

Cortes Natural Food Co-op

Greenhouse Gas Emissions Report for the 2018 Calendar Year

January 1, 2018 to December 31, 2018



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Key terms

For further terms, see Climate Smart's [online glossary](#).

Baseline GHG Emissions Inventory: A comprehensive, quantified list of an organization's greenhouse gas emissions and sources for the initial reporting year (base year). The baseline GHG inventory is the level of greenhouse gas emissions against which future GHG inventories are compared.

Biologically sequestered carbon: Long-term carbon stored in biomass, such as forests, soils and peatland. Carbon is "locked" into organic matter through biological processes. This carbon can be released through e.g. burning of biomass as fuel or change in land use.

Carbon Dioxide Equivalent (CO₂e): The universal unit for comparing the emissions from various greenhouse gases. The carbon dioxide equivalent for a gas is derived by multiplying the mass of the gas by the associated global warming potential (GWP). For example, the GWP for methane is 21. This means that emissions of one metric tonne of methane are equivalent to the emissions of 21 metric tonnes of carbon dioxide.

Carbon Offset: A project or activity that results in a given amount of greenhouse gases being avoided or reduced in one place, that is used to 'balance out' another's total GHG emissions. Emission reductions that are real, additional (beyond business as usual), measurable, permanent, and verified can generate offset credits. Credits are tradable certificates.

Emission Factor: A factor that converts activity data to GHG emission values, e.g. lbs of carbon dioxide emitted per barrel of fossil fuel consumed.

Renewable energy certificates (RECs): RECs are tradable energy certificates representing proof that 1 megawatt-hour (MWh) of electricity was generated from an eligible renewable energy resource (e.g. solar or wind) and was fed into the electricity grid.

Climate Smart at a glance

Climate Smart is an award-winning certified B - corp that has developed a practical and solutions-based program for SMEs to **profitably track and reduce GHG emissions**. Climate Smart emphasizes the business case for GHG reduction: **operational efficiencies, cost savings, and competitive advantage**.

Using an SME tailored approach, Climate Smart provides **innovative tools and programming** for our "host partners" on the front lines—cities, ports, airports, chambers, and financial institutions—to disrupt old economic trajectories and invest in more efficient technologies to deliver cleaner products and services.

Since 2007, Climate Smart has worked with 40+ host partners to engage close to 1000 businesses to prepare for and participate in the low-carbon economy. [Case studies](#) from a sampling of 78 Climate Smart businesses show a total **annual cost savings of \$2.6 million**.

Climate Smart also links SMEs to global impacts through harnessing the power of SME derived data to inform estimates of emissions from SMEs at different geographical scales, through our [Business Energy and Emissions Profiles](#) (BEEPs). Climate Smart was awarded the Grand Prize in the [2016 MIT Climate CoLab contest](#) and was judges' choice in 2018 for our BEEPs. We have produced BEEPs for cities across Canada and the US. Our goal is to produce 100 BEEPs across North America.

850+

Climate Smart certified businesses to date (trained or in training)

2,200,000+

Total emissions measured by Climate Smart to date, in tonnes (t) CO₂e

11%

Average reduction achieved after 3 years of Climate Smart certification

\$397

Projected cost savings to a business, per tonne CO₂e reduced

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Cortes Natural Food Co-op's 2018 calendar year carbon footprint

This report details the greenhouse gas emissions footprint for Cortes Natural Food Co-op during the 2018 calendar year, including the breakdown of emissions by source activity and Cortes' plan to reduce their emissions going forwards. This report and inventory were compiled in compliance with the Greenhouse Gas Protocol [Corporate Accounting and Reporting Standard](#), Revised Edition.

Cortes Co-op are working to reduce their GHG emissions from:

Paper use
Staff commuting
&
Propane equipment

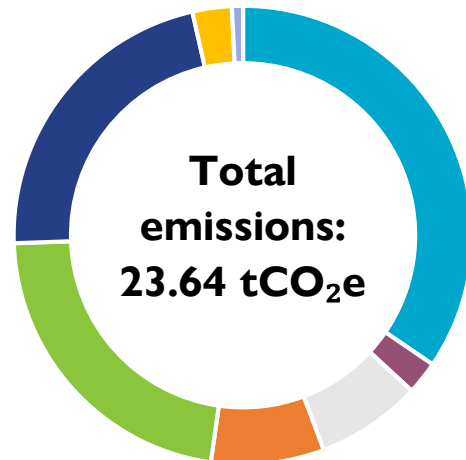
Cortes' GHG emissions in their 2018 baseline year are equivalent to 93,028 km driven by a passenger car¹.

