



# CORPORATE GHG INVENTORY

Client:  
Axios Industrial Group

Inventory Year:  
Calendar Year 2021

Study Completed:  
November 2022



## DOCUMENT SUMMARY

Company Information		
Company Name	Axios Industrial Group	
Address of Headquarters	10077 Grogans Mill Rd. The Woodlands, TX 77380	
Regions of Operation	<input type="checkbox"/> Asia <input type="checkbox"/> Latin America <input type="checkbox"/> Africa <input type="checkbox"/> North America, All <input type="checkbox"/> Europe, Eastern <input checked="" type="checkbox"/> North America, US Only <input type="checkbox"/> Europe, Western <input type="checkbox"/> Oceania	
Parent Company	White Deer Management LLC	
GHG Inventory Details		
Reference Standards	<input checked="" type="checkbox"/> GHG Protocol Corporate Standard <input checked="" type="checkbox"/> GHG Corporate Value Chain Standard <input checked="" type="checkbox"/> ISO 14064-1:2018 – Corporate Level Accounting	
Inventory Year	Calendar Year 2021	
Baseline Year	N/A	
Inventory Scope		
Inventory Coverage	<input type="checkbox"/> All Emission Categories <input checked="" type="checkbox"/> Some Categories Excluded	
Organizational Boundary	<input checked="" type="checkbox"/> Operational Control <input type="checkbox"/> Equity-Share <input type="checkbox"/> Financial Control	
Level of Assurance/Verification	No Assurance Conducted	
Included Emissions (Operational Boundary)		
Scope 1 and 2 Emissions	Scope 3 Emissions	
<input checked="" type="checkbox"/> Scope 1 – Direct emissions <input checked="" type="checkbox"/> Scope 2 – Indirect emissions from electricity (Location-Based) <input checked="" type="checkbox"/> Scope 2 – Indirect emissions from electricity (Market-Based)	<input checked="" type="checkbox"/> 1. Purchased Goods and Services <input type="checkbox"/> 2. Capital Goods <input checked="" type="checkbox"/> 3. Energy Related Activities <input type="checkbox"/> 4. Upstream Transportation and Distribution <input checked="" type="checkbox"/> 5. Waste Generated in Operations <input checked="" type="checkbox"/> 6. Business Travel <input checked="" type="checkbox"/> 7. Employee Commuting <input checked="" type="checkbox"/> 8. Upstream Leased Assets <input type="checkbox"/> 9. Downstream Transportation and Distribution <input checked="" type="checkbox"/> 10. Processing of Sold Products <input checked="" type="checkbox"/> 11. Use of Sold Products <input type="checkbox"/> 12. End of Life Treatment of Sold Products <input checked="" type="checkbox"/> 13. Downstream Leased Assets <input checked="" type="checkbox"/> 14. Franchises <input checked="" type="checkbox"/> 15. Investments	
Note: A checked box indicates that the emissions source was evaluated, and the emissions were calculated, or that the emissions source was evaluated and determined to be not applicable.		

## TABLE OF CONTENTS

<b>1 BACKGROUND</b>	<b>1</b>
<b>2 MAJOR FINDINGS OF THE STUDY</b>	<b>2</b>
2.1 MARKET CONTEXT AND PERFORMANCE METRICS	4
2.2 REPORTING EMISSIONS	5
2.3 NEXT STEPS AND RECOMMENDATIONS	5
2.3.1 <i>Actions to Reduce the Company's Direct Emissions</i>	5
2.3.2 <i>Actions to Improve Carbon Accounting and Long-Term Planning</i>	5
<b>3 INVENTORY SCOPE</b>	<b>7</b>
3.1 ORGANIZATIONAL BOUNDARIES AND CONSOLIDATION APPROACH	7
3.1.1 <i>Facilities Included in the Inventory</i>	7
3.2 OPERATIONAL BOUNDARIES	7
3.2.1 <i>GHG Protocol Inventory Categories</i>	7
<b>APPENDIX A. INVENTORY MANAGEMENT PLAN AND DATA QUALITY ASSESSMENT</b>	<b>10</b>
<b>APPENDIX B. DATA QUALITY PEDIGREE MATRIX</b>	<b>11</b>
<b>APPENDIX C. EMISSIONS RESULTS BY GREENHOUSE GAS</b>	<b>12</b>

