

Webb Chemical Annual Sustainability Report 2024



Message from our Leadership



Kurt Scholtens
*Vice President of Commercial
and Culture*

Capitalism, as Adam Smith envisioned, is a mechanism for advancing the common good. Smith recognized that in a framework of fair competition and moral responsibility, there is a promotion of prosperity for the whole society.

Today, we face global challenges—climate change, resource scarcity, and social inequity—that demand we rekindle Smith's original intent. Business should be guided by sustainable practices that ensure long-term value for communities, not just short-term profits.

By investing in renewable energy, circular economies, and ethical labor, Webb believe's we can align our success with societal resilience. This isn't charity—it's capitalism at its finest: driving innovation, creating jobs, and leaving our world stronger for future generations.

Help us reclaim capitalism not as a system of extraction, but as a force for regeneration. One that turns self-interest into shared progress.



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Webb Overview



Since 1963, Webb Chemical has existed to provide value to our Communities, Customers, Coworkers and Company. We operate the company according to our 6 values of Integrity, Safety, Family, Fun, Results Oriented and Relationship Focused. Decisions at Webb Chemical are made according to our 6 values with a focus on our global environment, human rights, ethics and community focus. While the business continues to evolve and grow, we do so committed to our values and guided approach.



Sustainability Pillars & Commitment



Though it has been a part of our founding principles from our beginning in 1963, in 2021 Webb Chemical started a journey of documenting how we exist as a positive influencer in a world experiencing pandemics, natural disasters, and geopolitical conflicts. We have observed firsthand that a human's ability to flourish is compromised when we pursue individualized wants rather than communal needs. Humankind is better when we work together. We are committed to investing in our environment, our people and our communities as our purpose.

OUR ENVIRONMENT

We strive to minimize our environmental impact as a company.

OUR PEOPLE & COMPANY

We empower employees to achieve health and safety goals through engagement and career development.

OUR COMMUNITIES

We invest in our communities on a local and regional level to ensure the success of the community on a personal and business levels.





7 AFFORDABLE AND CLEAN ENERGY



Affordable and Clean Energy

A well-established energy system supports all sectors of an economy. Webb Chemical is working to invest in clean energy to reduce our greenhouse gases in the trucks we drive to our reducing our plant energy consumption.

8 DECENT WORK AND ECONOMIC GROWTH



Decent Work and Economic Growth

Webb Chemical strives to provide all employees an equal opportunity for a great career. We ensure that every job at Webb is paid appropriately to ensure economic growth for the employee and their family. We are also committed to providing a safe and healthy work environment.

11 SUSTAINABLE CITIES AND COMMUNITIES



Sustainable Cities and Communities

Webb Chemical is committed to our local communities being Muskegon County (Michigan) and Allen County (Indiana) by reinvesting our profits and giving our time to help build our local communities.

Measuring Progress

Webb Chemical has set forth targets to support Our Environment, Our People and Our Community. Our targets serve as benchmarks to achieve a more sustainable company focused on human flourishing.



	Goal	Action	Target Outcome
	SDG 7 - Invest in Affordable and Clean Energy	Continue to invest in renewable energy for our facilities.	Expand Solar Generation capacity to cover 50% of our plant energy consumption by 2035
	SDG 8 - Provide Decent Work and Economic Growth	Ensure that Webb continues to fairly compensate our employee base and provide opportunity for economic growth in our communities.	Achieve the recognition as one of Michigan's Best and Brightest companies to work for in 2025
	SDG 11 - Invest in Sustainable Cities and Communities	Proactively invest in Muskegon County, Michigan and Allen County, Indiana to promote economic sustainability.	Grow the employee base in both geographic areas for our sites year over year
	Our Environment - Reduce Diesel Emissions per Millions Lbs. of Product Moved	Review enhancements for better fuel economy and reduction in idle time.	Achieve Idle Time at 10% Fleet Average and 8MPG per tractor by 2030
	Our People - Invest in our people by providing opportunities for advanced training and career development.	Allocate time and an engaging learning management system to provide continued technical training and development for employees.	Achieve 4,000 Hours of Training and Continuing Education for our employees by 2025
	Our Communities - Donate our resources to support United Way of the Lakeshore and United Way of Allen County	Encourage company and employee participation of time and resources to United Way in our respective geography.	70% Employee participation of time and/or resources to United Way (Lakeshore and Allen County)