93,028 km



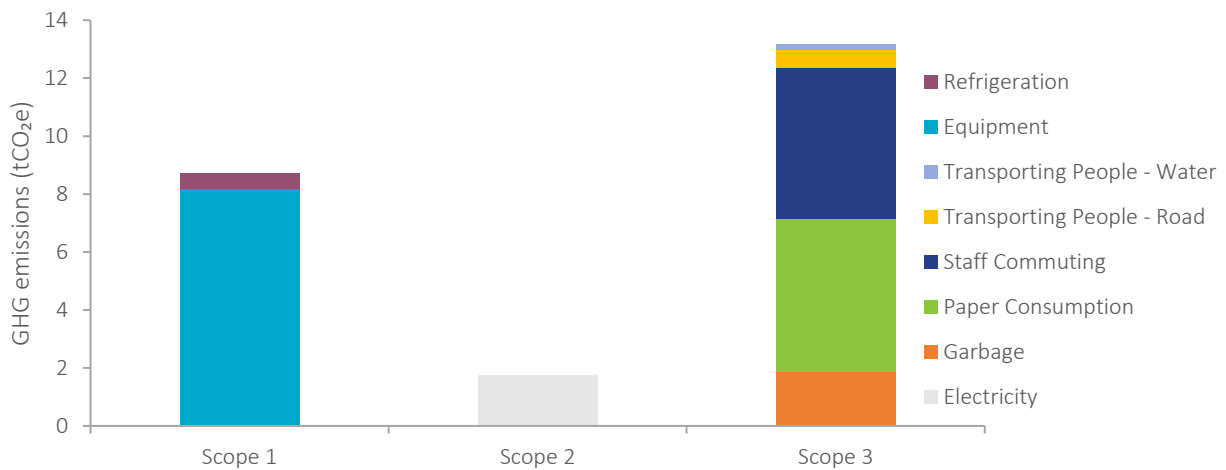
¹Source: EPA Greenhouse Gas Equivalencies Calculator

Total emissions for the 2018 calendar year by activity



- Scope 1 Equipment
- Scope 1 Refrigeration
- Scope 2 Electricity
- Scope 3 Garbage
- Scope 3 Paper Consumption
- Scope 3 Staff Commuting
- Scope 3 Transporting People - Road
- Scope 3 Transporting People - Water

Total emissions by scope



Analysis

Cortes Natural Food Co-op ("Cortes") measured its first greenhouse gas inventory with Climate Smart for the 2018 calendar year (January 1, 2018 to December 31, 2018) and recorded emissions of 23.64 tonnes of carbon dioxide equivalent (tCO₂e); when including delivery of goods to the store, the total recorded emissions rose to 78.54 tCO₂e. Overall, Cortes' largest emissions sources were **propane powered ovens (equipment)** (34.5%), **paper consumption** (22.2%) and **staff commuting** (22%). Cortes Natural Food Co-op is Climate Smart certified for 2019.

The following sections present the breakdown of Cortes' emissions for their 2018 calendar year inventory by scope, as well as details of any emissions of CO₂ from combustion of biologically sequestered carbon and purchased offsets and renewable energy certificates (RECs).

Scope 1

Scope 1 emissions totalled 8.71 tCO₂e in Cortes' 2018 calendar year:

Activity	2018 Baseline	% of emissions	Justifications & Additional Notes
Scope 1			
Refrigeration	0.55	2%	Emissions from HFC-134a refrigerant replenished during servicing
Equipment	8.16	35%	Use of propane for cooking equipment
Grand Total	8.71	37%	

Scope 2

Scope 2 emissions totalled 1.75 tCO₂e in Cortes' 2018 calendar year:

Activity	2018 Baseline	% of emissions	Justifications & Additional Notes
Scope 2			
Electricity	1.75	7%	Electricity to power café and shop equipment
Grand Total	1.75	7%	

Market based emission factors

The 2015 [GHG Protocol Scope 2 guidance](#) requires companies to report their Scope 2 emissions in two ways: **location-based** (reflecting grid emission factors), and **market-based** (using supplier specific emissions factors and/or those from contractual instruments such as renewable energy certificates - RECs). The table below shows emissions from purchased electricity calculated using these two methods. Note that location-based values are shown on the emissions summary charts presented in this report.

	Total kWh	Category of instruments	kWh	Total tCO ₂ e
Location-based Calculation ¹	155,295	Provincial average	155,295	1.75
Supplier Specific Market-based Calculation ²		BC Hydro	155,295	1.66

¹ Emission Factor based on Environment and Climate Change Canada: National Inventory Report, 2016.