## LIST OF TABLES

TABLE 1: AXIOS 2021 EMISSIONS OVERVIEW.....	3
TABLE 2: COMPANY EMISSIONS IN CAR EQUIVALENTS .....	4
TABLE 3: KEY PERFORMANCE METRICS .....	4
TABLE 4: LIST OF FACILITIES INCLUDED IN INVENTORY .....	7
TABLE 5: GHG PROTOCOL EMISSION CATEGORY INCLUSION .....	7
TABLE 6: INVENTORY MANAGEMENT PLAN.....	10
TABLE 7: DATA QUALITY PEDIGREE MATRIX .....	11
TABLE 8: 2021 SEPARATE REPORTING OF EACH GHG .....	12

## LIST OF FIGURES

FIGURE 1: AXIOS 2021 TOTAL EMISSIONS .....	2
--	---

## LIST OF ABBREVIATIONS

**CDP:** Carbon Disclosure Project

**CO<sub>2</sub>:** Carbon Dioxide

**CO<sub>2</sub>e:** Carbon Dioxide Equivalent

**DEFRA:** Department for Environment, Food & Rural Affairs (United Kingdom)

**EPA:** Environmental Protection Agency (United States)

**GHG:** Greenhouse Gas

**GWP:** Global Warming Potential

**IEA:** International Energy Agency

**IPCC:** Intergovernmental Panel on Climate Change

**LCA:** Life Cycle Assessment

**MT:** Metric tonne (1,000 kg)

**SBTi:** Science Based Targets Initiative

**TCR:** The Climate Registry

**UNFCCC:** United Nations Framework Convention on Climate Change

**WBCSD:** World Business Council for Sustainable Development

**WRI:** World Resources Institute

# 1 BACKGROUND

This document represents the results of a corporate greenhouse gas (GHG) emissions inventory that was conducted by WAP Sustainability Consulting for Axios Industrial Group. The study took place during 2022 and considered relevant activities that occurred during the period of January 1<sup>st</sup>, 2021, through December 31<sup>st</sup>, 2021.

This inventory followed several GHG accounting standards and guidance documents. Primarily, the inventory followed requirements defined by the World Resource Institutes (WRI) Greenhouse Gas (GHG) Protocol. WRI's GHG Protocol is the most used and respected international standard for how to measure, manage, and report GHG emissions, commonly referred to as a company's carbon footprint. The latest statistics indicate that 92% of Fortune 500 companies that report to the Carbon Disclosure Project (CDP) utilize the WRI GHG Protocol. This standard is global in scope and widely recognized by domestic and international reporting schemes. Utilizing the WRI GHG Protocol is the first step toward a credible inventory.

Additionally considered for this inventory was WRI's Corporate Value Chain Accounting and Reporting Standard. The Corporate Value Chain Accounting and Reporting Standard includes emission categories that are a consequence of the activities of the company but occur from sources not owned or controlled by the company. These emissions are referred to as "scope 3" emissions and evaluating them shows that a company is willing to look beyond their direct sphere of influence to understand and improve their overall carbon footprint. This standard additionally splits scope 3 emissions into 15 categories which are used in this inventory and further sets the minimum boundaries of what needs to be considered for each category. Included scope 3 emission categories were selected based on data availability and project scope and budget.

The calculation of GHG emissions used recognized emission factors from The Climate Registry, Intergovernmental Panel on Climate Change (IPCC), and the United States Environmental Protection Agency (EPA). Following standard GHG accounting procedures, calculated emissions were classified as scope 1, scope 2, or scope 3. Scope 1 emissions are direct emissions within an organization's boundary. Scope 2 emissions are impacts related to the purchase of electricity. Scope 3 emissions are emissions that occur at other entities as a result of the decisions and actions that the reporting company takes.

A growing number of businesses are committed to the goal of becoming more environmentally sustainable. The first step in evaluating and understanding a company's emissions is to conduct a GHG inventory analysis. While there are a variety of reasons for a company to undertake the task of completing an inventory, the primary reason that Axios elected to complete this inventory was to quantify their company's emissions and identify reduction opportunities.

