Carbon Inventory Report:

SUSTAINABLE ORGANIC GOODS

BENNETTO™

NATURAL FOODS co

Bennetto Natural Foods Ltd

Period: 01.04.2019 – 31.03.2020

Unverified Inventory

Date: 26.01.21

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1 Summary

This carbon inventory was prepared for Bennetto Natural Foods Ltd for the 2020 financial year.

Organisation background	Name: Bennetto Natural Foods Ltd Contact person: Lucy Bennetto Contact email: lucy@bennetto.co.nz Area of business: Chocolate production and distribution Full Time Equivalents (FTEs): 2 Bennetto Natural Foods Ltd produce and distribute chocolate.
Report period	01.04.2019 – 31.03.2020
Organisational boundary	This measurement covers the following sites: 63 Cleveland Street, Edgeware, Christchurch 8013

Reporting boundary	Business operations scope 1, 2 and 3 emissions resulting from:
	• Scope 1
	  ○ NA
	• Scope 2
	  ○ Electricity
	• Scope 3)
	  ○ Transmission distribution and line losses
	  ○ Business Travel
	  ○ Non-company vehicles
	  ○ Freight

Omissions	• Waste • International outward freight • North Island Marketing and sales
Emissions	Total emissions: 16.45 tCO_2e including radiative forcing.
Offsets	Total offsets: 7.54 tCO_2e including radiative forcing, excluding previously offset flight and inward freight emissions.

Bennetto Natural Foods Ltd has elected to offset 120% of these emissions with (Verified Emission Reduction Units (VERs))/New Zealand Carbon Units (NZUs)) provided by Ekos. Through this measurement and offsetting, Bennetto Natural Foods Ltd has qualified for Climate Positive Business Operations for the 2020 financial year and has been issued certificate number 40000446.

2 Background

This report is the second annual greenhouse gas (GHG) emissions inventory, prepared for Bennetto Natural Foods Ltd. It was prepared in accordance with the requirements of ISO 14064-1 (2006) and covers the period 01.04.2019 – 31.03.2020.

2.1 Communication and dissemination

This inventory was prepared as a management tool for Bennetto Natural Foods Ltd to:

- Assist it in managing its response to climate change and its reduction of GHG emissions.
- Be a communication tool that demonstrates to stakeholders that Bennetto Natural Foods Ltd has identified its emissions profile, is aware of the significant issues related to climate change and is taking action to mitigate these issues, including offsetting unavoidable emissions.

The users of this report will include, but are not limited to, the staff, manager and Board of Bennetto Natural Foods Ltd, its shareholders and members. The summary of this inventory will be made available to all stakeholders on request. A copy of the summary report will also be available from Ekos' website.

2.2 Reporting period and base year

This inventory is for the 01.04.2019 – 31.03.2020 reporting period. The base year period for Bennetto Natural Foods Ltd is the 01.04 2018 – 31.03.2019. Subsequent inventories will be compared to this base year.

2.3 Data included

The data included in this inventory has been compiled from Bennetto Natural Foods Ltd business operations and covers scope 1, 2 and 3 emissions which result from the use of:

- Purchased energy
- Transmission and distribution line losses
- Business travel
- Non-company vehicle use
- Freight

2.4 Verification and Compliance with Standard

This inventory has been prepared in compliance with the International Standards Organisation's process for calculating and reporting GHG emissions 14064-1 (2006). It should be noted that this measurement is an unverified inventory and that no verification audit of the findings has been conducted.

3 Organisational boundary

The organisational boundary identifies which facilities or subsidiaries of Bennetto Natural Foods Ltd are included or excluded from the carbon inventory. Emissions from all aspects of the organisation are consolidated to determine the total volume. Consolidation is done using one of these methods:

- Control, whereby all emissions over which the organisation has either *financial* or *operational* control are included in the inventory
- Equity share, whereby the organisation only includes emissions for the portion of the facilities and business that the organisation owns.

For Bennetto Natural Foods Ltd inventory, the consolidation method of operational control has been used to consolidate emissions. This means that all emissions over which Bennetto Natural Foods Ltd has operational control of have been included in the inventory.

Included with Bennetto Natural Foods Ltd organisational boundary are therefore all emission sources that occur within Bennetto Natural Foods Ltd operations at 63 Cleveland Street, Edgeware, Christchurch 8013 excluding sales and marketing that occurs in the North Island.