² Emission Factor based on BC Ministry of Environment: Best Practices Methodology for Quantifying GHG Emissions, 2016.

Scope 3

Scope 3 emissions totalled 13.17 tCO₂e in Cortes' 2018 calendar year:

Activity	2018 Baseline	% of emissions	Justifications & Additional Notes
Scope 3			
Paper Consumption	5.25	22%	Over 60% of paper emissions were from grocery bags (various sizes)
Garbage	1.88	8%	Waste from the café and store
Staff Commuting	5.20	22%	The majority of distance commuted was by small or medium gas car, although a fifth of the kilometres commuted were by bicycle or walking.
Transporting People - Water	0.18	1%	Business travel to Vancouver Island or the mainland via BC Ferries.
Transporting People - Road	0.65	3%	Business travel to Vancouver Island or the mainland via road (in combination with ferry trips).
Grand Total	13.17	56%	

Scope 3 emissions from the transporting of goods totalled an additional 54.9 tCO₂e in Cortes' 2018 calendar year.

Release of sequestered carbon

Direct CO₂ emissions arising from the combustion of biologically sequestered carbon, such as from burning biomass or biofuels, are reported separately from the scopes. For Cortes' 2018 calendar year inventory, there was no reported release of sequestered carbon.

Offsets & renewable energy certificates

Cortes did not purchase offsets or renewable energy certificates in the 2018 calendar year.



Cortes' emissions reduction plan

Based on their 2018 calendar year inventory, Cortes will work to minimize their emissions by focusing on strategies aimed at propane use, paper use, and staff commuting. Cortes' current reduction plan is shown below.

Category	Strategy	Considering	Planned	Implemented
Electricity	Make use of natural lighting as much as possible			Implemented
	Use standby settings on electronics			Implemented
	Set computers to power saving mode			Implemented
	Put up signage to help people remember to turn off lights and equipment		Planned	
	Regularly monitor your usage through your online account with your utility provider to identify inefficiencies	Considering		
	Implement a policy that all office-based equipment and lighting is turned off when not in use		Planned	
	Implement a policy that all non office-based equipment is turned off when not in use		Planned	
	Replace incandescent lightbulbs with compact fluorescent lightbulbs			Implemented
	Replace incandescent lightbulbs with light-emitting diodes		Planned	
	Replace fluorescent tube lighting with LED tubes		Planned	
	Replace older fluorescent lighting with higher-efficiency models			Implemented
	Purchase/install energy efficient office equipment as old ones expire			Implemented
	Replace desktop computers with laptops at their end of life	Considering		
	Install occupancy sensors in common areas	Considering		
	Use variable-frequency drives (VFD) to improve efficiency	Considering		
Switch from propane ovens to electric ones	Considering			
Heat	Ensure bay doors in warehouses and workshops are closed when not in use			Implemented
	Implement a regular maintenance program			Implemented
	Check settings on programmable thermostats (if installed) so that heat is turned down in the evenings and on weekends		Planned	
	Conduct a commercial energy assessment	Considering		
	Install programmable thermostats	Considering		
	Install faucet aerators			Implemented
	Insulate piping			Implemented
	Insulate hot water tanks		Planned	
	Assess condition of weather stripping and install new as needed		Planned	
	Substitute electric heat in the place of natural gas in cases where temperature throughout your space is uneven			Implemented
	Install energy efficient windows	Considering		
	Install or upgrade building insulation		Planned	
	Install high-efficiency commercial cooking equipment	Considering		
	Install high-efficiency hot water tanks			Implemented
	Capture waste heat from refrigeration for pre-heating water for building	Considering		



