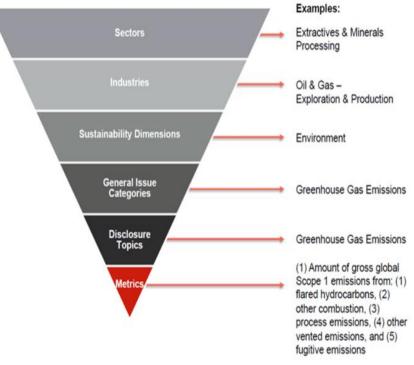
Sectors and Industries are based on SASB's Sustainable Industry Classification System (SICS). They are represented as columns in SASB's Materiality Map.

Sustainability Dimensions are broad sustainability themes, including: Environment, Social Capital, Human Capital, Business Model & Innovation, and Leadership & Governance.

General Issue Categories (GIC) are industryagnostic and cross-cutting themes that allow comparisons across sectors/industries. They are represented as rows in SASB's Materiality Map.

Disclosure Topics are the industry-specific and tailored versions of the GICs that may have financially material impacts on companies participating in an Industry.

Accounting Metrics are quantitative and qualitative indicators created to measure performance on each Disclosure Topic.





SASB Materiality Map

4														
		Consumer Goods				Extractives & Mid	xtractives & Minerals Processing					Food & Beverage	Health Care	Infrastructure
Dimension	General Issue Category ^①	Click to expand	Coal Operations	Construction Materials	Iron & Steel Producers	Metals & Mining	Oil & Gas – Exploration & Production	Oil & Gas – Midstream	Oil & Gas – Refining & Marketing	Oil & Gas – Services	Click to expand	Click to expand	Click to expand	Click to expand
Environment	GHG Emissions										4	The state of the s		
	Air Quality		7										7	
	Energy Management		/ · · · · · · · · · · · · · · · · · · ·						1					
	Water & Wastewater Management							1					4	
	Waste & Hazardous Materials Management	7						1						
	Ecological Impacts	7											4	
	Human Rights & Community Relations													
1	Customer Privacy												4	
	Data Security											A = A		4
Social Capital	Access & Affordability													
	Product Quality & Safety													
	Customer Welfare													4
	Selling Practices & Product Labeling													<u> </u>
Human Capital	Labor Practices			<u> </u>			<u> </u>						/	
	Employee Health & Safety							/						
	Employee Engagement, Diversity & Inclusion											/		
Business Model &	Product Design & Lifecycle Management		/L		4	'		,				A STATE OF THE STA		
	Business Model Resilience			4				/					<i>'</i>	
	Supply Chain Management					4								1
Innovation	Materials Sourcing & Efficiency												/	
·	Physical Impacts of Climate Change											<u>/</u>		
	Business Ethics							<u> </u>				<u> </u>		
	Competitive Behavior				1		<u> </u>			<u> </u>			<u>. </u>	
Leadership & Governance	Management of the Legal & Regulatory Environment					,		<u>/</u>					· · · · · · · · · · · · · · · · · · ·	
	Critical Incident Risk Management													
<i>I</i> '	Systemic Risk Management												· ′	
4								ACD Foundation All D						'

SASB: Meat, Poultry & Dairy

Disclosure Topic & Metrics



 Scope 1 emissions are defined and shall be calculated according to the methodology contained in The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (GHG Protocol), Revised Edition, March 2004, published by the World Resources Institute and the World Business Council on Sustainable Development (WRI/WBCSD



Source: https://navigator.sasb.ifrs.org/sector/FB/industry/FB-MP?industry_tab=disclosure-topics



Science Based Targets Initiative (SBTi)

Science-based targets provide a clearly-defined pathway for companies to reduce greenhouse gas (GHG) emissions, helping prevent the worst impacts of climate change and future-proof business growth.

Targets are considered 'science-based' if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global warming to 1.5°C above pre-industrial levels.