## 2 MAJOR FINDINGS OF THE STUDY

The effort completed to date is the starting point for a deeper understanding into the GHG emissions associated with Axios's business operations. This inventory provided insight into highly material emission sources or "hot spots" and enabled the ability to analyze emission trends over time. This information and increased transparency can help inform corporate strategy and prioritize actions to reduce emissions, as well as provide a benchmark for future activities.

Like many companies, the emissions derived from the value chain (scope 3) of Axios are higher than the direct emissions (scope 1) and those from the generation of electricity consumed (scope 2). The combined greenhouse gas contribution from all scope 3 emission sources was approximately 55% of the total calculated carbon emissions in 2021. Table 1, below, presents emissions based on the World Resource Institute (WRI) GHG protocol's reporting format and provides a breakdown of the total carbon emission by scope and category.

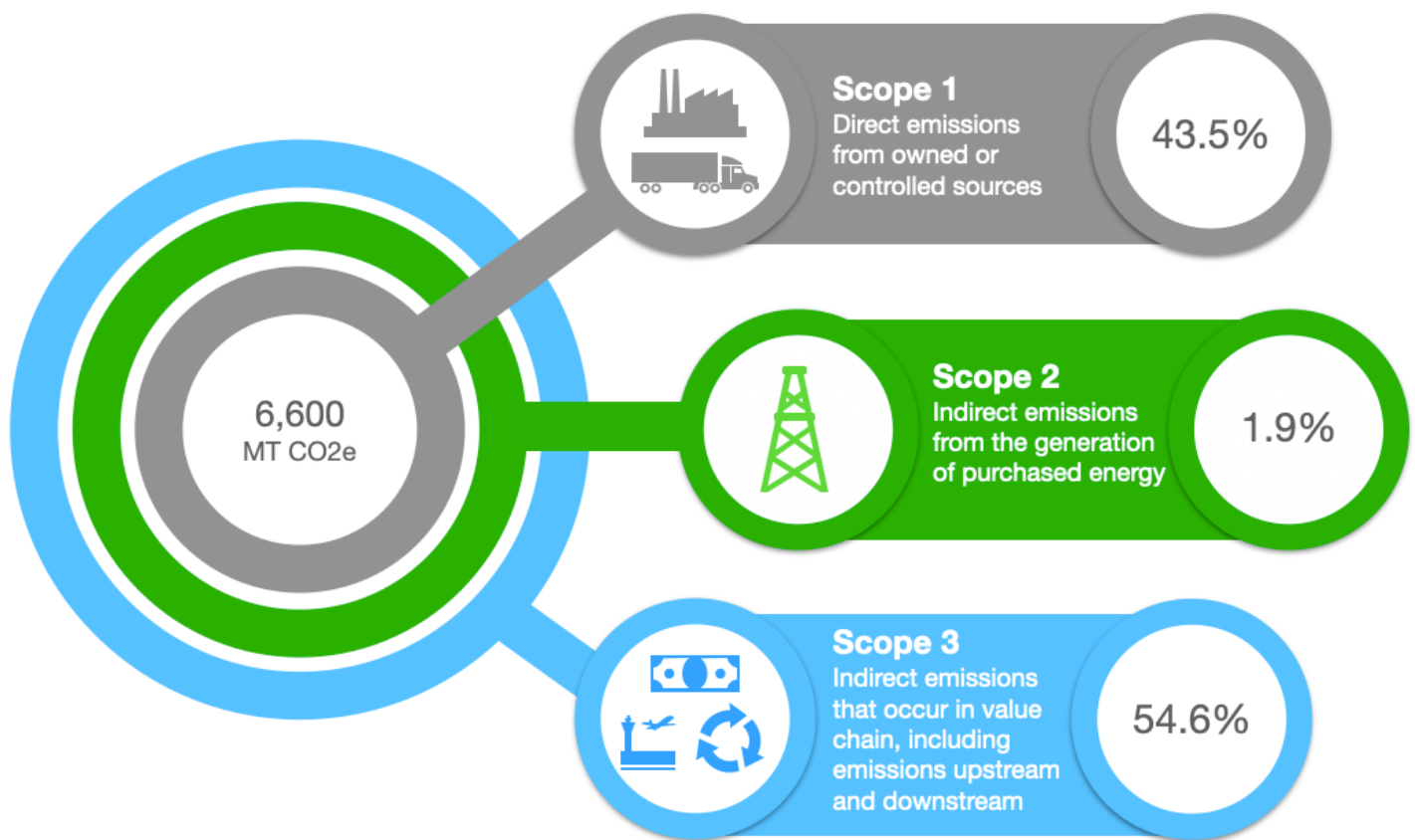


Figure 1: Axios 2021 Total Emissions

Table 1: Axios 2021 Emissions Overview

Emissions Source		2021 Inventory		Materiality Level
		MT CO <sub>2</sub> e	% of Annual	
Scope 1	Stationary Fuel Combustion	16.9	<1%	Material
	Fleet Emissions	2,850	43.1%	Highly Material
	Fugitive Emissions (Refrigerants)	9.1	<1%	Immaterial
Scope 2	Electricity (Location-Based)**	174	-	
	Electricity (Market-Based)**	123	1.9%	Material
Scope 3	Purchased Goods & Services	1,300	19.6%	Material
	Capital Goods	-	-	Not Calculated
	Fuel- and Energy- Related Activities	745	11.3%	Material
	Upstream Transportation & Distribution	-	-	Not Calculated
	Waste Generated in Operations	11.6	<1%	Immaterial
	Business Travel	29.8	<1%	Immaterial
	Employee Commute	1,530	23.2%	Material
	Upstream Leased Assets	-	-	N/A
	Downstream Transportation & Distribution	-	-	Not Calculated
	Processing of Sold Products	-	-	N/A
	Use of Sold Products	-	-	N/A
	End of Life Treatment of Sold Products	-	-	Not Calculated
	Downstream Leased Assets	-	-	N/A
	Franchises	-	-	N/A
Investments	-	-	N/A	
<b>Total Emissions:</b>		<b>6,600</b>	<b>100%</b>	

\*Note: Due to rounding, the sum of results presented may not equal the total shown.