Category	Strategy	Considering	Planned	Implemented
Transportation	Engage employees to consider lower carbon modes of travel where possible for business trips	■		
	Promote carpooling to work by installing a ride share board or facilitating participating in local carpooling program			
	Allow employees to telecommute			
	Reduce business travel through the use of teleconferencing / videoconferencing			
	Provide bicycle parking			
	Source from local / regional suppliers whenever possible			■
	Consider e-bike incentives for staff commuting	■		
	Ask R&B Trucking about a lower emissions vehicle to service Cortes on a regular basis	■		
Paper	Put up signage to increase staff paper awareness	■		
	Reduce paper consumption during meetings	■		
	Re-use paper			■
	Set computer defaults to double-sided printing			■
	Switch from paper to electronic invoicing, where possible			■
	Switch from paper to electronic file storage	■		
	Purchase paper with recycled content	■		
	Replace paper towels with electric blowers in bathrooms	■		
	Perform an experiment with onsite composting of paper towels	■		
	Sell or provide reusable shopping bags instead of paper bags		■	
Look for a supplier with recycled paper content in products		■		
Waste	Participate in a battery recycling program			■
	Increase waste diversion from landfill through improved signage and other employee engagement activities		■	
	Expand waste program to divert organic waste from landfill		■	
	Expand recycling program to include soft plastics			■
	Expand recycling program to include wood			■
	Expand recycling program to include metals			■
	Invest in an on-site composter/digester for organic waste			■
Request all suppliers to minimize their packaging	■			
Water	Fix leaking taps			■
	Eliminate once-through cooling on any equipment			■
	Install faucet aerators on high-use taps			■
	Install low-flow toilets			■
	Install waterless or composting toilets	■		
	Install greywater systems for indoor use	■		
	Install greywater systems for outdoor use	■		
Install rainwater harvesting system for specific operations	■			
Employee engagement	Communicate to staff why your company is getting Climate Smart certified and how they can get involved		■	
	Solicit ideas for greening operations from staff		■	

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Category	Strategy	Considering	Planned	Implemented
Employee engagement	Install a green board to communicate GHG emissions reduction initiatives and other sustainability-related activities			
	Establish an employee green team to help develop and coordinate GHG emissions reduction initiatives			
	Develop and include sustainability policy in operations and/or employee manual			
	Regularly report to staff on GHG emissions reduction initiatives and progress			
Offsets & renewable energy certificates	Purchase renewable energy certificates (RECs)			
	Purchase carbon offsets			

Methodology

As a Climate Smart certified business, Cortes conducted its GHG emissions inventory according to the Greenhouse Gas Protocol [Corporate Accounting and Reporting Standard](#), Revised Edition. The GHG Protocol is an internationally recognized standard published by the World Resources Institute and the World Business Council on Sustainable Development.

Organizational Boundaries

Cortes used the operational control approach to determine its organizational boundary and included in its inventory all operations related to the café and store; any emissions from the camp site were not included.

Inventory Boundaries

The GHG Protocol requires the inclusion of Scope 1 and 2 emissions, and suggests including Scope 3 emissions from activities relevant to an organization's business and goals, and for which reliable data can be obtained. Cortes included emissions from the following activities under Scopes 1, 2 and 3:

- **Scope 1:** includes direct GHG emissions from sources that are owned or controlled by the reporting company or organization
 - refrigerants in in-store chillers and the kitchen
 - propane used for kitchen cooking equipment
- **Scope 2:** includes indirect GHG emissions from purchased electricity and purchased heat
 - purchased electricity
- **Scope 3:** includes indirect GHG emissions that are consequences of the reporting company's operations but occur at sources owned by another company
 - business travel by road and ferry;
 - garbage;
 - paper consumption; and
 - staff commuting.

Emission factors

This inventory was conducted using the emissions factors from the Climate Smart web-based greenhouse gas management tool. The Climate Smart GHG management tool was designed for adherence to the GHG Protocol. Climate Smart's emission factors come from a variety of sources, such as Environment Canada, the GHG Protocol Initiative, the US Environmental Protection Agency and the Intergovernmental Panel on Climate Change. Climate Smart reviews its emission factors annually to update them based on refined industry methodology and changing electricity grids.

Climate Smart also acknowledges that complete adherence to the Protocol requires the six major greenhouse gases to be accounted for separately, and is working towards adding this feature at a future date. Further details on Climate Smart's emission factors, their sources, and methodology for updating them are available upon request to info@climatesmartbusiness.com.



Sources of data included

Cortes used the following sources of data to estimate their greenhouse gas emissions for the 2018 calendar year:

Activity	Data source
Electricity > Purchased	The total kilowatt-hours of electricity used, based on utility bills, were entered into the Climate Smart software tool.
Transporting People > Vehicles owned by others > Water	The number of BC Ferry trips was entered for each route.
Transporting People > Vehicles owned by others > Road	The total kilometers travelled were entered.
Staff Commuting	The distance commuted by each mode of transport was entered based on staff commuting survey.
Equipment > Equipment you own	The total litres of fuel used by equipment were entered.
Garbage	The total estimated weight of garbage was entered into the Climate Smart tool.
Paper Consumption	The paper type, paper bond weight, number of reams used and post-consumer recycled content were entered. The paperweight and paper type were entered into the paper calculator (http://papercalculator.org) to calculate emissions.
Refrigeration	The total weight of refrigerant top-ups was entered based on maintenance invoices.

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