

Scope 1 & 2 Summary **2024**

CJK Group

Preliminary Report Published April 2025

Produced in partnership with



Introduction

In today's world, businesses face growing scrutiny over how they operate—and how they impact the environment. From international frameworks like the Paris Agreement to major weather events affecting supply chains, the pressure to understand and manage environmental risks is increasing.

Across industries, leading companies are choosing to take action—not just to meet regulations, but to build resilience, cut costs, and align with customer expectations. Climate-related risks are now a core part of long-term business planning, not just environmental policy.

Scientific consensus points clearly to the need for emissions reductions: global greenhouse gas emissions must fall sharply by 2030 and reach netzero by 2050 to limit the most severe consequences of climate change. But navigating that path starts with clarity.

This report provides a detailed view of CJK Group's direct (Scope 1) and indirect (Scope 2) emissions. By quantifying its footprint, CJK Group can take the first steps toward better operational insight, improved efficiency, and long-term sustainability planning.



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What is a Carbon Footprint?

A carbon footprint measures the amount of carbon dioxide (CO₂) and other greenhouse gases released into the atmosphere from human activity.

Also known as a GHG (greenhouse gas) assessment, a company's carbon footprint is reported in metric tons of CO_2 equivalent (CO_2e). These emissions are calculated by multiplying activity data—like kilowatt-hours of electricity or miles driven—by verified emissions factors from government and industry sources.

The GHG Protocol breaks emissions into three "scopes". To give a complete picture, organizations must account for all relevant scopes and categories in their reporting.



An illustration of the Scopes and Categories that make up a carbon footprint. Source: The GHG Protocol.

The GHG Protocol

The Greenhouse Gas (GHG) Protocol is a standardized methodology for quantifying and reporting greenhouse gas emissions. It is developed and maintained by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). The GHG Protocol provides a consistent and transparent framework for companies, governments, and other organizations to measure and report their greenhouse gas emissions in a comparable and consistent manner. Learn more at www.ghgprotocol.org

Reporting Boundaries

Direct emissions were calculated from activities carried out at CJK Group's manufacturing and office facilities. This includes all natural gas and propane consumed on-site and electricity purchased for operations. This report does not include Scope 3 (value chain) emissions, which will be assessed separately in the future.

Reporting Boundaries

This Greenhouse Gas (GHG) Emissions Report covers Scope 1 and Scope 2 emissions for select CJK Group companies during the 2024 reporting year. While CJK Group operates a broad network of printing and publishing businesses, this analysis focuses solely on emissions from its Sheridan and Tweddle Group facilities. Included sites span ten locations across the United States, with operations ranging from trade book manufacturing and academic printing to short-run digital publications and product support printing. The data presented here reflects direct energy use and purchased electricity across these reporting facilities (see next page).

Standards

This assessment follows the GHG Protocol Corporate Accounting and Reporting Standard, the globally recognized framework for quantifying Scope 1 and 2 greenhouse gas emissions.¹

Exclusions

Mobile Combustion and Fuel Oil of Scope 1 are currently outstanding. This report does not cover Scope 3 emissions, such as purchased goods, business travel, or transportation and distribution. These will be included in future reports.

Methodology

Consumption data of Natural Gas, Propane and Purchased Electricity were submitted by representatives of CJK Group into Nero's Data Collection Tool.

These data were then aggregated into Nero's GHG Calculator and multiplied by EPA's Emission Factors for Greenhouse Gas Inventories (2025 edition).

Reporting Periods

The reporting year follows CJK Group's financial year. The 2024 reporting year reflects activity from 01/01/2024 – 12/31/2024.

Base Year Policy

A requirement of The GHG Protocol is to compare emissions in the reporting period to a defined base year.

CJK Group has adopted 2023 as its base year, as it reflects a representative year with good access to reliable activity data. The base year may be recalculated in the future if there are major structural changes in the business, such as acquisitions or divestitures.