Certificate Of Conformance

This is to certify that the Environmental Management System of:

Webb Chemical Service Corporation

2708 Jarman Street
Muskegon Heights MI
49444-0348
United States

(WITH ADDITIONAL FACILITIES LISTED ON ATTACHED ANNEX)

has been assessed by ABS Quality Evaluations, Inc. and found to be in conformance with the requirements set forth by:

ISO 14001:2015

The Environmental Management System is applicable to:

Handling, Storage, and Transportation of Industrial Commodity Chemicals

Certificate No:	43288	18
Certification Date:	JUN 2013	15
Effective Date:	JUN 2025	15
Expiration Date:	JUN 2028	07
Revision Date:	MAY 2025	



Dominic Townsend, President





CERTIFICATE *of* SUSTAINABILITY

THIS RECOGNIZES THAT

Webb Chemical Service Corp.

Has successfully shown their dedication to sustainable practices through the completion of Code VI: Sustainability under Responsible Distribution 2023 set forth by the Alliance for Chemical Distribution (ACD) Formerly NACD. The company has shown conformance through third-party verification of programs, policies, and procedures that address the following areas of sustainability:

CORPORATE SOCIAL RESPONSIBILITY | ENVIRONMENT, WATER, AND ENERGY |
RECYCLING, RE-PACKAGING, RESELLING, REUSING, AND OTHER WASTE MINIMIZATION EFFORTS

4/13/2023

Issue Date



4/13/2026

Valid Through

Caroline K. Brooks, Senior Director
Responsible Distribution



CERTIFICATE *of* COMPLETION

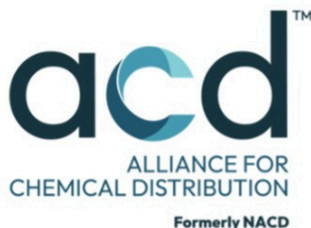
THIS CERTIFIES THAT

Webb Chemical Service Corp.

Has successfully demonstrated its commitment to Responsible Distribution as set forth by the Alliance for Chemical Distribution (ACD), formerly NACD, through successful completion of its Responsible Distribution 2023 version verification.

April 13, 2023

Issue Date



Caroline K Brooks

Caroline K. Brooks, Senior Director
Responsible Distribution

April 13, 2026

Valid Through



Charles Hutchinson

Charles Hutchinson,
Senior Associate

Webb Chemical

CY 2024 Greenhouse Gas Report

APRIL 2025

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Abbreviations

CH ₄	methane carbon dioxide carbon dioxide equivalent
CO ₂	energy use intensity greenhouse gas global warming
CO ₂ E	potential hydrofluorocarbons International Energy
EUI	Agency Inventory Quality Management System metric
GHG	tons nitrous oxide nitrogen trifluoride
GWP	perfluorocarbons quality assurance quality control
HFCS	sulphur hexafluoride World Business Council on
IEA	Sustainable Development World Resources Institute
IQMS	
MT	
N ₂ O	
NF ₃	
PCFS	
QA	
QC	
SF ₆	
WBCSD	
WRI	

Glossary

CO2 EQUIVALENT (CO2E)	The universal unit of measurement to indicate the global warming potential (GWP) of each of the six greenhouse gases, expressed in terms of the GWP of one unit of carbon dioxide.
GLOBAL WARMING POTENTIAL (GWP)	A factor describing the radiative forcing impact (degree of harm to the atmosphere) of one unit of a given GHG relative to one unit of CO2.
GREENHOUSE GASES (GHG)	The six gases that contribute to the greenhouse effect as listed in the Kyoto Protocol: carbon dioxide (CO2); methane (CH4); nitrous oxide (N2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF6).
INVENTORY QUALITY MANAGEMENT SYSTEM (IQMS)	Describes an organization's process for completing a high-quality, corporate-wide greenhouse gas (GHG) inventory. This is how Webb Chemical will institutionalize a process for collecting, calculating, and maintaining GHG data.
FORESIGHT INVENTORY MANAGEMENT TEAM	The team responsible for collecting and aggregating Webb Chemical's comprehensive inventory activity data, reviewing the data for accuracy and completeness, and providing emissions calculations and inventory reports.
WEBB CHEMICAL'S INVENTORY MANAGEMENT TEAM	The client's designated contact(s) is responsible for notifying Foresight when new locations open or close, ensuring the data provided is accurate and complete, and assisting in follow-up with site contacts when responses are delayed
QUALITY CONTROL (QC)	A system of routine technical activities to assess and maintain the quality of the inventory as it is being compiled. It is performed by personnel compiling the inventory.
QUALITY ASSURANCE (QA)	A planned system of review procedures conducted by personnel not directly involved in the inventory compilation/development process.
ORGANIZATIONAL BOUNDARY	An approach for consolidating GHG emissions and consistently applying the selected approach to define the businesses and operations that constitute Webb Chemical for the purpose of accounting and reporting GHG emissions.