Setting a science-based target is a five-step process:

- Commit: submit a letter establishing your intent to set a science-based target
- Develop: work on an emissions reduction target in line with the SBTi's criteria
- Submit: present your target to the SBTi for official validation
- Communicate: announce your target and inform your stakeholders
 - Disclose: report company-wide emissions and track target progress annually

https://sciencebasedtargets.org/how-it-works





How does the SBTi relate to the Greenhouse Gas Protocol?

The Science Based Targets initiative (SBTi) closely aligns with the <u>Greenhouse Gas Protocol (GHG Protocol)</u> as the foundation for its greenhouse gas (GHG) accounting and target-setting methodologies. The GHG Protocol provides the standards and guidelines for measuring and managing GHG emissions, which the SBTi uses to ensure that companies set science-based targets in a consistent, accurate, and credible manner. It provides the accounting standards and guidelines necessary for organizations to quantify and manage their GHG emissions effectively across Scopes:

- Scope 1: Direct GHG emissions from owned or controlled sources.
- Scope 3: All other indirect emissions that occur in a company's value chain (both upstream and downstream).
- Scope 2: Indirect GHG emissions from the generation of purchased electricity, steam, heating, and cooling consumed by the reporting company.

Overall, the GHG Protocol provides the standardized framework for emissions accounting that underpins the SBTi's approach to setting and validating science-based targets, ensuring that companies adhere to a consistent methodology for measuring and reporting their GHG emissions.

Source: https://sciencebasedtargets.org/faqs#how-does-the-sbti-relate-to-the-greenhouse-gas-protocol

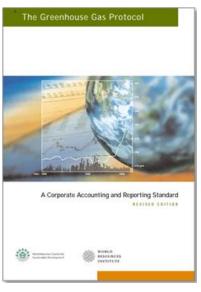


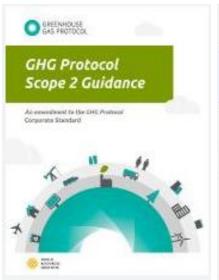


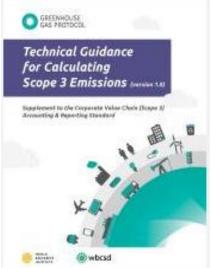
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Greenhouse Gas (GHG) Protocol





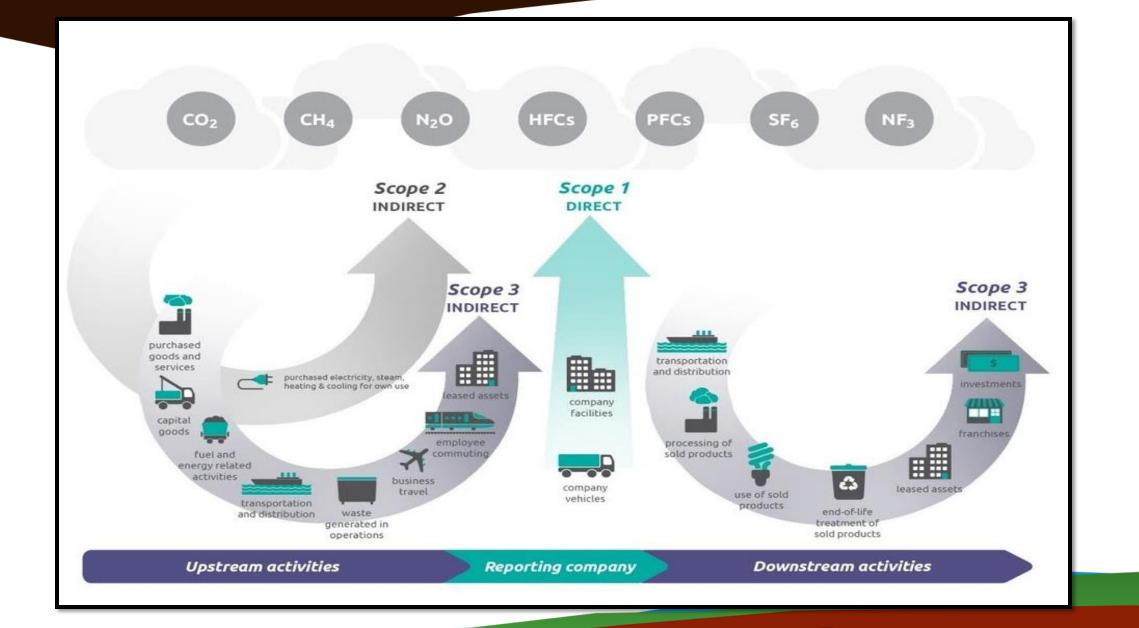




The global standard for GHG accounting is the GHG Protocol:

