



Carbon Footprint Report for:
Bennetto Natural Foods Co
Period: 2019 Financial Year



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1. Summary

This report is a carbon footprint measurement report of greenhouse gas emissions and offsetting prepared for Bennetto Natural Foods Co with the following boundaries:

Organisation details Name: Bennetto Natural Foods Co
Contact person: Charlie Bennetto
Email: charliebennetto@hotmail.com
Area of Business: Food Distribution
FTEs: 1.5

Report period (April 2018 – March 2019)

Organisational Boundary This measurement covers the following sites:
63 Cleveland St Christchurch

Operational Boundary Business Operations Scope 1, 2 and 3 emissions resulting from:

- Fuels
- Air-conditioning
- Purchased energy
- Line losses
- Driving
- Flying
- Waste to Landfill
- Freight
- Accommodation
- Agriculture

Omissions None

Emissions Total emissions = 9.64tCO₂e

Offsets Total offsets = 11.71tCO₂e



Bennetto Natural Foods Co has elected to offset 120% of these emissions with Verified Emission Reduction units provided by Ekos. Through this measurement and offsetting Bennetto Natural Foods Co has qualified for Climate Positive Business Operations certification.

2. Methodology

This report was prepared with activity data provided by Bennetto Natural Foods Co and compiled and calculated by Ekos.

The International Standards Organisation (ISO) 14064-1 sets out two methods for measuring greenhouse gas emissions:

- I. Direct measurement
- II. Use of an emission factor multiplied by activity data.

This report is based on method II.

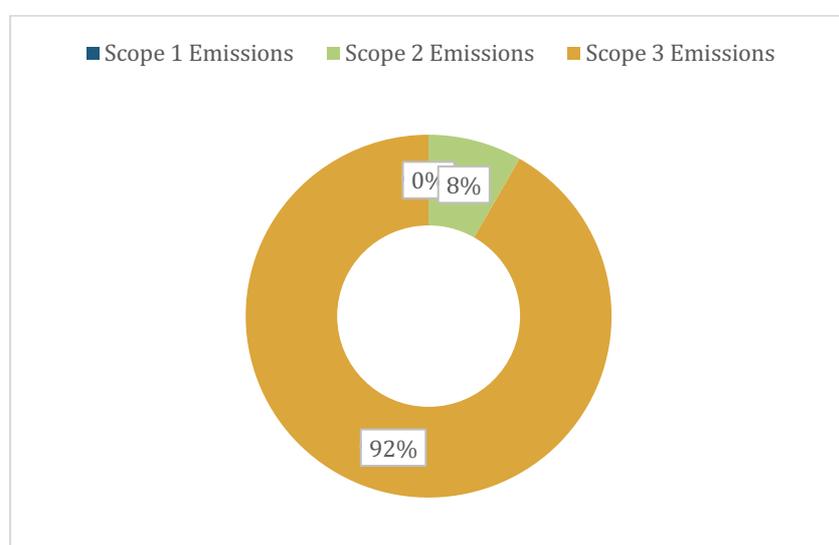
Emission factors have been sourced from the New Zealand Ministry for the Environment 2016 Guidance for Voluntary Greenhouse Gas Reporting and the UK's Department of Environment, Food and Rural Affairs (DEFRA 2018).

