

Annual Greenhouse Gas Inventory

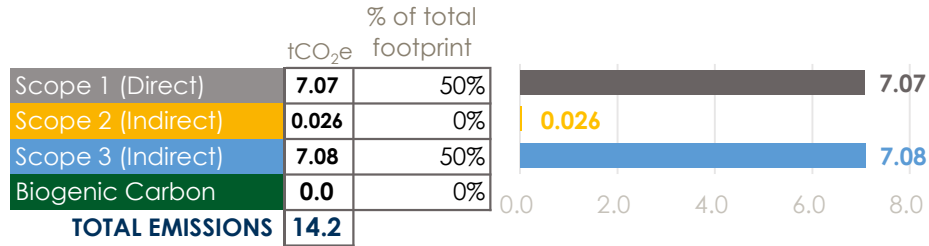


32 Lakes Coffee Roasters

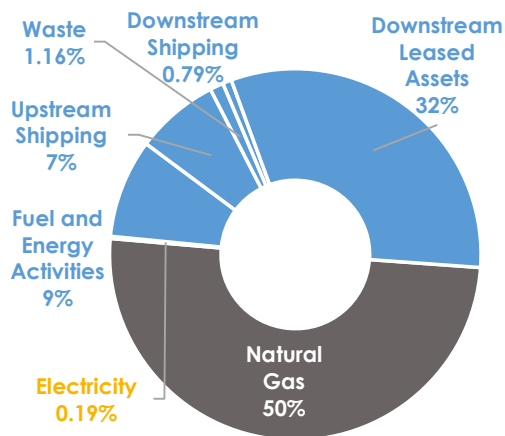
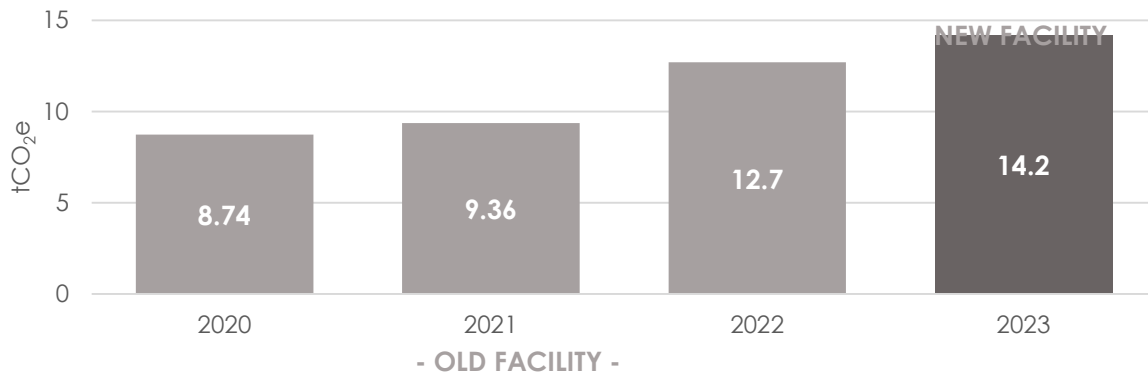
June 1, 2022 to May 31, 2023

Total Emissions

14.2 tCO₂e



Total Emissions



Analysis

32 Lakes is located in the territories of the Tla'amin Nation in the qathet Regional District of BC. The company is composed of one roasting facility, one company vehicle and are the lessors of a building. This report marks 32 Lakes' fourth year of measuring, reporting and offsetting 32 Lakes' emissions. Roughly four months into this reporting period, 32 Lakes moved to a new larger location. In addition to the new location, this is the first full reporting period where all company travel was done in an electric vehicle, eliminating all gasoline usage.

In 2023, natural gas is the largest emissions source followed by downstream leased assets, then fuel and energy activities.