\*\*Note: Location-based electricity emissions are not assigned a percentage or materiality level in the table since this category is considered an alternative calculation methodology to the market-based emissions values. Market-based emissions factors take into account the emissions intensity of local energy providers if known. The location-based emissions factors take into account regional emissions based on the EPA's eGRID system. Reporting based on both market-based emissions factors and location-based emissions factors is required, and one method is not preferable to the other, though the market-based electricity emissions are used in the totals to be conservative.

The largest impact category was fleet emissions, accounting for approximately 43% of the total inventory. Emissions in this category are from the combustion of gasoline and diesel in Axios owned/controlled vehicles.

The second largest emission source was employee commute, accounting for approximately 23% of the total footprint. Emissions in this category are from Axios employees and contractors commuting to and from work locations.

The next largest impact category was Purchased Goods & Services, accounting for approximately 20% of the company's calculated carbon footprint in 2021. Emissions in this category include the embodied carbon of goods purchased. Embodied carbon is the term used to describe the emissions associated with a product from raw material sourcing, supplier processing, shipments from material suppliers, and manufacturing.

## 2.1 MARKET CONTEXT AND PERFORMANCE METRICS

Without context, a carbon footprint does nothing to help a company understand the scale of its impact. Instead, it is often helpful to put the number into some context. At an elementary level, one can compare a company's carbon footprint to well-known sources and sinks of carbon emissions, such as an equivalent number of automobiles. This comparison can help interested individuals visualize the extent of a carbon footprint. In the case of Axios, the company's carbon footprint was equal to the annual emissions from 1,440 typical passenger vehicles in the United States in 2021.

Table 2: Company Emissions in Car Equivalents

	2021	Unit
<b>Total Carbon Emissions</b>	6,600	MT CO <sub>2</sub> e
<b>Total Car Equivalents*</b>	1,440	Automobiles
*The average annual emissions per year per passenger vehicle is 4.6 MT CO <sub>2</sub> e per data from the US EPA		

It is helpful for companies to track performance not only by looking at absolute emissions but emissions as a number relative to business activity. In this manner, companies can evaluate if their carbon footprint per unit of activity is decreasing, even as the company's absolute emissions are increasing. One such standard performance metric is emissions per employee.