¹ https://ghgprotocol.org/corporate-standard

Reporting Facilities

Reporting Facility Name(s)	Description of business activities at this Facility	Inclusion	Address
Grand Rapids (SGR)	Primary printing 1/c & 2/c Automotive Manuals, Trade Books, Bibles, Academic & Educational products with various binding options; Saddlestitch and Perfect Bound capabilities	Included	5100 33rd St SE Grand Rapids, 49512, MI, USA
Kentucky (SKY)	Printing and binding of soft and hard cover books	Included	100 US Bypass 60, 40384, KY, USA
Michigan (SMI)	Primary printing 1/c & 4/c Trade Books, Children's Books, Academic & Educational products with various binding options; Saddlestitch, Perfect Bound, Case Binding, Smyth Sewing including Large format and Specialty covers - Foil, emboss, spot UV capabilities	Included	613 East Industrial Drive Chelsea, 48118, MI, USA
Minnesota (SMN)	Primary printing 1/c & 4/c Trade Books, Children's Books, Academic & Educational products with various binding options; Saddlestitch, Perfect Bound, Case Binding, Smyth Sewing including Large format and Specialty covers – Foil, emboss, spot UV, thin book capabilities along with Fulfillment Services.	Included	3323 Oak Street Brainerd, 56401, MN, USA
New Hampshire (SNH)	Primarily offset printing of 4/c professional journals, magazines, catalogs with UV and aqueous coating options; perfect and saddlestitch binding; polybagging and paper wrapping of products; ink jet and paper label addressing.	Included	69 Lyme rd, 03755, NH, USA
Ohio (SOH)	Primarily - Short to mid run publication printing 1/c, 2/c & 4/c Professional Magazines, Catalogs, and advertising products. Binding options; Saddlestitch, Perfect Bound, with Warehoused pick & pack, plastic & paper polybag mailing and Fulfillment Services.	Included	3765 Sunnybrook Road Brimfield, 44240, Ohio, USA
Pennsylvania (SPA)	Primarily - Short run Offset & Digital printing (under 30K copies) 1/c & 4/c Journals, Books, Professional Magazines & products, binding options; Saddlestitch, Perfect Bound, Case Binding, with Warehoused pick & pack, plastic & paper polybag mailing and Fulfillment Services.	Included	450 Fame Avenue Hanover, 17331, PA, USA
Random Lake (SRL)	Commercial printing primarily 4/C process producing Trade magazines, catalogs, travel industry, calendars with binding options including Saddlestitch and Perfect Bound. Plastic polybag mailing and fulfillment services.	Included	100 Industrial Drive, 53075, WI, USA
Tweddle (TGI)	Tweddle Group's primary production specializes in web and offset printing, with two web presses and one sheet fed press.	Included	24700 Maplehurst, 48036, USA
Sheridan Wisconsin (SWI)	This facility was officially closed at end of Q1 of 2024, with major production effectively stopping in January 2024.	Partially Included	2211 Forden Ave. Madison, Wisconsin, USA
Worzalla (SWZ)	Book Manufacturing	Included	3535 Jefferson St, Stevens Point, 54481, WI, USA

Carbon Emissions Data

Summary and Trends

Emissions and energy use decreased across most indicators in 2024. Total emissions fell by 6.8%, largely driven by the closure of the Sheridan Wisconsin (SWI) facility in Q1 2024. Scope 1 and 2 emissions dropped by 4.9% and 7.4% respectively, while energy consumption declined by 4.7%.

	Current Reporting Year (FY 2024)	Comparison Reporting Year (FY 2023)	% Change
Scope 1 Emissions	12,522	13,164	-4.88%
Scope 2 Emissions	44,512	48,051	-7.37%
Total Emissions	57,034	61,215	-6.83%
Total Energy Consumption used to calculate emissions (kWh)	173,987,547	182,638,258	-4.74%

Emissions Breakdown by Facility

This section compares total emissions (tCO₂e) across CJK Group's facilities for 2023 and 2024. Kentucky (SKY) remained the highest-emitting site, with emissions increasing from 14,082 tCO₂e to 14,677 tCO₂e—a 4.2% year-on-year rise.

The largest percentage increase occurred in Ohio (SOH), where emissions jumped from 9,133 tCO₂e in 2023 to 9,707 tCO₂e in 2024—a 6.3% increase. Wisconsin (SWI) experienced the biggest reduction due to this facility permanently closing in Q1 2024,



2024 Energy Consumption

Scope 2 (purchased electricity) dominates the energy profile, accounting for 60.5% of total consumption, while Scope 1 (natural gas and propane) makes up the remaining 39.6%. Natural gas is the largest Scope 1 contributor, representing 36.5% of the total energy used.



2024 Emissions

Scope 2 emissions represent 78% of total emissions. Scope 1 makes up 22%, with natural gas as the main contributor (20%), followed by propane at just under 2%.