Reduction Target **28%** by 2024

Over 2020 baseline

Reduction Progress **62%** % increased

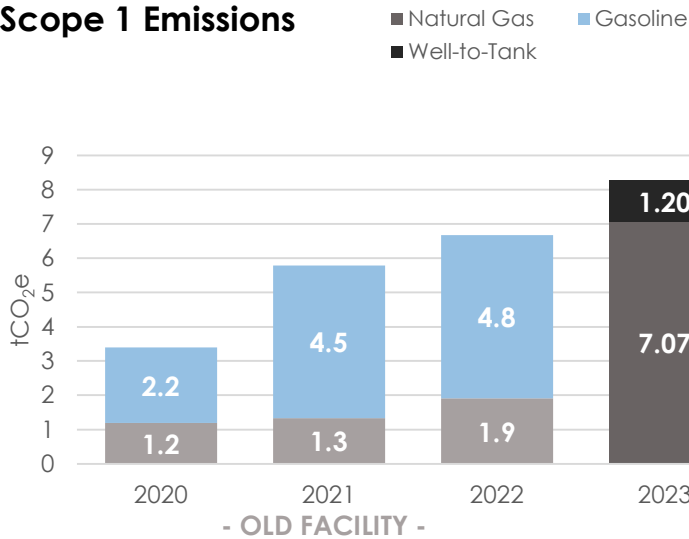
Offset Cost **\$425**

kgCO₂e/lbs roasted **1.02**

13,968 lbs roasted 2023

Scope 1

Scope 1 Emissions



Analysis

Natural gas is 32 Lake's largest emissions source accounting for 58% of total emissions. Natural gas powers the roasters and afterburner. The afterburner is a new piece of natural gas powered equipment installed in FY 2023 for smokeless & scentless roasting. As production increases, purchasing electric roasters and renewable natural gas are some options to consider for reducing emissions. In addition, well-to-tank emissions have been included for the first time. These are emissions related to the production and transportation of natural gas.

Note: Natural gas was estimated using total lbs roasted for the previous period of June-Sept before moving to the new location.

tCO₂e **8.27**

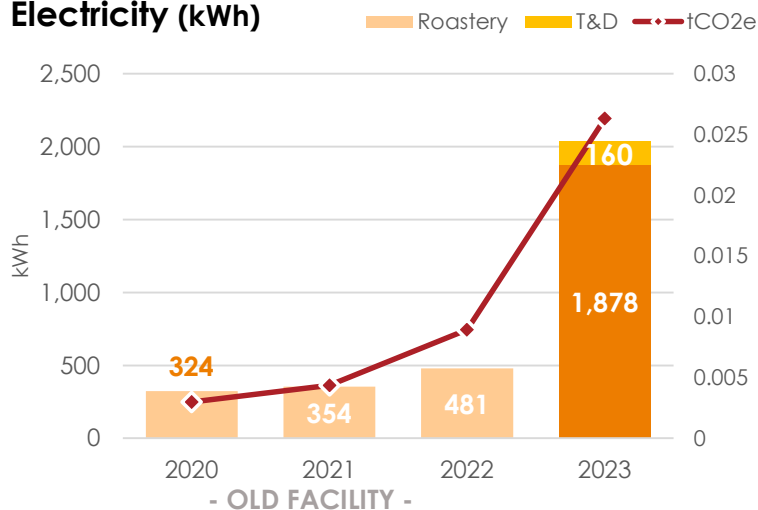
% of Total **58%**

Total GJ **139**

 **26.1**
Barrels of Oil

Scope 2

Electricity (kWh)



Analysis

Electricity consumption is a small portion of the footprint accounting for 0.3% of the total emissions. Very minimal electricity was used in the old roastery with only a few lightbulbs, a printer, a computer and some consumption by the roaster. The new roastery continues to be energy efficient with low electricity consumption in 2023. The 32 Lakes café and bakery electricity consumption has been moved to scope 3. Transmission and distribution losses have also been included in 2023 for the first time. This accounts for losses from the delivery of electricity to the building.