4 Reporting boundary

The reporting boundary identifies which emission sources are included in the carbon inventory and which are excluded. ISO 14064-1(2006) categorises emissions as follows:

- Scope 1 emissions are those emissions resulting directly from the organisation's operations including stationary energy sources and vehicles owned by the company.
- Scope 2 and 3 emissions are emissions indirectly created by the company through the importation of electricity, heat or steam generated elsewhere or from the organisation's purchase of goods and services (such as business travel and the production of waste) that cause emissions to be generated by others.

In compliance with the ISO Standard, all of Bennetto Natural Foods Ltd relevant scope 1, 2 and 3 emissions are accounted for in this GHG inventory.

The included emission sources are shown in the following diagram:

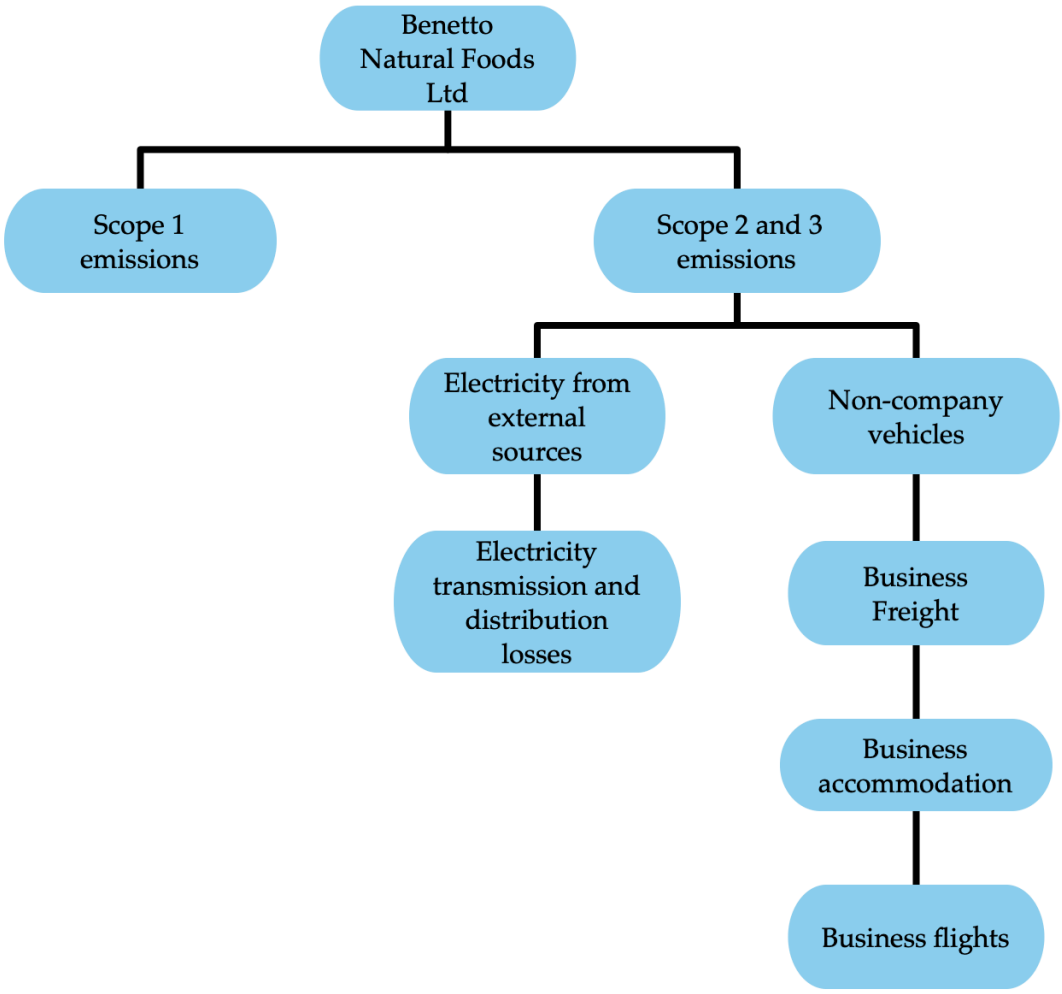


Figure 1: Emission sources for Bennetto Natural Foods Ltd

Exclusions

Waste:

- Unavailability of data.

International outward freight:

- Unavailability of accurate data.

North Island Sales and Marketing:

- Unavailability of accurate data.