OPERATIONAL BOUNDARY	The scope of emissions (direct and indirect) for all operations that fall within Webb Chemical’s established organizational boundary.
SCOPE 1	Direct greenhouse gas (GHG) emissions that occur from sources that are owned or controlled by Webb Chemical.
SCOPE 2	Greenhouse gas (GHG) emissions that occur from the use of purchased electricity supplied by grids.
SCOPE 3	Greenhouse gas (GHG) emissions that occur from “upstream” and “downstream” activities that are not owned or controlled by Webb Chemical.

Executive Summary

Background

Webb Chemical Service Corporation (Webb Chemical) is a full-service chemical distributor located in Muskegon, Michigan and Fort Wayne, Indiana, delivering a wide range of quality chemicals to their customers on time.

Foresight Management (Foresight) has engaged with Webb Chemical to identify all emissions sources across all locations within their operational control and provide greenhouse gas emission (GHG) totals for the calendar year 2024. The results will be presented in two main parts: the Inventory Quality Management System (IQMS) and the Annual GHG Inventory Report.

Purpose

The purpose of this report is to provide a detailed inventory of Webb Chemical's scope 1 & 2 GHG

emissions for the CY 2024 reporting year. The report has been prepared in accordance with the *GHG Reporting Protocol – A Corporate Accounting and Reporting Standard Revised Edition (2015)*.

Results

In a comparative analysis of 2023 (Base Year) and 2024 (Reporting Year), Webb Chemical observed a 9% increase in scope 1 emissions and a 12% increase in scope 2 emissions. Overall, there was a 9% increase in emissions. Energy consumption increased from 12,550 MWh to 13,744 MWh. A detailed breakdown of these reductions is provided in the [Results](#) section.

Key Takeaways

Vehicles were the largest source of GHG emissions, totaling 2,787 tCO₂e, which represents 81% of Webb Chemical's total emissions for calendar year 2024. Diesel was the highest activity type contributor, accounting for 2,778 tCO₂e. Electricity purchased was second highest at 340 tCO₂e and natural gas a close third at 280 tCO₂e. A complete set of graphs and detailed information is provided in the [Discussion](#) section.

Next Steps

To further reduce its GHG emissions and demonstrate leadership in its industry, Webb Chemical should consider collecting more robust solar data, conducting vehicle decarbonization and a renewable energy feasibility study, and performing a scope 3 screening and inventory. Additionally, efforts to improve EcoVadis scores should be pursued.

GHG Inventory Boundary

Organizational Boundary

Webb Chemical will use the Operational Control approach for establishing its organizational boundary. The Operational Control approach means that Webb Chemical’s accounts for the GHG emissions from operations over which they have operational control (or the authority to introduce and implement corporate or site-specific operating policies at the particular asset or operation). A full list of facilities under Webb Chemical’s operational control is provided in [Appendix A](#).

Operational Boundary

Setting operational boundaries involves identifying the emissions associated with Webb Chemical’s established organizational boundary and categorizing them as direct or indirect emissions at each operational level. Scope 3 emissions have not been collected or calculated for this reporting year and are therefore not included or discussed further in this report.