- The GHG Protocol establishes comprehensive global standards to measure and manage GHG emissions from private and public sector operations, value chains, and mitigation actions.
- The GHG Protocol's standards, tools and online training helps organizations track progress towards their climate goals.









Innovation Center Resources





Tools & Resources for Measuring and Managing GHG Emissions

Wisconsin Cheese Makers Association

March 20th, 2025

Checkoff Affiliated Companies

CREATED TO SERVE FARMERS' EXPANDED NEEDS AND OPPORTUNITIES













Represents the global trade interests of U.S. dairy to expand export and increase export value



EST. 2006

Demonstrates the global dairy sector's contribution to global food systems, healthy diets and sustainable livelihoods



EST. 2008

Brings together dairy leadership to advance U.S. dairy's shared social responsibility platform and collective goals



EST. 2010

Improves nutrition and physical activity for youth in U.S. schools and communities through public and private partnerships



EST. 2015

Works with dairy farmers to reduce U.S. dairy's environmental footprint in an economically viable way through innovative manure management solutions and ecosystem services markets



The Innovation Center for U.S. Dairy works with and through the dairy community to:

- Align on pre-competitive priorities
- Advance an industry-wide sustainability/social responsibility platform
- Speak with a unified voice to inspire belief in U.S. dairy as a relevant and credible solution for a more sustainable future.

U.S. DAIRY SUSTAINABILITY FRAMEWORK

A future where U.S. dairy unlocks transformative good for people and planet



Advance Well-being



Deliver dairy nutrition that meets emerging and personalized health needs

- Enhance nutrition security
- Benefit the body



Regenerate the Environment



Optimize dairy solutions that enhance natural resources and ecosystems

- Achieve GHG neutrality
- Improve ecosystem health
- Accelerate the circular economy



Care for Our Animals and Communities



Ensure healthy animals, a vibrant workforce and safe, high-quality dairy foods

- Provide exceptional care for our cows
- Empower our people and communities
- Ensure excellence in food safety and traceability









Sustainability Standards Bodies





State-Specific Climate Disclosure Regulations

Climate Disclosure Regulations

Industry Guidance for Co-ops and Processors

 Innovation Center for U.S. Dairy developed GHG accounting and reporting guidance for U.S. dairy cooperatives and processors.

- Guidance is split into two documents:
 - Scope 1 & 2 GHG Inventory Guidance
 - Scope 3 Inventory Guidance

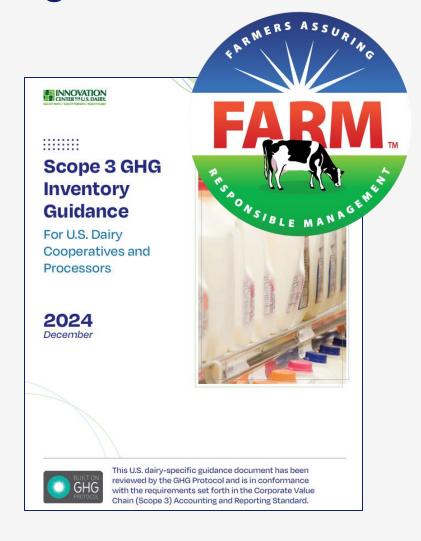


Guidance Built on GHG Protocol



- Guidance reviewed and formally endorsed by GHG Protocol.
- Signifies alignment with GHG Protocol standards:
 - Corporate Standard
 - Scope 2 Guidance
 - Scope 3 Standard
- First agricultural sector guidance to obtain this status.

Aligned With FARM ES



 Scope 3 Inventory Guidance recognizes the FARM Environmental Stewardship program.