Note: Electricity consumption for October-May was estimated using financial data and average cost for the utility.

tCO₂e **0.03**

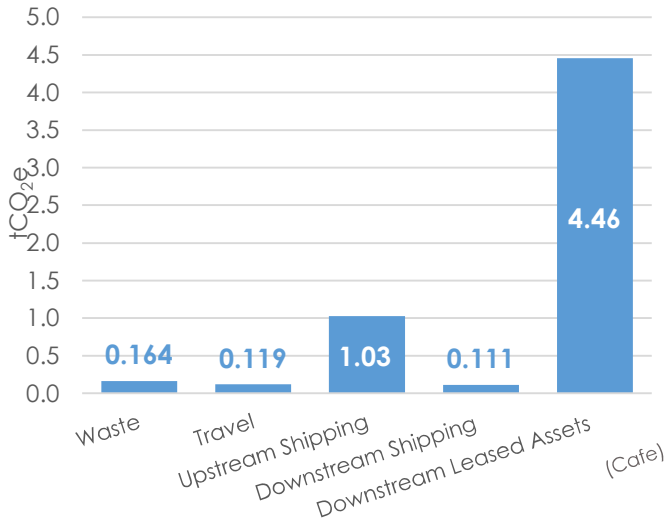
% of Total **0.2%**

kWh **1,878**

 **0.17**
houses

Scope 3

Emissions by Source



Analysis

In 2023, emissions from scope 3 accounted for 50% of the total footprint. The largest category is downstream leased assets (32 Lakes Café and bakery). This includes natural gas and electricity emissions of the Cafe owned and leased by 32 Lakes.

This is followed by fuel and energy activities, which are emissions from the supply and distribution of natural gas and electricity used by the roastery. Then, upstream shipping, which is the shipping of green beans to 32 Lakes. Lastly is waste, travel and downstream shipping, consisting of e-commerce shipping to customers.

Upstream Shipping

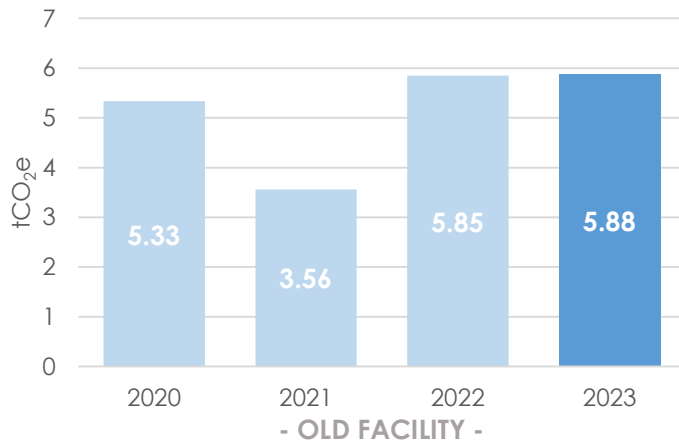
Shipping green beans to 32 Lakes is the largest scope 3 emissions source that the company has influence over. Continuing best practices such as shipping by ground, or rail if available will keep these emissions low.

When making decisions around how green beans are shipped to the facility, choose ocean and/or rail where available for the lowest emissions impact. In addition, purchasing beans from warehouses on the west coast and nearby the roastery keeps shipping distances low, and subsequently shipping emissions as well.

Analysis

In order to follow scope 3 reporting best practices, a number of changes have been made to the 2023 report. Previously, the 32 Lakes cafe and bakery had been included in scope 1 and 2, but have been recategorized as a downstream leased asset. In addition, shipping was separated into two categories, upstream and downstream, to better reflect the level of influence 32 Lakes has on its shipping activities.

Scope 3 Emissions



Note: 32 Lakes Café and bakery natural gas & electricity consumption is estimated to be consistent with 2022. Paper as an emissions source has been removed due to immateriality.

tCO₂e **5.88**

% of Total **41%**

tCO₂e / FTE **2.94**

 **1.57**
cars

Conclusion

This report marks 32 Lake's first year in the new roasting facility. Emissions from previous measurements are included in the report for reference, but not directly comparable to the 2023 year due to the change in facility and change in reporting boundary.

32 Lakes continues to be a sustainability leader in the coffee roasting industry. Total emissions for 2023 resulted in 14.2 tCO₂e, with 1.02 kgCO₂e/lb roasted. Despite this increase in emissions, 32 Lakes is very attentive to their environmental impact and continues to have a small carbon footprint.

Emissions sources at 32 Lakes are subject to change based on the volume of roasted coffee due to the changing demands of natural gas, shipping volume, production of waste and other factors that adjust with volume of beans roasted. Continuing to prioritize low-emissions production practices as the company grows in the coming years will help keep emissions low.