Scopes Emissions Considered

SCOPE 1 DIRECT EMISSIONS	From sources that are owned or controlled by Webb Chemical and occur on-site within the operational boundaries of Webb Chemical. Emissions include diesel, gasoline, natural gas, and propane.
SCOPE 2 INDIRECT EMISSIONS	Associated with the consumption of purchased electric power, heating, or cooling. These are activities that take place within Webb Chemical’s operations but occur at sources owned or controlled by another party.
SCOPE 3 INDIRECT (OPTIONAL) EMISSIONS	From “upstream” and “downstream” emissions resulting from activities not owned or controlled by Webb Chemical. <i>*Note – Scope 3 emissions are not included in the GHG Report.</i>

Table 1. GHG Pollutants by Activity Type

GHG Emissions Scope	Activity Type	Emission Sources (Typical Uses)	GHG Pollutants
Scope 1 (Direct)	Diesel	Mobile sources, back-up generators	CO ₂ , N ₂ O, CH ₄
	Gasoline	Mobile Sources	CO ₂ , N ₂ O,
	Natural Gas	Furnaces, water heaters, boilers	CH ₄
	Propane	Forklift	CO ₂ , N ₂ O,
Scope 2 (Indirect)	Grid Purchased Electricity	On-site electricity use	CH ₄ CO ₂ , N ₂ O,

Scope 2 emissions are calculated using the location-based methodology. Location-based emissions are directly related to local grid consumption based on location-based emission factors. Location-based emissions exclude offsets and Renewable Energy Certificates (RECs). Onsite generation does not have emissions.

Base Year Adjustments

Webb Chemical will utilize a baseline year of Calendar Year 2023 (1/1/2023 – 12/31/2023) to track future progress and compare future emissions.

Adjustments to Base Year Emissions – Structural and Methodology Changes

Webb Chemical's base year and subsequent year inventories will be adjusted for mergers, acquisitions and divestitures according to guidance provided by WRI/WBCSD GHG Reporting Protocol. Webb Chemical's base year inventory and subsequent years' emissions reports will be updated when a significant cumulative change in their base year emissions is triggered. The following conditions will require such adjustment if a significant change is identified:

- A structural change of organizational boundaries (i.e., merger, acquisition, or divestiture).
- A change in calculation methodologies or emission factors.
- Additional or new data or methodology are available on source emissions that were not previously available.
- Outsourcing (i.e., production of goods that is moved outside of Webb Chemical's defined reporting boundaries) or Insourcing (i.e., opposite of "outsourcing") where the modified case includes emissions that were not previously accounted for within the inventory.
- A significant error or several cumulative errors in Webb Chemical's inventory is discovered.

Significant is defined as an absolute change of five percent total or larger in Webb Chemical's total base year emissions (both scope 1 and scope 2) on a tCO₂e basis.

In the instance where Webb Chemical has acquired or merged with a company and base year data for the new company is not available after best efforts to collect such data, an alternative simplified method may be used to update the base year data using available data. Note that the associated procedure, calculation methodologies, and supporting data should be documented in this plan.

If absolutely no data for the new company is available and it is impossible to estimate the impact on Webb Chemical's cumulative base year emissions, a corresponding base year inventory will be established for the current reporting year (which will include the new acquisition / merger) and such modifications to the reporting program should be documented in this plan.

The following changes identify conditions that do not warrant a change to base year emissions. Note this list includes commonly encountered activities but it is not exhaustive.

- An acquisition or merger of new facilities that did not exist in the base year.
- Outsourcing (i.e., production of goods that is moved outside of Webb Chemical defined reporting boundaries) or Insourcing (i.e., opposite of "outsourcing") that has been reported under core indirect emissions (or scope 2).
- Organic growth or decline – increases or decreases in production output, changes in processes or product mix, and closure / openings of operating units owned or controlled by Webb Chemical.

Results

Energy Results In calendar year 2024, Webb Chemical evaluated its energy consumption relative to its baseline year, 2023, to identify changes over time. Table 2 details energy consumption by scope and activity type in megawatt hours (MWh) for both years, along with the percentage change for each category and activity type.