 FARM ES can be leveraged for reporting on-farm scope 3 emissions





U.S. dairy's social responsibility pledge to consumers, customers and other stakeholders

Demonstrates and documents how U.S. dairy:

- Responsibly produces milk and dairy products
- Brings value to the communities it serves
- Acts transparently and meets globally accepted standards

>77% of U.S. Milk Production



















































































The Processor Stewardship Reporting Tool (PSRT)

When the Stewardship Commitment launched, there was no mechanism in place for processors to report on metrics consistently, securely and confidentially

Innovation Center for U.S. Dairy partnered with Harbor to develop the Processor Stewardship Reporting Tool, built on the Intelex Platform

Enables processors to manage sustainability performance on a facility-by-facility basis, while simultaneously contributing to national, aggregated industry performance annually

The Processor Stewardship Reporting Tool was built directly from the indicators and metrics defined in the Dairy Processor Handbook









NATIONAL AGGREGATED REPORTING

PSRT Tracks Scope 1 & 2 Emissions

 Stewardship Commitment companies can measure their scope 1 and 2 GHG emissions in Intelex.

 Scope 1 and 2 data forms built in direct alignment with Scope 1 & 2 GHG Inventory Guidance.





GHG Reduction Opportunities Guidance



Scope 1 & 2 Reduction Guidance

- Heating, ventilation and air conditioning
- Boiler, steam and condensate systems
- Hydraulic systems
- Motors and drives
- Pumps and fans

- Lighting
- Compressed air systems
- Material handling and conveying systems
- Pasteurization process
- Refrigeration and process cooling

Scope 3 Reduction Guidance

- Packaging
- Supply chain collaboration and interventions

- Waste
- Carbon markets

GHG Tools & Resources



Processor Stewardship Reporting Tool (PSRT):

- Intelex is the software platform on which the PSRT is built
- Tracks Stewardship Commitment ESG metrics not just GHGs
- This tool helps processors track and calculate Scope 1 and 2 GHG emissions.
- Harbor will demo this tool for Scope 1 and 2 during the workshop
- https://www.intelex.com/esg/reporting







Energy and GHG: Tailored Tracking for Accurate Reporting

☐ Sub-Section: Diesel (Stationary) (3)							
☐	*Diesel Usage (Stationary)	G	14,656.00 gal		15,318.00	gal		
CV_ENG_DSLS_En	Diesel Usage (Stationary)	G	1,917.00 MMBtu (+5 %)		2,003.59	MMBtu		
CV_GHG_DSLS_C2	Diesel - Stationary GHG Emissions	<u> </u>	149,764.22 kg (+5 %)		156,528.95	kg		
☐ Sub-Section: Liquid Natural Gas (Stationary) (3)								
☐	*LNG (Stationary) Usage	<u>C</u>				gal		
CV_ENG_LNGS_En	LNG (Stationary) Usage	G	0.00 MMBtu (0 %)		0.00	MMBtu		
CV_GHG_LNGS_C2	LNG (Stationary) GHG Emissions	G	0.00 kg (0 %)		0.00	kg		



Energy and GHG: Tailored Tracking for Accurate Reporting

☐	Scope 1 Total GHGs (Mobile+Stationary+Process) Refrigerant GHGs Omitted GHG emissions from direct emissions (stationary combustion, mobile combustion, process emissions). This total does NOT include Fugitive Emission from leak of refrigerants which is calculated in the Refrigerants Indicator Set. Note: Biogenic CO2 emissions are NOT included per GHG Protocol.	G	2,139,307.90 kg (-12 %)	1,883,924.18	kg	
☐	Scope 2 GHGs from Indirect Energy (Market-Based) GHG emissions, calculated by the market-based approach, from indirect sources owned or controlled by other businesses.	Ġ	78,899.75 kg (+31 %)	103,332.84	kg	
☐	Scope 2 GHGs from Indirect Energy (Location-Based) GHG emissions, calculated by the location-based approach, from indirect sources owned or controlled by other businesses.	G	78,729.26 kg (+31 %)	103,109.54	kg	