Information on Inventory Uncertainty

Emission Source	Data Type	Quality
Natural Gas	Summary Spreadsheet & Estimate	Adequate
Electricity	Financial Data & Estimate	Adequate
Upstream Shipping	Summary Spreadsheet	Good
Downstream Shipping	Summary Spreadsheet & Invoices	Good
Waste	Estimate	Adequate
Leased Assets	Estimate	To be Improved
Travel	Data Tracking Sheet	Good

This table details the type of data received from 32 Lakes to generate this report. Data quality is assessed on five categories: technology, time, geography, reliability and completeness. The purpose of this table is to provide further information on the values in this report and what sources were used to calculate them.

Glossary of Terms

Term	Description
Carbon Neutral	Companies are carbon neutral when they remove GHG emissions equivalent to all their scope 1, 2 and material (>5%) scope 3 emissions, usually by purchasing carbon offsets.
Emissions Factor	The volume of emissions created by an emissions producing activity (i.e. fuel combustion), calculated based on the amount of the activity (volume, distance, etc.).
GHG	Greenhouse Gas (emissions): Atmospheric gasses contributing to the greenhouse effect, including Carbon Dioxide (CO ₂), Methane (CH ₄), Nitrous Oxide (N ₂ O), etc.
GJ	Gigajoule: Unit of natural gas equal to 26.137 m ³ or 0.947 MMBtu
kWh	Kilowatt-Hour: Common unit for measuring electrical consumption
m ³	Cubic Meter: Unit of measurement equal to 1,000 Litres
Net-Zero	Companies with a zero-emission carbon footprint, usually achieved by minimizing outputs and negating the remaining emissions through carbon removal activities.
PCR%	Post-Consumer Recycled Content (as a percentage)
psg-km	Passenger-Kilometer: Unit separating total emissions between passengers per km
tCO ₂ e	Tonnes of Carbon Dioxide Equivalent: a combined term capturing the emissions from various GHGs.
t-km	Tonne-kilometer: A unit of measurement used in shipping

Inventory Information

Company Name	32 Lakes Coffee Roasters
Contact Information	Margot Jantz margot@32lakes.com
Company Description	Roastery (leased), 1 company vehicle, owned leased asset (32 Lakes Café and bakery)
Reporting Period	June 1, 2022 to May 31, 2023
Inventory Boundary	Scope 1 (Direct Emissions) - Natural Gas
	Scope 2 (Indirect Emissions from Purchased Electricity) - Purchased Electricity (BC Hydro)
	Scope 3 (Indirect Emissions from Other Sources) - Waste, Company Travel, Downstream Shipping, Upstream Shipping, Fuel and Energy Activities, owned leased asset (Café)
	Major Scope 3 Exclusions - Purchased Goods and Services & Capital Goods
Scope 2 Approach	Location Based Emissions Calculation
Consolidation Approach	Operational Control: Accounting for 100% of emissions from operations over which the company has operational control.
Primary Measurement	Greenhouse gas emissions measured in Carbon Dioxide Equivalent (CO ₂ e)
Reporting Guidelines	Aligned with those defined in <i>The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition (The GHG Protocol, www.ghgprotocol.org)</i> .

Emissions References

- 2021 B.C. Best Practices Methodology for Quantifying Greenhouse Gas Emissions
<https://www2.gov.bc.ca/assets/gov/environment/climate-change/cng/methodology/2021-best-practices-methodology.pdf>
- Environment Canada's National Inventory Report (1990-2019); Part 2 & 3.
<https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/inventory.html>
- Department for Environment, Food & Rural Affairs (UK) Carbon Factors 2021
<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors->
- Intergovernmental Panel on Climate Change (Global Warming Potentials)
http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

All emissions factors are reviewed and approved by Ostrom Climate Solutions (<https://ostromclimate.com/>) on an annual basis.

Policy for Base Year Recalculation:

Base year emissions, and other previous emissions, shall be retroactively recalculated if a change in organizational structure or data quality is expected to exceed a significance threshold of 10% of base year emissions. These changes may arise from structural changes such as mergers, acquisitions, divestments, outsourcing or insourcing, changes in calculation methodology and improvements in accuracy, or discovery of significant errors.

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Completed	3/26/2024