Trends

The charts display energy use and associated emissions by fuel type for 2023 and 2024. Purchased electricity remained the largest energy source, though both consumption and emissions declined—consumption fell by 4.6% (from 110,376 mWh to 105,267 mWh), and emissions dropped by 7.4% (from 48,051 tCO₂e to 44,512 tCO₂e). Natural gas also saw reductions, with consumption down 5.1% (66,882 mWh to 63,456 mWh) and emissions decreasing by 5.1% (12,063 to 11,445 tCO₂e). Propane remained relatively stable, with consumption down 2.2% and emissions down 2.2% year over year.



Glossary

Carbon Footprint

A carbon footprint, also referred to as a GHG (greenhouse gas) assessment or GHG inventory, is a measure of the total amount of greenhouse gases emitted into the atmosphere as a result of an individual's, organization's or product's activities. Carbon footprints are typically measured in units of carbon dioxide equivalent (CO₂e) and are used to assess the impact of human activities on the environment and climate change.

Carbon Neutrality

Carbon neutrality refers to achieving a 'neutral' carbon footprint, meaning the amount of carbon dioxide released into the atmosphere is balanced by an equivalent amount removed from the atmosphere through carbon offsetting schemes.

The sources of emissions that have been offset to claim carbon neutral status are often varied. Many carbon neutral companies have measured and offset their Scope 1 and 2 emissions only.

Please also see the *Net Zero* definition to learn how these two terms differ.

Carbon Offsets

Carbon offsetting refers to the practice of compensating for an individual's or organization's greenhouse gas emissions by investing in projects that reduce or remove carbon dioxide from the atmosphere. These projects can include clean energy, reforestation, forest protection, or carbon capture and storage.

CO₂ Equivalent (CO₂e)

Carbon dioxide equivalent, or CO₂e, is the standard measure used to compare the emissions from various greenhouse gases. Each gas is expressed as an equivalent of CO₂ based on its global-warming potential. For example, one tonne of methane has the same global-warming potential as 25 tonnes of carbon dioxide, therefore 1 tonne of methane equals 25 tonnes of CO₂e.

Location Based Reporting

The location-based method for reporting electricity emissions uses the average fuel mix (natural gas, wind, solar, coal, nuclear etc.) used to generate electricity in a specific region. This emission factor is published annually by Government bodies such as the EPA (US) and DEFRA (UK).

Market Based Reporting

This method uses an emission factor that is specific to the electricity supplier of the reporting company. Market-based reporting allows the reporting company to declare zero emissions if it purchased 100% zero-carbon electricity. Market-based emissions may also be higher if the electricity supplier uses more fossil fuels than average.

It is a requirement of The GHG Protocol that both the location-based and market-based results are declared in the GHG assessment.

Global Warming Potential (GWP)

A factor describing the degree of harm to the atmosphere of one unit of a given GHG relative to one unit of carbon dioxide (CO₂). Also see CO₂ Equivalent (CO₂e).

Greenhouse Gases (GHGs)

Greenhouse gases contribute to climate change by trapping the sun's heat in the Earth's atmosphere. Compulsory GHGs which must be measured and included in GHG assessments are: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen triflouride (NF₃).

These individual GHGs are often combined and expressed in units of CO₂e.

Intensity Ratios

Environmental impacts can be normalized by dividing the total impacts (e.g. tonnes of emissions) by an appropriate activity metric (e.g. units produced, Full Time Equivalent staff) or financial metric (\$ million turnover).

Net Zero

To achieve net-zero, an organization must reduce its scope 1, 2 and 3 emissions by a minimum of 90% by 2050 at the latest. The remaining unavoidable emissions must be balanced through permanent carbon removal and offsetting programs.

Scope 1 Emissions

Emissions from operations that are owned or controlled by the reporting company. Examples of Scope 1 emissions are natural gas used for heating buildings, fuels used in company vehicles, and refrigerant gases used in air conditioning systems.

Scope 2 Emissions

Indirect emissions from the generation of purchased electricity, steam, heat or cooling consumed by the reporting company.

Scope 3 Emissions

All indirect emissions (not included in scope 2) that occur in the value chain of the reporting company. The GHG Protocol defines 15 upstream and downstream categories that must be included in a scope 3 assessment. These can be seen on the illustration on page 2 of this report.

The Greenhouse Gas (GHG) Protocol

The GHG Protocol is a standardized methodology for quantifying and reporting greenhouse gas emissions. It is widely used by companies, governments and other organizations to measure and manage carbon footprints.

Science Based Targets initiative (SBTi)

The SBTi defines and promotes best practice in science-based target setting, offers resources and guidance to reduce barriers to adoption, and independently assesses and approves companies' targets.







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