

PUBLIC DISCLOSURE STATEMENT

CARBON NEUTRAL AVOCADO (TRADING AS ECOAVO) PRODUCT CERTIFICATION FY2022–23

Australian Government

Climate Active Public Disclosure Statement







 NAME OF CERTIFIED ENTITY
 Carbon Neutral Avocados (Trading as EcoAvo)

 REPORTING PERIOD
 Financial Year 1 July 2022 – 30 June 2023
Arrears report

 DECLARATION
 To the best of my knowledge, the information provided in this public
disclosure statement is true and correct and meets the requirements
of the Climate Active Carbon Neutral Standard.

 Justin David Omodei
Director
27/10/23
 Justin David Omodei
Director



Australian Government

Department of Climate Change, Energy, the Environment and Water

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Version: August 2023



1.CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	307 tCO ₂ -e
CARBON OFFSETS USED	60% CERs, 40% VCUs
RENEWABLE ELECTRICITY	102%
CARBON ACCOUNT	Prepared by: Everclime
TECHNICAL ASSESSMENT	10 September 2021 EY Next technical assessment due: FY2024-25 report
THIRD-PARTY VALIDATION	29 October 2021 Type 3

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2. CERTIFICATION INFORMATION

Description of certification

This Public Disclosure Statement provides details of the carbon neutral product certification for Carbon Neutral Avocados, ABN 14 613 279 718, part of the EcoAvo brand in partnership with Bendotti & Co.

It covers the carbon neutral product line of avocados produced, packed and distributed from the farm until point of retail within the financial year (1 July 2022 – 30 June 2023, full coverage). This includes the Scope 1, 2 and 3 emissions associated with the life cycle of the avocado fruit, including the upstream emissions, organisation emissions, and downstream emissions until point of retail.

Uplift factors have been included to incorporate the emissions associated from the point of retail until the "grave", because this data is impossible to measure, due to the wide-ranging distribution of the avocado product, uplift factors must be applied.

The carbon inventory for the second year of certification is the actual data from FY22-23.

Product description

The functional unit for this certification is one kilogram (kg) Carbon Neutral Avocados produced, packed, and distributed until point of retail for the period 1 July 2022 – 30 June 2023 (FY23). The functional unit has been used to determine the emissions per functional unit i.e. the CO₂-e emissions intensity of one kg of avocados produced, packed, and distributed from the farm to the retailer. The emissions associated with the disposal or use by consumers is not included in this assessment.

Organisation description

Carbon Neutral Avocados is owned and operated by Posciavo Holdings Pty Ltd ATF The Justin & Jodie Omodei Family Trust ABN 14 613 279 718, Pemberton, Western Australia. We are a small sized, nimble, hands-on avocado growing business that supplies the highest quality avocados to our local accredited packing and distribution facility. The path towards carbon neutrality has provided our business with the levers to continue to reduce and neutralise our carbon emissions.

The Eco Avo

Our certified product will be sold & marketed under the EcoAvo Brand. The EcoAvo trademark is to ensure all produce sold using this brand is Carbon Neutral certified. All emissions relating to the packaging process of EcoAvo has been captured and included within the Joe Bendotti & CO Emission scope.



3. EMISSIONS BOUNDARY

Inside the emissions boundary

All emission sources listed in the emissions boundary are part of the carbon neutral claim.

Quantified emissions have been assessed as 'attributable processes' of a product or service. These attributable processes are services, materials and energy flows that become the product or service, make the product or service and carry the product or service through its life cycle. These attributable emissions have been quantified in the carbon inventory.

Quantified: Total net electricity emissions (Market based), Vegetable and fruit growing, hay, plant nurseries, flowers, Hay, Diesel oil post-2004 & Petrol, Gasoline post-2004, Road freight (Average HGV), Rail or train freight, Marine freight, Chemicals & fertilisers, Pesticides, General waste (municipal waste), Packaging plastic, Cardboard (paper products), Labels, Machinery and equipment repairs and maintenance services.

Non-quantified emissions have been assessed as attributable and are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. All material emissions are accounted for through an uplift factor. Further detail is available at Appendix C.

Non-quantified: Refrigerants, electricity, and chemicals associated with wholesaler storage and ripening, Emissions associated with disposal of fruit until point of retail.