Table 3: Key Performance Metrics

Performance Indicator	Scopes Included	Per Indicator Emissions	Units
Employee Count	Scopes 1, 2, 3	6.7	MT CO <sub>2</sub> e per Employee
Emissions per Facility Square Foot*	Scopes 1, 2	45.7	kg CO <sub>2</sub> e per Sq. ft.
*Based on best practice, emissions per square foot are calculated using scope 1 and scope 2 emissions only. Scope 2 emissions used to calculate performance metrics are market-based.			



---

## 2.2 REPORTING EMISSIONS

The primary reason that Axios elected to complete this inventory was to quantify their company's emissions and identify reduction opportunities. It is important to note that reporting requirements often vary, and this can make reporting emissions a problematic task. Often, organizations want to summarize their emissions into a single number that includes all scope 1, 2, and 3 values combined. However, subscribing to a combined GHG footprint number is dangerous for several reasons. First, it does not provide accurate insight into the sphere of influence that a company has over its emissions footprint. Second, it does not account for inventory inclusion choices, particularly those related to scope 3 emissions, that a company has the flexibility to make under accounting standards and can lead to double-counting emissions. Third, it can lead to inappropriate and inaccurate comparisons between competing organizations and distrust in GHG accounting practices.

Because of these reasons, reporting entities such as the Carbon Disclosure Project (CDP), the Climate Registry (TCR), the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), and the Dow Jones Sustainability Index (DJSI) do not request single carbon footprint values. Rather, they require that emissions be reported by scopes. Additionally, it is also best practice to not report all scope 3 emissions as a single rolled-up value, but rather as source categories based on data quality and calculation methods (more on this below).

In managing and reporting GHG emissions, Axios should follow the lead of the reporting entities listed above. The following statements are considered appropriate based on best practices related to GHG reporting:

- The combined corporate scope 1 and scope 2 emissions of Axios were 2,990 Metric Tons of Carbon Dioxide Equivalents (CO<sub>2</sub>e) in 2021.
- The total scope 3 emissions calculated were 3,610 Metric Tons of Carbon Dioxide Equivalents (CO<sub>2</sub>e) in 2021. Through the process of evaluating scope 3 emissions, it was discovered that the most impactful emission category outside of direct activities was related to Employee Commute, accounting for approximately 23% of the total calculated carbon footprint.

---

## 2.3 NEXT STEPS AND RECOMMENDATIONS

For Axios, there are several next steps that the company can take to show a commitment towards better understanding and reducing its climate impact and risk. Some of these actions are aimed at reducing the company's direct carbon impact. In contrast, others are useful measures aimed at improving the company's carbon accounting perspective, long-term planning ability, and market standing.

### 2.3.1 Actions to Reduce the Company's Direct Emissions

Emissions from Axios's vehicle fleet is the most significant impact source related to direct operations, accounting for approximately 95% of scope 1 and 2 emissions. Axios uses a fleet tracking system (WEX Fleet Cards) to capture fuel consumption data. However, this data was only available for a portion of the reporting year, estimations for the missing data were extrapolated from the provided data. Reduction strategies should include replacing older vehicles with newer, more efficient vehicles. Additionally, Axios could consider evaluating the potential for increased electric or hybrid vehicles within their fleet.

### 2.3.2 Actions to Improve Carbon Accounting and Long-Term Planning

#### Primary Data Collection – Scope 1 & 2

To collect and track fleet fuel data, Axios uses a 3<sup>rd</sup> party fleet tracking system (WEX Fleet Cards). WEX provides regular reports indicating fuel type and units purchased. For calendar year 2021, data was only available for a portion

of the reporting year, estimations for the missing data were extrapolated from the provided data. For subsequent inventories, Axios should provide full year WEX data to increase the accuracy of the emissions calculations.

Primary data was available for natural gas and electricity consumption at 8 out of 10 of Axios's facilities. For the facilities that were unable to provide primary data, consumption was estimated based on facility type and size. In the future, Axios should implement procedures to capture primary consumption data at all sites to better inform future inventories.