5 Greenhouse Gas (GHG) Inventory

5.1 Methodology

This GHG inventory was prepared in compliance with the international Standards for calculating GHG emissions. These Standards are the World Resource Institute's "Greenhouse gas protocol, a corporate accounting and reporting standard (GHG protocol) and "ISO 14064-1 (2006) Specification with guidance at the organisation level for quantification and reporting of GHG emissions and removals" (ISO 145064-1 (2018)). In measuring this inventory, the five principles of ISO 14064-1 (2006) were strictly applied.

It is important to note that subsequent measurements will be measured in line with ISO14064-1 (2018).

The methodology used in measuring Bennetto Natural Foods Ltd organisational GHG inventory is illustrated in the following diagram:

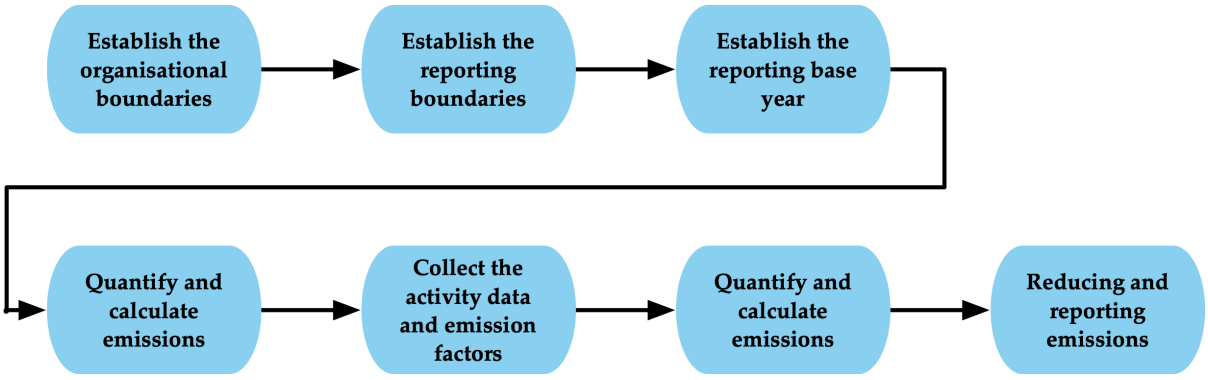


Figure 2: ISO 14064-1 (2018) methodology for measuring a GHG inventory

5.2 Data Collection

Data was collected by Bennetto Natural Foods Ltd staff with guidance where required from Ekos. The table below provides an overview of the data collected for each emission source. All emissions were calculated using an Ekos-developed calculator. The calculation method used to quantify Bennetto Natural Foods Ltd GHG emissions inventory was the activity data multiplied by the appropriate emission factor:

$$\text{Tonnes } CO_2e = \text{Total GHG activity x appropriate emission factor}$$

Activity data for Bennetto Natural Foods Ltd was obtained from a range of sources, which are outlined in the table below.

GHG emission factors were generally sourced from New Zealand's Ministry for the Environment. Where appropriate emission factors were not available, other reliable sources such as international government agencies or published research were used. A full list of the emission factors used is provided in Appendix 1.

Table 1: Data sources for Bennetto Natural Foods Ltd emissions

Emission Source	Unit	Data Source
Electricity	KwH	Invoices from Energy Provider
Electricity line losses	KwH	Invoices from Energy Provider
Flights	Pax.kms	Air New Zealand
Non-company vehicles	kms	Internal estimations
Incoming freight	Tonne.km	Mainfreight invoices
Outward freight	Tonne.km $	Third party logistics provider Third party logistics provider

5.3 Bennetto Natural Foods Ltd GHG Profile

Total emissions for Bennetto Natural Foods Ltd for the 12-month period from 01.04.2019 – 31.03.20 are 16.45 tonnes of CO_2e including radiative forcing.

5.3.1 Emissions breakdown

The majority of Bennetto Natural Foods Ltd emissions are from scope 3 flight emissions, scope 3 freight emissions and non-company vehicle emissions. See the below tables and figures which show the emissions source distribution.