Table 2. Total Energy Usage (MWh) by Scope and Activity Type

Scope and Activity Type	Baseline Year 2023	Reporting Year 2024	Percentage Change
Scope 1	11,853.29	12,963.98	9.37%
Diesel	9,995.68	10,988.74	9.93%
Gasoline	35.57	37.70	5.97%
Natural Gas	1,605.23	1,542.63	-3.90%
Onsite Energy Generation	18.16	176.17	869.99% ¹
Propane	198.65	218.75	10.12%
Scope 2	696.82	780.71	12.04%
Electric	696.82	780.71	12.04%
Grand Total (CY 2024)	12,550.11	13,744.69	9.52%

¹ Compared to 2023, more primary data for the onsite generation was provided in 2024 leading to a large percent change year-to-year. In 2023, Webb Chemical Service Corporation underwent planned maintenance and capital projects which affected their solar generation. They replaced the Bldg. 9 roof which took the Bldg. 9 solar generation system down for 4 months during peak summer months. Additionally, the inverter on Bldg. 3 failed which shut down Bldg. 3 solar generations for 6-7 months

Emission Results

In calendar year 2024, Webb Chemical assessed its total emissions by scope and activity type, comparing them to the baseline year of 2023. Table 3 presents the emissions data, highlighting the contributions from various sources. Scope 1 emissions include diesel, gasoline, natural gas, and propane while scope 2 emissions are derived solely from electricity.

Table 3. Total Emissions Usage by Scope and Activity Type²

Scope and Activity Type	Baseline Year 2023 Total (tCO ₂ e)	Reporting Year 2023 Total (tCO ₂ e)	Percentage Change
Scope 1	2,868.8	3,113.3	8.52%
Diesel	2,526.55	2,777.55	9.93%
Gasoline	8.56	9.07	5.97%
Onsite Energy Generation ³	0.00	0.00	N/A
Natural Gas	290.92	279.57	-3.90%
Propane	42.78	47.11	10.12%
Scope 2	304.11	340.36	11.92%
Electric	304.11	340.36	11.92%
Grand Total (CY 2024)	3,172.91	3,453.66	8.85%

² A further detailed breakdown of emissions by facility, scope, and GHG type can be found in [Appendix D](#).

³ Onsite energy generation from solar does not generate emissions but is included in the table for consistency.

Normalized Energy and Emissions Results – Year-Over-Year Comparison

Table 4 presents Webb Chemical’s comprehensive normalized energy and emissions data by pounds of product moved (per million pounds moved). Total pounds of product between Muskegon and Fort Wayne were used. Calculations were based on per million pounds of product used for a more comprehensible outcome value.

Table 4. Webb Chemical’s Comprehensive Normalized Energy and Emissions Data

Normalization (Units / Million Pounds of Product Moved)	Baseline Year 2023	Reporting Year 2024	Percent Change
Normalized Energy (MWhs / Million lbs of Product Moved)	56.75	55.31	-2.55%
Normalized Emissions (tCO ₂ e / Million lbs of Product Moved)	14.35	13.90	-3.15%

Normalized Energy and Emissions Results – Reporting Year (2024)

Table 5 presents reporting year 2024 normalization results for individual sites. Normalization for vehicle data used the combined Muskegon and Fort Wayne pounds of product moved to showcase the intensity of vehicles themselves in the pounds of products being moved. Moreover, vehicles make up 80.69% of Webb Chemical’s total emissions in calendar year 2024, and 79.90% of emissions in the baseline year 2023.

Table 5. Normalized Energy and Emissions Data by Site for Reporting Year 2024

Building Name	Million Pounds of Product Moved	Normalized Energy (MWhs / Million lbs of Product Moved)	Normalized Emissions (tCO ₂ e / Million lbs of Product Moved)
Fort Wayne	18.12	14.44	3.86
Muskegon	230.40	10.66	2.59
Vehicles	248.52	44.37	11.21
Total	248.52	55.31	13.90

Normalized Energy and Emissions Results – Baseline Year (2023)

Table 6 presents baseline year 2023 normalization results for individual sites. Normalization for vehicle data was performed as described above for Table 5. Baseline year normalized results are broken out individually by site due to the shift from last year's metric of per 100 pounds of product moved to this year's of per million pounds of product moved.