Energy & GHG Dashboard

ADM] Energy GHG Members Dashboard



Greenhouse Gas (GHG) Metrics

△ GHG Emissions (Metric Tonnes CO2e)									
	2017	2018	2019	2020	2021	2022	2023	2024	
Scope 1 GHG Emissions (Refrigerants Included)	43,883	44,418	42,785	47,152	47,463	45,218	44,479	3,799	
Scope 2 GHG	3,330	3,239	3,274	3,202	2,786	2,949	2,993	42	

Reporting Year Slicer

Location-wise GHG Emissions (Metric Tonnes CO2e)



Energy & GHG Dashboard

GHG Emissions (Metric Tonnes CO2e)

	2017	2018	2019	2020	2021	2022	2023	2024
Scope 1 GHG Emissions (Refrigerants Included)	43,883	44,418	42,785	47,152	47,463	45,218	44,479	3,799
Scope 2 GHG Emissions Location Based	3,330	3,239	3,274	3,202	2,786	2,949	2,993	42
Scope 2 GHG Emissions Market Based	3,404	3,307	3,340	3,264	2,840	3,013	2,780	46



EPA's Simplified GHG Emissions Calculator

A free tool designed for small to medium-sized organizations to estimate and inventory their annual greenhouse gas (GHG) emissions, covering Scope 1, 2, and some categories of 3. While the last version is from Sep 2024, there is no guarantee of updates given the changes in EPA.



https://www.epa.gov/climateleadership/simplifiedghg-emissions-calculator



EPA Tool: Simplified GHG Emissions Calculator

Supporting organizations in GHG measurement and management • www.epa.gov/climateleadership

EPA Simplified GHG Emissions Calculator ("the Calculator")

September 2024

The EPA Simplified GHG Emissions Calculator ("the Calculator") is designed as a simplified calculation tool to help organizations estimate and inventory their annual greenhouse gas (GHG) emissions for US-based operations. All methodologies and default values provided are based on the most current Center for Corporate Climate Leadership Greenhouse Gas Inventory Guidance Documents and the Emission Factors Hub. The Calculator will quantify the direct and indirect emissions from sources at an organization when activity data are entered into the various sections of the workbook for one annual period.

Before entering data, please: 1) Enable Macros and 2) Familiarize yourself with the Simplified Guide to GHG Management for Organizations.

Access the guide: https://www.epa.gov/system/files/documents/2022-09/Simplified_Guide_GHG_Management_Organizations.pdf

The simplified guide presents more details and information covered in the calculator; please check the guide for more info

if you have questions

There are three primary steps in completing a GHG inventory. Each emissions source also has these three steps.

(1) **DEFINE**: The first step in completing a GHG inventory is to determine the boundaries and emissions sources included within those boundaries. After you have defined your organizational and operational boundaries, you can use the questions on the "Boundary Questions" worksheet to help you determine which emissions sources are relevant to your business.

Go to Boundary Questions

(2) **COLLECT**: The second step is to collect data for the defined annual period. This step is typically the most time consuming, since the data can be difficult to gather. This Calculator has help sheets with suggestions and guidance for each emissions source and a general help sheet for data management. **Click the drop down menu boxes below to navigate to these sheets**.

Help - Market-Based Method

Go To Help Sheet

(3) **QUANTIFY**: The third step is to calculate emissions. This Calculator is designed to complete the emissions quantification step for you. Once the user enters data in this MS Excel spreadsheet, the emissions will be calculated and totaled on the "Summary" sheet.

Calculator Guidance - Important Information

https://www.epa.gov/climateleadership/simplified-ghg-emissions-calculator



GHG Protocol Calculation Tools



- Cross-sector tools: Applicable to many industries and businesses regardless of sector.
- Country-specific tools: Customized for particular developing countries.
- Sector-specific tools: Principally designed for the specific sector or industry listed, though they may be applicable to other situations.
- Tools for countries and cities: These tools help countries and cities track progress toward their climate goals.

https://ghgprotocol.org/calculation-tools-and-guidance



Stationary Combustion Calculator Example



Welcome 1. Introduction 2. Settings 3. Calculator

Calculating GHG Emissions from Stationary Combustion

Version 4.2, August 2024

This tool was last modified in August 2024 with the support of the Greenhouse Gas Management Institute (www.ghginstitute.org).