Table 2: Bennetto Natural Foods Ltd emissions by scope (including radiative forcing)

Scope 1 Emissions	**0.00**
Scope 2 Emissions	**0.44**
Scope 3 Emissions	**16.00**

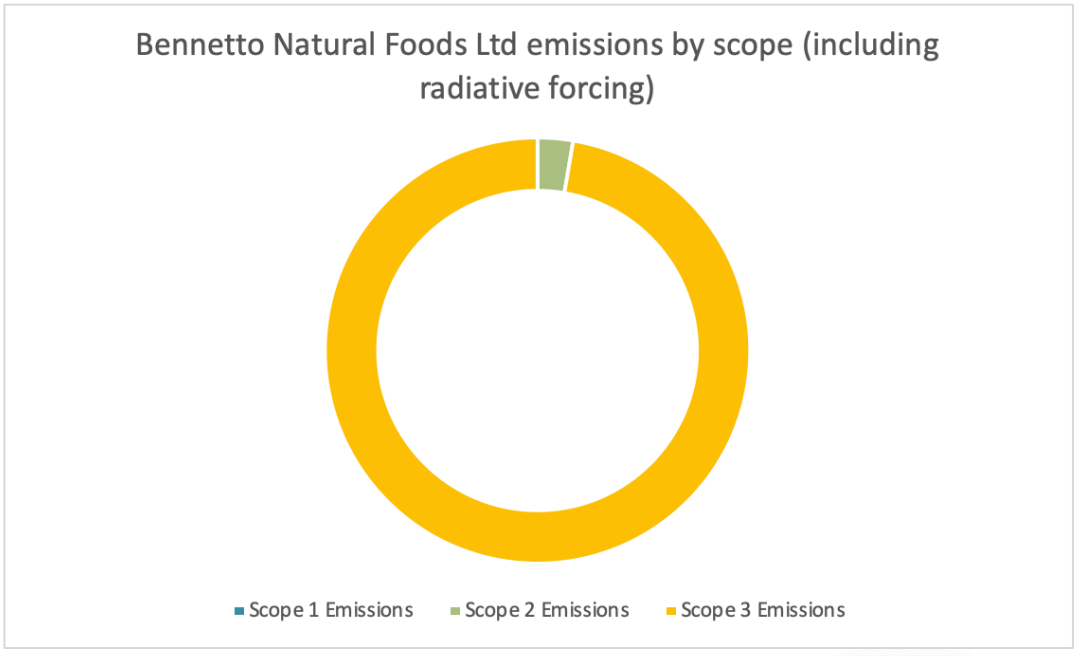
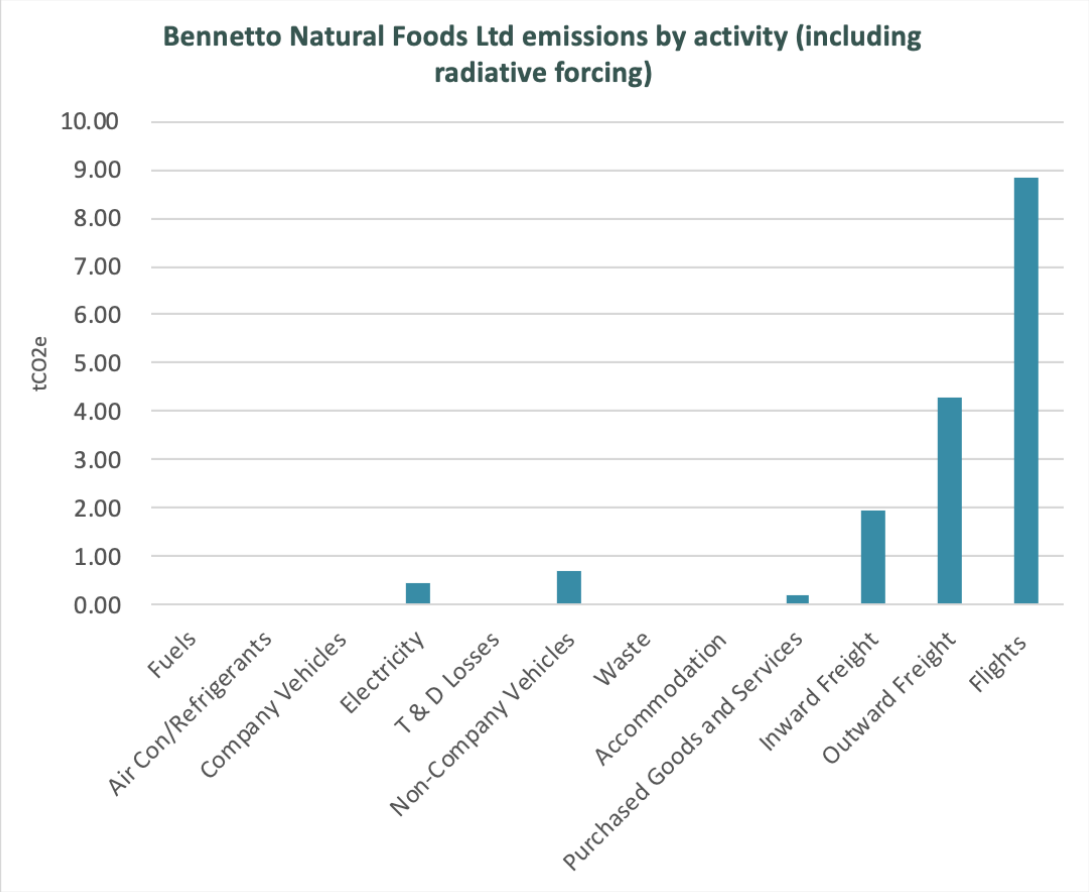