### Primary Data Collection – Scope 3

Like many companies, primary activity data was unavailable for certain scope 3 categories and estimations based on the best available data were used to calculate emissions. For example, Purchased Goods and Services, Waste Generated in Operations, and Business Travel emissions were estimated based on annual spend. Emissions were calculated using the EPA's US Environmentally-Extended Input-Output (USEEIO) emission factors. While this tool provides an estimate of the supply chain emissions in each industry based on spend, it is recommended that Unicat obtain primary data in future iterations of this assessment to allow for a more accurate calculation. Doing so will likely result in lower emissions since, in the absence of primary data, conservative estimations were utilized. Using estimations is acceptable when compiling an organizational-level GHG inventory. However, primary data is more valuable when one company wants to track its carbon reduction performance and make well-grounded decisions.

### Low Carbon Procurement Plan

A significant source of emissions for Axios came from purchased goods. This category was comprised of raw materials purchased to manufacture Axios products in calendar year 2021. Embodied carbon is the term used to describe the climate impact of materials calculated from an evaluation of how the material is manufactured and sourced. It includes the environmental impact from raw material sourcing, supplier processing, shipments from suppliers, and manufacturing. It is recommended that Axios seek opportunities to engage suppliers to obtain product-specific life cycle assessment (LCA) data for purchases, commonly found in environmental product declarations (EPDs).

## 3 INVENTORY SCOPE

### 3.1 ORGANIZATIONAL BOUNDARIES AND CONSOLIDATION APPROACH

According to the GHG Protocol, companies can utilize either an equity-share approach or control approach when creating a GHG inventory. For Axios, the control approach was selected, specifically using the operational control method to account for all operations under Axios direct operational control.

#### 3.1.1 Facilities Included in the Inventory

The following facilities are included in the GHG inventory.

Table 4: List of Facilities Included in Inventory

Axios Locations	
The Woodlands, TX	Geismar, TX
Orlando, FL	Augusta, GA
Pasadena, TX	Cushing, OK
Sulphur, LA	Deer Park, TX
Nederland, TX	Corpus Christi, TX

### 3.2 OPERATIONAL BOUNDARIES

After a company has determined its organizational boundaries in terms of the business units that it owns or controls, it then sets its operational boundaries. Setting operational boundaries involves identifying emissions sources and categorizing them as direct or indirect. This study is considered a Full and Complete inventory as it includes the minimum boundaries for all scope 1, 2, and 3 emissions sources/categories identified by the GHG Protocol. Additionally, scope 3 emissions are split into the categories defined by the GHG Protocol's Corporate Value Chain (scope 3) Accounting and Reporting Standard.

#### 3.2.1 GHG Protocol Inventory Categories

The table below showcases the inventory status of the possible emissions sources (scopes 1, 2, and 3).

Table 5: GHG Protocol Emission Category Inclusion

Scope	Emissions source	Materiality	Inclusion Type	Description of Business Operations Included
Scope 1	Fuel usage at Facilities	Immaterial	Calculated based on utility usage.	Natural gas consumption at Axios facilities
	Fugitive Emissions at Facilities	Immaterial	Estimated based on facility square footage.	Fugitive HVAC emissions at Axios facilities

Scope	Emissions source	Materiality	Inclusion Type	Description of Business Operations Included
	Company Vehicles	Material	Calculated based on fleet fuel consumption report.	Company fleet (both owned and leased vehicles).
Scope 2	Purchased Electricity, steam, heating & cooling for own use.	Material	Calculated based on utility usage.	Electricity consumption at Axios facilities.
Scope 3 (Upstream)	Purchased Goods and Services	Material	Calculated based on annual spend on purchased goods.	Annual goods purchased and estimated facility water usage.
	Capital Goods	N/A	Not Calculated	Excluded from this year's inventory as Axios does not currently have capital goods data.
	Fuel and energy related activities	Material	Calculated based on provided scope 1 and 2 data.	The extraction, production, and transportation of energy and fuels consumed in scopes 1 and 2.
	Transportation and Distribution	N/A	Not Calculated	Excluded from this year's inventory as Axios does not currently have logistics data for their operations.
	Waste Generated in Operations	Immaterial	Estimated based on facility size/employee count.	Waste generation and wastewater generated onsite but treated offsite.
	Business Travel	Immaterial	Calculated based on annual spend on business travel.	Commercial air, hotel, and rental car usage related to business travel.
	Employee Commuting	Material	Calculated based on provided employee data.	Employee commuting and telecommuting, to and from their work location.
	Leased Assets	N/A	Indicated zero	There is no indication of leased assets that aren't already included in scopes 1 and 2.