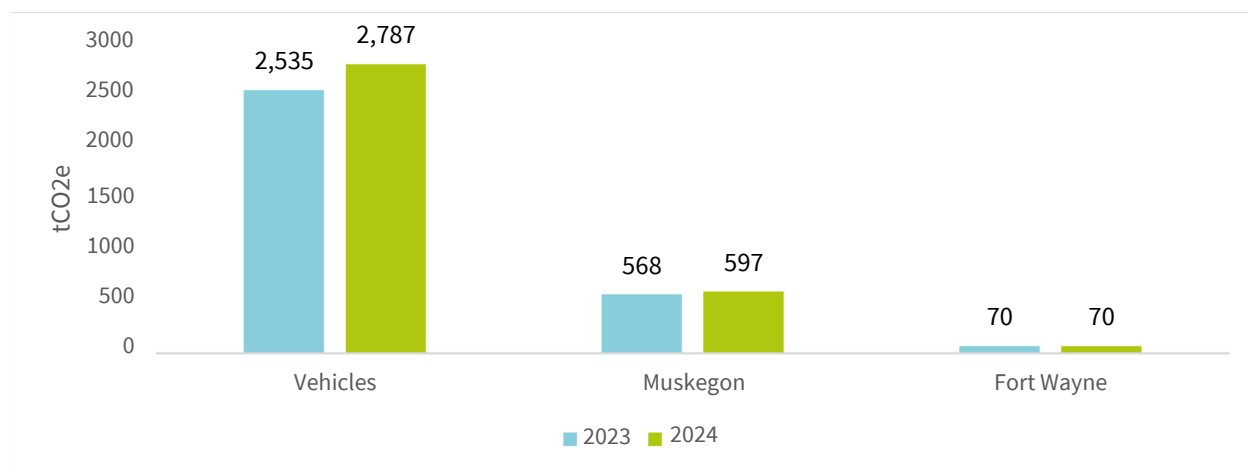
Table 6. Normalized Energy and Emissions Data by Site for Baseline Year 2023

Building Name	Million Pounds of Product Moved	Normalized Energy (MWhs / Million lbs of Product Moved)	Normalized Emissions (tCO ₂ e / Million lbs of Product Moved)
Fort Wayne	27.12	10.81	2.58
Muskegon	194.01	11.47	2.93
Vehicles	221.13	45.36	11.46
Total	221.13	56.75	14.35

Discussion

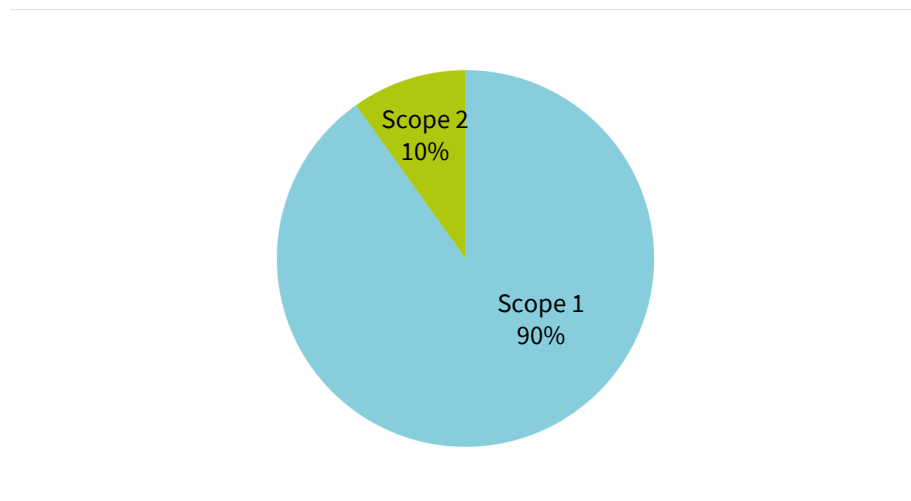
In calendar year 2024, Webb Chemical's vehicles generated the most emissions at 2,787 tCO₂e (10% increase from 2023), Muskegon at 597 tCO₂e (+5% increase from 2023), and Fort Wayne at 70 tCO₂e (0% change from 2023).

Figure 1. Total Emissions by Building for CY 2024 (tCO₂e)



In CY 2024, scope 1 emissions accounted for 3,113.30 tCO₂e (90%) of Webb Chemical's total emissions and scope 2 accounted for 340.36 tCO₂e (10%). See [Table 3](#) for year over year changes.