3. Emissions by Scope

Table 1. Emissions by Scope excluding radiative forcing

Scope 1 Emissions	0.00
Scope 2 Emissions	0.86
Scope 3 Emissions	9.50

Figure 1. Emissions by Scope



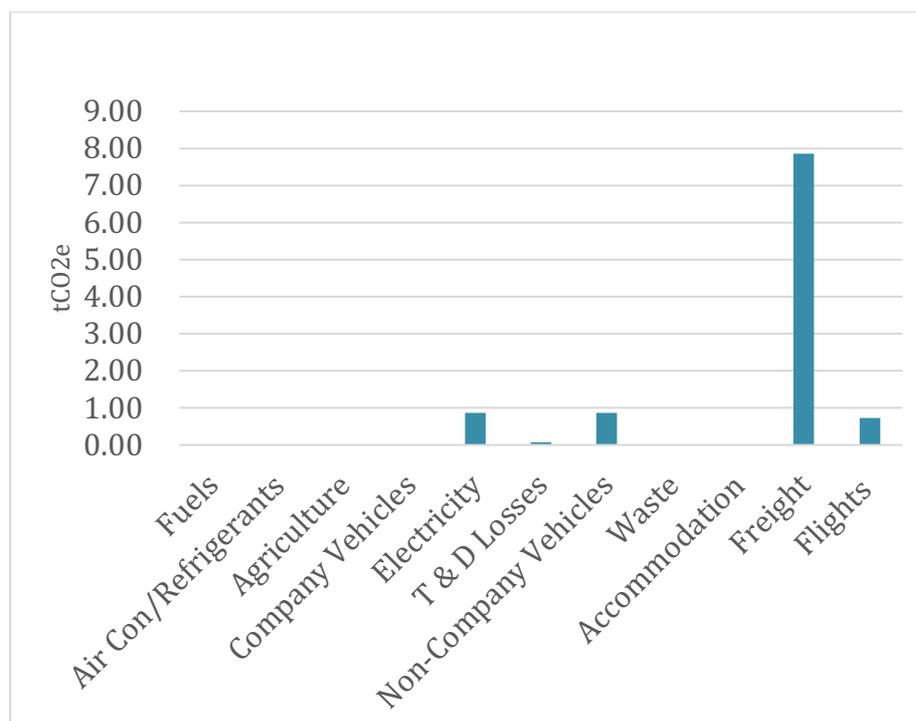


4. Emissions by Activity

Table 2. Emissions by Activity

	Activity	tCO2e
Scope 1	Fuels	0.00
	Air Con/Refrigerants	0.00
	Agriculture	0.00
	Company Vehicles	0.00
Scope 2	Electricity	0.86
Scope 3	T & D Losses	0.07
	Non-Company Vehicles	0.86
	Waste	0.00
	Accommodation	0.00
	Freight	7.86
	Flights	0.72
Total		10.36
FTEs		1.5
Footprint per FTE		6.91

Figure 2. Emissions by Activity





5. Omissions

There were no organisational or activity omissions.

Flight emissions were not included in the offsetting total as these emissions had already been offset through the airline.

6. Uncertainty

The Ekos *De minimis* rule is to apply a conservative 2% of the client's total footprint to activities relevant to the client, but where there is insufficient data to make a calculation or an evidence-based estimate. The *De minimis* rule is only applied to those activities that Ekos is able to determine will be less than 1% of the client's total footprint.

The Ekos *de minimis* rule was not applied to any area of this calculation.

We recommend that Bennetto Natural Foods Co puts systems in place to enhance its measurement for the following activities: Mileage. was based on conservative estimates. It is important that the accuracy of the mileage data is improved.

7. Offsets and Certification

To qualify for Climate Positive Carbon Certification with Ekos an organisation must measure and offset 120% of Scope 1 (fuels, air conditioning) Scope 2, (purchased energy), and Scope 3 (line losses, driving, flying, freight and waste to landfill) activity emissions.

Bennetto Natural Foods Co has measured all required activity emissions, totalling 9.64tCO₂e including radiative forcing

Bennetto Natural Foods Co has offset tCO₂e (120%)

Bennetto Natural Foods Co qualifies for Climate Positive – Business Operations.

Offsets are sourced from Verified Emission Reduction Units (VERS) produced in the Rarakau Rainforest Carbon Project in Southland, New Zealand, and these offsets are retired on the Markit Environmental Registry.

8. Emission Reduction Recommendations

The emissions profile hotspot for Bennetto Natural Foods Co & Climate Positive Business Operations is its Scope 3 freight emissions.

To reduce freight emissions Ekos recommends:

Whilst freight is the emissions hotspot is a core aspect of Bennetto Natural Foods Co it is hard to reduce the current emissions levels especially due to the fact there is currently no air freight.



We recommend transitioning to electric or hybrid vehicles to reduce the non-company vehicle emissions.

9. Glossary

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's surface, the atmosphere, and clouds. These include: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆).

The GHG scopes referred to are:

- Scope 1 - direct emissions from sources owned or controlled by you (e.g. diesel generator, coal heating, own vehicle fleet, agriculture)
- Scope 2 - indirect emissions generated by purchased energy (e.g. electricity, gas)
- Scope 3 - indirect emissions that are a consequence of the operations of an organisation or individual, but are not directly owned or controlled by the organisation or individual (e.g. flights, freight, non-company vehicles, waste, accommodation, electricity line 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, aiming to express the relationship between emissions and the climate warming effects of aviation, which is yet to be agreed. For this reason, Ekos makes accounting for RF optional for our clients.

A multiplier of 1.9 is used to account for Radiative forcing in accordance with the Ministry for Environment *Measuring Emissions: A Guide for Organisations 2019*.



Appendix 1: Emission Factors

Ekos uses emission factors provided by the following the New Zealand Ministry for the Environment (MfE) *Measuring Emissions: A Guide for Organisations 2019*.

Where emission sources are not covered by the MfE emission factors, Department for Environment and Rural Affairs (DEFRA) UK Government conversion Factors for Greenhouse Gas Reporting 2018.

Emission source	Emission Factor	Notes
Electricity		
Electricity	0.000098 tCO ₂ e/kWh	
Electricity Transmission and Distribution	0.0000007 tCO ₂ e/kWh	
Fuels		
Non-Company Vehicles		
Taxi	0.000075/\$ 0.000224/km	
Rental Car	0.00021/km	
Mileage	0.00027/km	
Flights		
NZ Domestic	0.000161 tCO ₂ e/km	If Radiative Forcing is included a multiplier of 1.9 is applied, as recommended by MfE.
NZ International <3,700km Economy	0.000084 tCO ₂ e/km	
Business	0.000127 tCO ₂ e/km	
NZ International >3,700km Economy	0.000086 tCO ₂ e/km	
Premium	0.000138 tCO ₂ e/km	
Business	0.000138 tCO ₂ e/km	
First	0.000344 tCO ₂ e/km	
Freight		
Road Freight Van Truck Ferry	0.00030 tCO ₂ e/ tonne. km 0.00014 tCO ₂ e/ tonne. km 0.000017 tCO ₂ e / tonne. km	Assumption:90% of journey is by truck, 10% by Van
Sea Freight General cargo Container ship RoRo Ferry	0.0000121tCO ₂ e/ tonne. km 0.0000203 tCO ₂ e/ tonne. km 0.0000517 tCO ₂ e / tonne. km	