Scope	Emissions source	Materiality	Inclusion Type	Description of Business Operations Included
Scope 3 (Downstream)	Transportation and Distribution	N/A	Not Calculated	Excluded from this year's inventory as Axios does not currently have logistics data for their operations.
	Processing of Sold Products	N/A	Not Relevant	No additional processing of sold products is required.
	Use of Sold Products	N/A	Not Relevant	Axios products do not require energy/fuel to be used.
	End of Life Treatment of Sold Products	N/A	Not Calculated	Excluded from this year's inventory as Axios does not currently have insight into end-of-life data for the products they manufacture and sell.
	Leased Assets	N/A	Indicated zero	There is no indication of leased assets that aren't already included in scopes 1 and 2.
	Franchises	N/A	Indicated zero	There is no indication of franchises that aren't already included in scopes 1 and 2.
	Investments	N/A	Indicated zero	There is no indication of investments.

## APPENDIX A. INVENTORY MANAGEMENT PLAN AND DATA QUALITY ASSESSMENT

Table 6: Inventory Management Plan

Scope and Emissions Source	Data Quality Assessment <sup>1</sup> (1 = Low; 5 = High)					Individual Primarily Responsible for Data Collection	Data Source(s)
	Technological	Temporal	Geographical	Completeness	Reliability		
1 (Facilities): Natural Gas	5	5	5	5	2	Marques Brooks	Spreadsheet – Facility Consumption Data
1 (Facilities): Fugitive Emissions from Refrigerants	4	5	5	5	2	Marques Brooks	Spreadsheet – Facility Locations/Sizes
1 (Facilities): Company Vehicles	5	5	5	4	2	Marques Brooks	Report – Fleet Consumption
2 (Facilities): Building Electricity	4	5	5	5	2	Marques Brooks	Spreadsheet – Facility Consumption Data
3 (Upstream): Purchased Goods and Services	4	5	5	5	2	Marques Brooks	Spreadsheet – Annual Goods Purchased
3 (Upstream): Fuel and energy related activities	4	5	5	4	2	Marques Brooks	Scope 1 and 2 provided data – see above.
3 (Upstream): Waste Generated in Operations	4	5	5	5	2	Marques Brooks	Spreadsheet – Employees per Location
3 (Upstream): Business Travel	4	5	5	5	2	Marques Brooks	Spreadsheet – Travel Expenses
3 (Upstream): Employee Commuting	4	5	5	5	2	Marques Brooks	Spreadsheet – Employees per Location

<sup>1</sup> Details on the scoring can be found in Appendix B: Data Quality Pedigree Matrix.

## APPENDIX B. DATA QUALITY PEDIGREE MATRIX

Please refer to the Pedigree Matrix below containing information on how the data utilized in this assessment was scored in terms of data quality.