Calculation Tools Disclaimer

These spreadsheets and associated materials have been prepared with a high degree of expertise and professionalism, and it is believed that they provide a useful and accurate approach for calculating greenhouse gas emissions. However, the organizations involved in their development collectively and individually, do not warrant these spreadsheets for any purpose, nor do they make any representations regarding their fitness for any use or purpose whatsoever.

Each user agrees to decide if, when, and how to use these spreadsheets and does so at his or her sole risk. When using the tools provided on the GHG Protocol website, you agree that you are not entitled to rely on any information generated using these worksheets. You further agree to hold WRI, WBCSD, and any of their partners in the creation of the tools, harmless for loss you might suffer arising out of: any inaccuracies in numbers generated by the worksheets or variation between predictions and your actual results. Under no circumstances shall WRI, WBCSD, or any of their partners that helped create the tools, be liable for any damages, including incidental, special or consequential damages, arising from the use of these spreadsheets or an inability to use them.

If you distribute these tools through any means other than the GHG Protocol website at www.ghgprotocol.org, you should check the website to ensure the tool being provided is the latest version available, and provide information to users on how to check for updates and revisions to the tools.

For any inquiries, please contact the Greenhouse Gas Protocol Technical Support Form

> Welcome!

1. Introduction

2. Setting:

3. Calculator

Revision history

+

Resources

• **GHG Protocol**: The leading international standard for GHG accounting and reporting. Provides resources, guidance documents, and training.

Corporate Standard: https://ghgprotocol.org/corporate-standard Scope 2 Guidance: https://ghgprotocol.org/scope-2-guidance

Scope 3 Guidance: https://ghgprotocol.org/corporate-value-chain-scope-3-standard

Tools and Resources: https://ghgprotocol.org/tools-resources

• **Dairy-Specific GHG Inventory Guidance**: Documents that provides a dairy-specific interpretation of recognized GHG accounting standards, aligned with the GHG Protocol Corporate Accounting and Reporting Standard.

<u>Scope 1 and 2 Guidance</u>: https://www.usdairy.com/getmedia/b70f5fce-424d-4f7c-9691-21f5f780dd23/scope 1 2 guidance handbook 2024 final reduced.pdf?ext=.pdf Scope 3 Guidance: https://www.usdairy.com/getmedia/2e8a6a15-6254-4bdc-a323-7be3b3d973da/Scope 3 Guidance Handbook 2024 Final reduced.pdf?ext=.pdf

EPA Center for Corporate Climate Leadership: Offers a range of resources, including guidance
documents, emission factors, and tools to help organizations develop a GHG inventory and manage
their emissions.

https://www.epa.gov/climateleadership



THANK YOU

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Questions and Answers



With the change in the Administration, should we anticipate fewer requests for greenhouse gas data from our customers/buyers?



Will the EPA remove the greenhouse gas tool as a part of all the changes being made at the Federal level?



Does the Intelex tool track Scope 3?

Additional 2025 Sustainability Programming

April 16th & 17th: CheeseCon

- Unpacking Carbon Footprints: A Value Chain Approach to Advancing Dairy Sustainability
- Sustainable Trade: Exploring the Nexus of Sustainability & Dairy Exports

Summer: Dairy Sustainability Workshop

 Carbon Clarity: How to Measure, Benchmark, and Improve Your Company's GHG Impact

Fall: Dairy Sustainability Workshop

 Optimizing Sustainability: Materiality Assessment Workshop

Thank you, sponsors!





Visit Us at Booth #1117 at 2025 CheeseCon!



WISCONSIN CHEESE MAKERS ASSOCIATION

EST. 1891

Join WCMA's next free member webinar!

Dairy Exporting: Navigating Economic Cycles in a Changing World

April 24th, 1:00 p.m. (CT)

Register Now! WisCheeseMakers.org/Events