Figure 3: Bennetto Natural Foods Ltd emissions by scope (including radiative forcing)

Table 3: Bennetto Natural Foods Ltd emissions by activity (including radiative forcing)

	Activity	tCO2e
Scope 1	Fuels	0.00
	Air Con/Refrigerants	0.00
	Company Vehicles	0.00
Scope 2	Electricity	0.44
Scope 3	T & D Losses	0.03
	Non-Company Vehicles	0.70
	Waste	0.00
	Accommodation	0.00
	Purchased Goods and Services	0.22
	Inward Freight	1.94
	Outward Freight	4.29
Total	Flights	8.82
FTEs		**16.45**
Footprint per FTE		2
		8.22

Table 4: Bennetto Natural Foods Ltd emissions by activity (including radiative forcing)



5.4 Uncertainty and Data Quality

Where accurate data is not available, it is appropriate to estimate to ensure that a comprehensive inventory measurement is completed. Estimates must be carried on a scientifically-derived basis to ensure accuracy. For Bennetto Natural Foods Ltd GHG inventory, there are the following areas of uncertainty:

- Staff Mileage

  The staff mileage provided was based on an overconservative distance calculation carried out internally by Bennetto Natural Foods Ltd. No mileage log or fuel volumes are currently recorded for staff mileage.

To increase the quality of the carbon inventory, Bennetto Natural Foods Ltd should plan to improve data collections processes for staff mileage. This data could be improved by accurately recording mileage travelled for work through a mileage log. These improvements should start as soon as possible.

6 Offsets and Certification

To qualify for Zero Carbon Business Operations Certification with Ekos, an organisation must measure its business operations inventory (carbon footprint) and offset 100% of direct and indirect emissions. To qualify for Climate Positive Business Operations Certification, and organisation must offset 120% of direct and indirect emissions.

Bennetto Natural Foods Ltd has measured all required activity emissions totalling 16.45 tCO_2e including radiative forcing and have offset 7.54 tCO_2e (120%) including radiative forcing, excluding previously offset flight and inward freight emissions. Therefore, Bennetto Natural Foods Ltd has qualified for Climate Positive Business Operations Certification for the 2020 financial year period.

The offsets Bennetto Natural Foods Ltd has selected are offsets in the form of Verified Emission Reduction units (VERs) or New Zealand carbon Units (NZUs) that have been sourced from the Ekos carbon credit supply chain. These offsets are retired on the Markit Environmental Registry (if VERs) or the New Zealand Carbon Registry (if NZUs).

7 Emissions Reduction Recommendations

Ekos recommends Bennetto Natural Foods Ltd take action to reduce its operational carbon emissions. These recommendations are based on Bennetto Natural Foods Ltd emission hotspots. These are the highest level emission sources, and provide the greatest opportunity to reduce emissions for Bennetto Natural Foods Ltd at the lowest cost.

The highest emission sources for Bennetto Natural Foods Ltd are:

- Scope 3 flight emissions
- Scope 3 outward freight emissions

To reduce scope 3 flight emissions, Ekos recommends only flying when absolutely necessary. Ekos recommends exploring alternative travel modes when domestic travel is necessary, examples of these alternative transport modes are bus and train services. We understand these alternative modes are not always available or appropriate.

To reduce scope 3 outward freight emissions, Ekos recommends engaging with outward freight providers regarding their efforts around carbon emissions reductions. This indirect emissions source is difficult for Bennetto Natural Foods Ltd to directly reduce, however, the company can engage with the supply chain and encourage emissions reductions within the freight providers operations. Such reductions could be achieved through the transition of delivery vehicles to electric or hybrid models for example.