Outside the emissions boundary

Non-attributable emissions have been assessed as not attributable to a product or service. They can be **optionally included** in the emissions boundary and therefore have been offset, or they can be listed as outside of the emissions boundary (and are therefore not part of the carbon neutral claim). Further detail is available at Appendix D.

There are no non-attributable processes identified as part of this product life cycle assessment.



Inside emissions boundary

Quantified

Total net electricity emissions (Market based)

Vegetable and fruit growing, hay, plant nurseries, flowers

Diesel oil post-2004 & Petrol

Gasoline post-2004

Road freight (Average HGV)

Rail or train freight

Marine freight

Chemicals & fertilisers

Pesticides

General waste (municipal waste)

Packaging materials and supplies

Machinery and equipment repairs and maintenance services

Industrial and agricultural machinery embodied emissions

Non-quantified

Refrigerants, electricity, and chemicals associated with wholesaler storage and ripening

Emissions associated with disposal of fruit until point of retail

Excluded

Refrigerants used in packing facility

Outside emission boundary

Non-attributable

Not Applicable



Product process diagram

The following diagram provides an overview of the life cycle of Carbon Neutral Avocado's avocado product, including upstream emissions generated from the production and transport of inputs, organisational emissions from onsite production processes, and downstream emissions from distribution, storage and disposal until point of retail.

The below diagram describes a cradle-to-point-of-retail certification scope. Cradle to grave certification was not used due to the data gap that exists relating to the volumes of avocado waste and method of disposal by retailers and the consumer.

	Embodied emissions and freight of inputs					
Upstream emissions	 Embodied emissions in, and freight of, infant avocado trees Embodied emissions in, and freight of, fertilisers, chemicals, pesticides, and mulch Embodied emissions of fuel Embodied emissions of machinery and equipment purchased 					
	Avocado Production					
	 Fertiliser, chemical and pesticide application Mulch (hay) application General waste On-farm dam water catchment Irrigation 					
Production	Harvost					
	 On-farm transport Excavator & machinery use Machinery and equipment repair and maintenance services Capital purchases 					
Distribution to packing shed						
	Road freight					
	Grading & packing					
Downstream	 Cool storage Grading Packing & labelling 					
emissions	Distribution					
	 Local, Interstate, and overseas distribution Wholesaler storage, ripening and distribution to retailer 					
	Consumer use					
	Consumer use Consumption and disposal of avocado					





4. EMISSIONS REDUCTIONS

Emissions reduction strategy

Accurately recognising where our emissions are generated from was the first step in formulating a plan for reducing them. As part of our emissions reduction strategy to reduce our carbon emissions per tonne of production, we are investigating opportunities to:

- Adopt emerging technologies in photovoltaic/battery power generation for our irrigation requirements.
- Reducing our fuel use in the orchard.
- Minimising the freight of both our inputs and our produce (through supplying localised customers)
- Growing our own fodder for mulching around the trees, rather than purchasing hay/straw from our current supplier. (completed FY23)
- Adapting and refining our agronomy to maximise our yields

In future years, we will continue to seek new opportunities to reduce our emissions and will report on our progress against our emissions reduction strategy in future Public Disclosure Statements.

Our goal is to have a further 35% reduction in actual emissions from the '21-'22 period by 2030, resulting in 55% reduction from baseline levels set at the original application, measured as the baseline figure of 607 tCO₂-e for the Carbon Neutral Avocados' portion of the EcoAvo product.

FY23 however saw an in emissions per functional unit, this is due to avocados being a seasonal fruit with strong years (FY22) and slow years (FY23). The baseline or fixed emissions however do not change drastically between these time period. Slower years are also an opportunity to increase capital expenditure in order to prepare for larger crops. FY24 is expected to be a large crop, potentially bigger than FY22 which was considered a very strong crop. The EcoAvo brands expect there to be a sharp drop in emissions per functional unit as a result of the increased number of avocados grown.



Emissions reduction actions

Over the past twelve months we have implemented several actions that have lead to the reduction in emissions from last year.

These include purchasing GreenPower.

 We purchased GreenPower throughout FY23 to have 100% of our with zero under the GreenPower scheme, evidence of this will be included in the submissions. This resulted in our expected emissions from electricity dropping to zero.