Table 7: Data Quality Pedigree Matrix

Data Indicator Score	Technology: Does the data reflect actual technologies used?	Temporal: Does the data reflect the actual time of the activity?	Geographical: Does the data reflect the actual geographic location of the activity?	Completeness: Does the data cover all transactions?	Reliability: Are the sources and data collection methods dependable?
5	Data directly represents the underlying medium of activity (i.e. feet of wire used, ccf of natural gas combusted).	Data provided for the same 12-month period as the GHG inventory.	Data is site-specific to the company's value chain location(s).	Data collected covers 100% of activity.	Data is provided through a systematic, traceable, and replicable reporting structure by personnel given training or technical assistance in GHG data quality management. The reporting company's Q/A processes check for entry, transcription, and calculation errors.
4	Data relates to, but does not directly represent the underlying medium of activity (i.e. annual spend used as proxy for actual activity).	Data provided for the same year as the inventory, but less than 12 months of data was provided.	Data is a mix between site-specific and proxy from the region(s) directly surrounding the company's value chain location(s).	Data collected covers 75-100% of activity. Estimates were used for uncollected data.	Data is provided through a systematic, traceable, and replicable reporting structure by personnel NOT given training or technical assistance in GHG data quality management. The reporting company's Q/A processes check for entry, transcription, and calculation errors.
3	Data represents a similar activity within the client's value chain (i.e. data from a similar dataset for the same client is used as a proxy).	Data provided for a different 12-month period than the 12-month period covered under the GHG inventory.	Proxy data from the region(s) directly surrounding the company's value chain location(s).	Data collected covers 50-75% of activity. Estimates were used for uncollected data.	Data is provided through a systematic, traceable, and replicable reporting structure by personnel given training or technical assistance in GHG data quality management. The reporting company does NOT employ Q/A processes to check for entry, transcription, and calculation errors.
2	Data represents a similar activity not specific the client's value chain (i.e. data from the client's broader industry is used as a proxy).	Data provided for less than 12 months and the year is different than that of the inventory.	Data is a mix between proxy data from the region(s) directly surrounding the company's value chain location(s) and proxy data from region(s) that do not directly surround the company's value chain location(s).	Data collected covers 25-50% of activity. Estimates were used for uncollected data.	Data is provided through a systematic, traceable, and replicable reporting structure by personnel given NOT training or technical assistance in GHG data quality management. The reporting company does NOT employ Q/A processes to check for entry, transcription, and calculation errors.
1	Data does not reflect the underlying activity.	Year of data is unknown.	Proxy data from region(s) that do not directly surround the company's value chain location(s) or the data's location is unknown.	Data collected covers <25% of activity or the completeness is unknown.	Data is not provided through a systematic, traceable, and replicable reporting structure.
* Adopted from GHG Product Life Cycle Accounting Protocol					

## APPENDIX C. EMISSIONS RESULTS BY GREENHOUSE GAS

When companies report carbon emissions, they typically report them in carbon dioxide equivalents (CO<sub>2</sub>e). This unit is a roll-up of all reportable GHGs in a standard unit based on each gases' molecular contribution to climate change. Utilizing a standard unit for all gases simplifies the communication of a company's carbon footprint. However, the GHG Protocol does require reporting of the seven primary GHG separately. These gases include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFC, SF<sub>6</sub> and NF<sub>3</sub>. Gases must be in both metric tons of individual gas and CO<sub>2</sub>e.

Additionally, this inventory does not include emissions from GHGs not covered by the Kyoto protocol.

Table 8: 2021 Separate Reporting of each GHG

	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFC** & PFC**	SF <sub>6</sub>	NF <sub>3</sub>
<b>Metric Tons of Gas</b>						
Scope 1	2.73E+03	2.05E-01	3.91E-01	6.68E-03	0.00E+00	0.00E+00
Scope 2*	5.04E+01	2.18E-03	2.72E-04	0.00E+00	0.00E+00	0.00E+00
Scope 3***	3.59E+03	3.21E-02	3.24E-02	0.00E+00	0.00E+00	0.00E+00
<b>Metric tons of CO<sub>2</sub> equivalent</b>						
Scope 1	2.73E+03	5.73E+00	1.04E+02	9.02E+00	0.00E+00	0.00E+00
Scope 2*	5.04E+01	6.09E-02	7.21E-02	0.00E+00	0.00E+00	0.00E+00
Scope 3***	3.59E+03	8.98E-01	8.59E+00	0.00E+00	0.00E+00	0.00E+00
<p>*Scope 2 values presented above are based on location-based emissions factors</p> <p>**HFCs and PFCs have been reported in a combined format. Because of the estimation methodology used in the inventory, the GHG practitioners were unable to separate the two gas types. However, HFCs and PFCs are immaterial emissions sources for the reporting company, and we do not expect the combination of the values to significantly impact decisions or company strategy.</p> <p>*** Scope 3 categories were calculated using the best emission factors available, some of which are a single characterized emission factor (CO<sub>2</sub>e). In these situations, it is not possible to breakout emissions by separate GHG, emissions for these categories were included in the CO<sub>2</sub> column.</p>						