To reduce offsetting costs, Bennetto Natural Foods Ltd could use a freight provider that is Certified Zero Carbon.

8 Bennetto Natural Foods Ltd emissions comparisons year on year

Table 5: Bennetto Natural Foods Ltd emissions comparison year on year (including radiative forcing)

		tCo2e	tCo2e	%
	Activity	**2019 financial year**	**2020 financial year**	**Change**
Scope 1	Fuels	0	0.00	N/A
	Aircon/Refrigerants	0	0.00	N/A
	Company Vehicles	0	0.00	N/A
Scope 2	Electricity	0.92	0.44	-52%
Scope 3	T & D Losses	0.07	0.03	-52%
	Non-Company Vehicles	0.86	0.70	-19%
	Accommodation	0	0.00	N/A
	Purchased Goods and services	0	0.22	N/A
	Waste	0	0.00	N/A
	Inward Freight	0	1.94	N/A
	Outward Freight	7.86	4.29	-45%
Total	Flights	1.37	8.82	544%
FTEs		**11.08**	**16.45**	48%
Footprint per FTE		**1.50**	**2**	33%
		7.39	**8.22**	11%

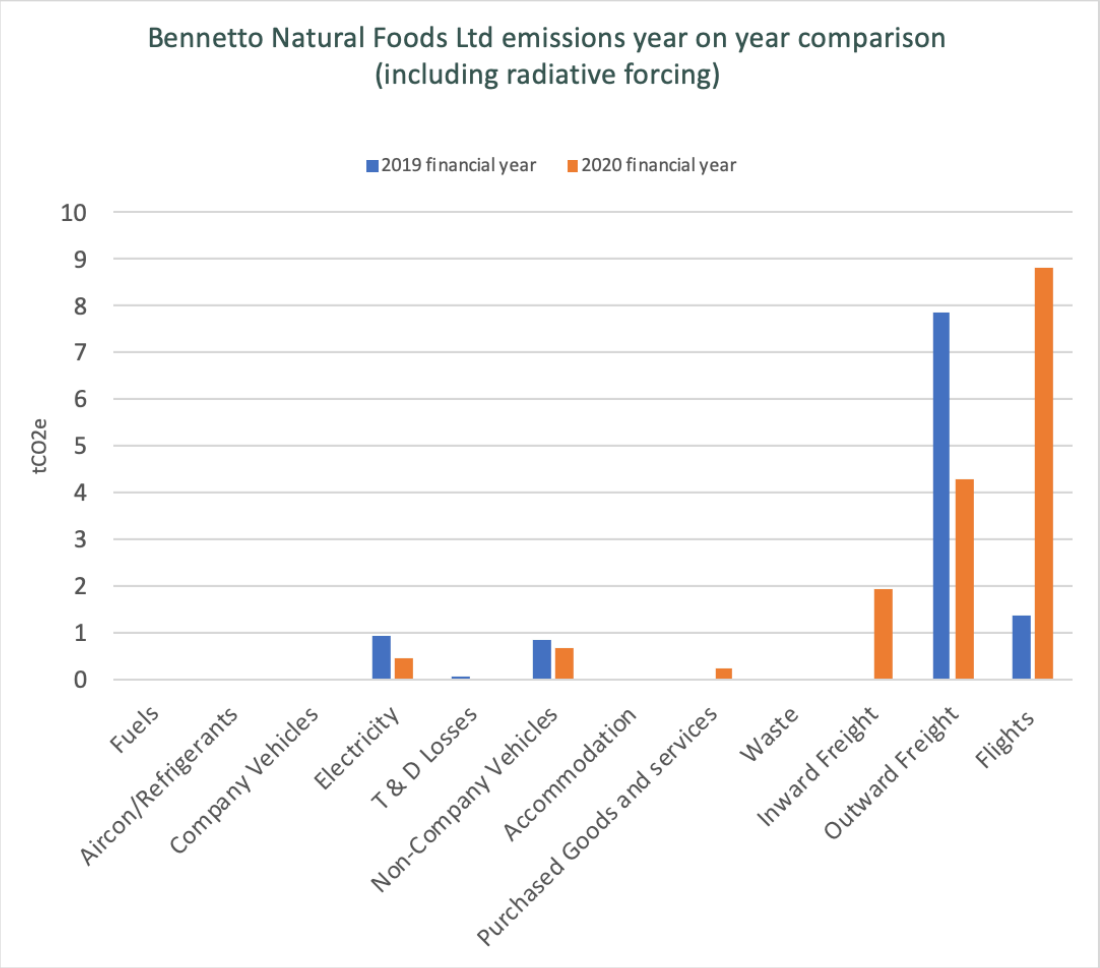


Figure 4: Bennetto Natural Foods Ltd emissions comparison year on year comparison (including radiative forcing)