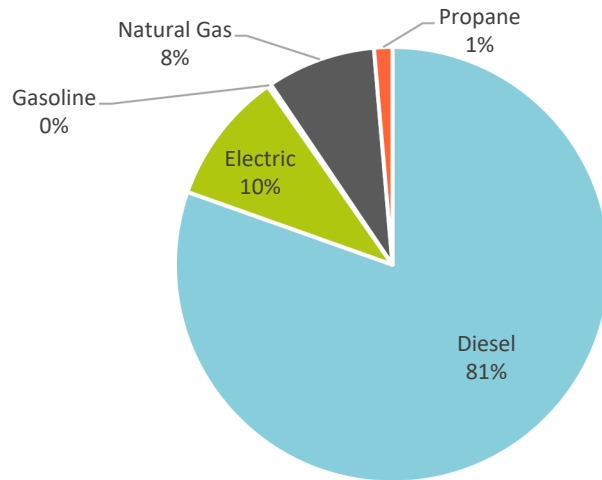
Figure 2. Total Emissions by Scope CY 2024



As an organization, Webb Chemical has control over the generation of scope 1 emissions and can directly work to reduce these emissions over time through further efficiency measures. Scope 2 emissions are generated by the utility provider and decisions around the purchase of renewable energy could be considered to reduce these emission sources. Webb Chemical has already begun their journey to reduce scope 2 emissions by installing solar arrays at their Muskegon campus.

The largest source of emissions at Webb Chemical was diesel (80.42%) from vehicles. Next was electric (9.85%) and natural gas (8.09%). The lowest contributions were propane and gasoline at 1.36% and 0.26%, respectively. See [Table 3](#) for year-over-year changes.

Figure 3. Emissions Breakdown by Source in CY 2024



Reporting Principles and Disclaimers

Relevance

Ensure the GHG inventory appropriately reflects the GHG emissions of the company and serves the decision-making needs of users – both internal and external to the company.

Completeness

Account for and report on all GHG emission sources and activities within the chosen inventory boundary. Disclose and justify any specific exclusions

- Primary data for emitting activities was at 100% completeness. (This does not include onsite energy generation from solar)
- Overall, primary data was at 96.58% completeness as Webb Chemical was unable to collect onsite energy generation from several of its solar panel arrays due to some technical difficulties.

Consistency

Use consistent methodologies to allow for meaningful comparisons of emissions over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.

- Updated Emission Factors: The eGrid 2023 dataset was released at the beginning of CY2025, and was applied to readings from CY2023 – present, as it is the most accurate and up-to-date emissions source.
- Improved Primary Data Collection: We obtained additional primary data for the CY2023 data, leading to more accurate reporting.

Transparency

Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.

- Onsite energy generation data collected came from solar array reports only and did not include data from the Consumers Energy bills. Foresight and Webb Chemical need to work with Consumers Energy and the Webb Chemical solar team to better understand the solar array data.

Accuracy

Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

- Foresight has prepared Webb Chemical's GHG Inventory in line with the GHG Protocol. Foresight is a second party, but the IQMS, GHG Report, and GHG Calculation workbook can be used to seek third party validation. Coefficients were sourced through Climatiq, an ISO 14067 certified database. All uncertainties are documented above.

Appendix A: List of Facilities

Below is a comprehensive list of facilities that are included within Webb Chemical's operational boundary based on the data and information we received.

Facilities

Site Name

	Address	City	State	Zip	Country	Sq. Feet
Muskegon	2708 Jarman St	Muskegon	MI	49444	USA	120,352
Fort Wayne	702 Hayden St	Fort Wayne	MI	46803	USA	21,995

Appendix B: Emissions Calculation Methodology

Calculating emissions from GHG sources generally involves the following six steps:

1. Determine annual consumption of each combusted fuel or annual energy consumption;
2. Determine the CO₂ emission factor for each fuel or unit of energy consumption;
3. Determine CH₄ and N₂O emission factors for each fuel or unit of energy consumption;
4. Calculate CO₂ emissions by multiplying the emission factor by annual fuel or energy consumption;
5. Calculate CH₄ and N₂O emissions by multiplying emission factors by annual fuel or energy consumption; and
6. Convert CH₄ and N₂O emissions to CO₂e using their corresponding global warming potentials

The formula to calculate GHG emissions is:

Activity Data X Emissions Factor X Global Warming Potential (GWP) = GHG Emissions (CO₂e)

Global Warming Potentials

CO ₂	CH ₄	N ₂ O
1	27.9	273

Source: [IPCC Sixth Assessment Report \(AR6\)](#)

Appendix C: List of Emission Factors

Below is a list of references and emission factors used to calculate GHG emissions for all fuel sources. All coefficients were gathered through Climatiq, an ISO 14064 certified database. The emissions factors listed below only show the most current emission factors that were available for the 2024 reporting year.