Table 5 and figure 4 show the following changes in carbon emissions between the 2019 and 2020 financial year measurements;

- Scope 2 electricity emissions have decreased by 52%.
- Scope 3 non-company vehicle emissions have decreased by 19%.
- Scope 3 freight emissions have had an overall decrease of 20% (this is likely due to the availability of more accurate distribution data for this year's measurement).
- Scope 3 flight emissions have increased by 445%.

Overall, Bennetto Natural Foods Ltd carbon footprint has increased by 48% during the 2020 financial year when compared with the 2019 financial year measurement.

8 Glossary

De minimis

Certain activities contribute less than 1 percent of the total of CO_2e emissions. These may be excluded from the GHG inventory, provided that the total of excluded emissions does not exceed a materiality threshold of 5 percent. That is, the total of all excluded emission sources should not exceed 5 percent of the total inventory.

Greenhouse gas (GHG)

Gaseous constituent of the atmosphere, both natural and anthropogenic, that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth' surface, the atmosphere and clouds. These include:

- Carbon dioxide (CO_2)
- Methane (MH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF_6)

GHG Scopes:

- Scope 1: Direct emissions from sources owned or controlled by reporting entity. For example diesel generator, coal heating, own vehicle fleet, agriculture
- Scope 2: Indirect emissions generated by purchased energy. For example, electricity, gas.
- Scope 3: Indirect emissions that are a consequence of activities undertaken by the reporting organisation or related individual, but not directly controlled by the organisation. For example, flights, freight, non-company vehicles, waste, electricity line distribution and transmission losses.

Radiative Forcing (RF):

Radiative forcing helps organisations account for the wider climate effects of aviation, including water vapour and indirect GHGs. This is an area of active research, which seeks to express the relationship between emissions and climate warming effects of aviation. Inclusion of radiative forcing effects is optional for Ekos' clients as the science is still evolving.

Ekos uses a multiplier of 1.9 to account for radiative forcing effects in line with the Ministry for the Environment publication *Measuring Emissions: A Guide for Organisations 2019.*

Appendix 1: Emission Factors

Ekos uses emission factors provided by the New Zealand Ministry for the Environment (MfE) publication *Measuring Emissions: A Guide for Organisations 2019*. Where emission sources are not covered by the MfE publication, Ekos identifies suitable factors for use from the Department for Environment and Rural Affairs (DEFRA) , UK Government document *Factors for Greenhouse Gas Reporting 2018*. A full list of the emission factors used in this report are shown below:

Emission source	Emission Factor	Notes
Electricity		
Electricity	0.000098 tCO2e/kWh	
Electricity Transmission and Distribution	0.0000007 tCO2e/kWh	
Non-Company Vehicles		
Mileage	0.00027 tCO2e/km	
Flights		
NZ Domestic	0.000130 tCO2e/km	If Radiative Forcing is included a multiplier of 1.9 is applied, as recommended by MFE.
NZ International 3,700km Economy	0.000084 tCO2e/km	
NZ International 3,700km Economy	0.000086 tCO2e/km	
Freight		
Air Freight Domestic Short-haul 3700kms Long-haul 3700kms	 0.002705 tCO2e/tonne. km 0.001056 tCO2e/ tonne. km 0.000770 tCO2e/tonne. km	If Radiative Forcing is included a multiplier of 1.9 is applied, as recommended by MFE.
Road Freight Van Truck Ferry	 0.00070 tCO2e/ tonne. km 0.00014 tCO2e/ tonne. km 0.000017 tCO2e / tonne. km	Assumption of truck to van ratio determined by client.
Sea Freight General cargo Container ship RoRo Ferry	 0.0000121tCO2e/ tonne. km 0.0000203 tCO2e/ tonne. km 0.0000517 tCO2e / tonne. km	
Purchased goods		
Freight Postal and courier pick-up and delivery services	0.000226tCO2e/$	Sourced from the Motu.