In calculating scope 1 emissions, we utilized specific coefficients for each activity, drawing from reliable sources. While these coefficients vary by activity—such as natural gas, diesel, and refrigerants, they remain consistent regardless of geographical location.

In calculating scope 2 emissions, we utilized the following best practices in order of preferred sources when selecting coefficients:

1. Local or State Government if available
2. AIB
3. Climate Transparency
4. GHG Protocol

Scope 1 Emission Factors

Source	Scope	Reference	CO2	CH4 0.001	N2O 0.0001
Natural Gas	1	2024 WRI - GHG Emissions Factor Hub	53.06 kg/MMBtu	kg/MMBtu	kg/MMBtu
Diesel	1	2021 WRI - GHG Emissions Factor Hub	10.21 kg/gal	0.00004488 kg/gal	0.00004224 kg/gal
Gasoline	1	2023 WRI - GHG Emissions Factor Hub	8.78 kg/gal	0.00038 kg/gal	0.00008 kg/gal
Propane	1	2023 WRI - GHG Protocol Emissions Factor Hub	5.72 kg/gal	0.00027 kg/gal	0.00005 kg/gal

Scope 2 Emission Factors - United States

Source	Scope	Reference	Locations used	CO2	CH4	N2O
Electricity (Grid Purchased)	2	2023 U.S. eGRID – RFCW	Fort Wayne	413.4 kg/MWh	0.0322056 kg/MWh	0.004536 kg/MWh
Electricity (Grid Purchased)	2	2023 U.S. eGRID – RFCM	Muskegon	436.4 kg/MWh	0.0371952 kg/MWh	0.0049896 kg/MWh

Appendix D: Source Data Matrix

This table provides a simple matrix checklist overview of what fuels we received and calculated for 2024 for Webb Chemical's facilities.

Facility	Diesel	Electric	Gasoline	Natural Gas	Propane
Fort Wayne		✓		✓	✓
Muskegon		✓		✓	✓
Muskegon - Vehicles	✓		✓		

Appendix E: Detailed Breakdown of Emissions Results

This table offers a comprehensive breakdown of CY24 greenhouse gas emissions by building and site, detailing total emissions in tCO₂e for carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). This table does not include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), or sulfur hexafluoride (SF₆).

CY 2024 Emission (tCO₂e)

Site	Sum of tCO ₂ e CO ₂	Sum of tCO ₂ e CH ₄	Sum of tCO ₂ e N ₂ O	Sum of tCO ₂ e
FortWayne				
Scope 1				
Natural Gas	30.08	0.02	0.02	30.11
Propane	29.55	0.02	0.02	29.58
Scope 2	0.52	0.00	0.00	0.52
Electric	39.69	0.09	0.12	39.89
Total	39.69	0.09	0.12	39.89
	69.76	0.10	0.14	70.00

Muskegon

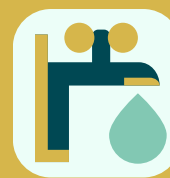
Scope 1	296.14	0.19	0.24	296.57
Natural Gas	249.73	0.13	0.13	249.99
Propane	46.41	0.06	0.11	46.58
Scope 2	298.82	0.71	0.93	300.46
Electric	298.82	0.71	0.93	300.46
Total	594.97	0.90	1.17	597.04

Vehicles

Scope 1	2,783.13	0.35	3.14	2,786.62
Diesel	2,774.10	0.34	3.12	2,777.55
Gasoline	9.03	0.01	0.02	9.07
Total	2,783.13	0.35	3.14	2,786.62
Grand Total	3,447.86	1.36	4.44	3,453.66

Conclusion

We thank you for your business and continued support of Webb Chemical. We will continue to make decisions at Webb Chemical according to our 6 values with a focus on our global environment, human rights, ethics and community focus. While the business continues to evolve and grow, we do so committed to our values and guided approach. We look forward to continuing our own journey toward a more sustainable future and would encourage your company to join us.



Contact



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