Research into on-site carbon sequestration

- Detailed reports into the potential for soil carbon that could be measured as sequestered to
 "inset" Carbon Neutral Avocado's emissions. The reports found that the ground already had high
 levels of carbon sequestered and would only be able to sequester a further 0.11tCO2e/ha/y. A
 decision on whether to pursue this path is yet to be made although it seems unlikely.
- We also completed a general report looking at all potential methods of on-site carbon offset generation including planting native tree species, biodiesel and soil carbon. Tree plantations are difficult due to the high price of land with regard to income generation potential of the land.
- Biodiesel is an area of interest for both of EcoAvo's farmers. They will continue to explore the
 potential for biodiesel to be created from their green waste. This will be part of the long term
 carbon reduction strategy for both parties. Investigation in biodiesel continues with current
 conversations underway with relevant groups on whether this can be implemented in the coming
 24 months.

Insetting is still in its nacent stage and therefore we are acting cautiously in our decision making around the possibility of sequestering carbon at the farm to reduce the carbon footprint of our avocados. We will continue to explore this as confidence builds around the use of insetting.



5. EMISSIONS SUMMARY

Emissions over time

Emissions since base year					
		Total tCO ₂ -e	Emissions intensity of the functional unit		
Base year/Year 1:	2021-22	607	0.0006777 tCO ₂ -e/kg avocado		
Year 2:	2022-23	307	0.001449 tCO ₂ -e/ kg avocado		

Significant changes in emissions

Emission source	Previous year emissions (t CO ₂ -e)	Current year emissions (t CO ₂ -e)	Reason for change
Electricity	58.78	0	100% GreenPower purchased
Diesel	114.98564	136.10	Same amount of diesel, higher emissons factor
Нау	38.89	0	Own fodder used instead of purchased Hay
Industrial and agricultural machinery embodied emissions	15.377228	12.179	Money spent on new capital purchases
Machinery and equipment repairs and maintenance services	0.5318471	3.60	Money spent on repairs for exisiting capital equipment
Road Freight (\$)	23.30694	4.1366014	Smaller harvest, less upstream freight required
Rail or train freight	91.893011	23.3452	Smaller harvest, so less freight
Road Freight (Average HGV):	193.2219481	12.741285	Mistake found in last year's accounting methodology which overestimated road freight from rail depot to customers by 10 times. Amended this year.



Emissions summary

Attributable process	tCO ₂ -e
Electricity	0
Diesel and petrol	144.08
Packaging materials and supplies	3.22
Road freight	16.88
Rail or train freight	23.34
Chemicals and pesticides	80.94
Equipment and maintenance	15.77
General waste	10.07
Total	294.34

Uplift factors

The following uplift factors have been applied:

Uplift applied	tCO ₂ -e
Disposal of fruit by retailer (data unavailable)	8.83
Downstream storage, ripening and retail of avocados (data unavailable)	2.94
Total uplifts applied	11.77
Total carbon account (including uplifts)	306.11

Emissions intensity per functional unit (tCO ₂ -e/kg of avocado, including uplifts)	0.001449474
Number of functional units to be offset (kg of avocado)	211,189
Total emissions to be offset (tCO ₂ -e)	306.11



6.CARBON OFFSETS

Offsets retirement approach

This certification has taken in-arrears offsetting approach. The total emissions to offset are 307 t CO₂-e. The total number of eligible offsets used in this report is 307. Of the total eligible offsets used, 124 were previously banked and 307 were newly purchased and retired. 124 are remaining and have been banked for future use.

Co-benefits

The project has brought employment opportunity at the village level. Lot of villagers have got employment either as security guards, drivers, etc. This has made ii possible for them to earn a living at a place closer to their home rather than going far away into the cities. Apart from this, contracts for civil work have also been given to local villagers. Other work pertaining to these projects have helped the local villagers also such as hiring of transport services, civil contracts, couriers, office automation facilities such as photocopying/printing/fax services etc.



Eligible offsets retirement summary

Offsets retired for Climate Active certification											
Project description	Type of offset units	Registry	Date retired	Serial number (and hyperlink to registry transaction record)	Vintage	Stapled quantity	Eligible quantity retired (tCO ₂ -e)	Eligible quantity used for previous reporting periods	Eligible quantity banked for future reporting periods	Eligible quantity used for this reporting period	Percentage of total (%)
Hebei Yuxian Second Phase 49.5MW Wind Power Project	VCU	Verra	26 Oct 2021	8097-455242118- 455242848-VCU-034- APX-CN-1-814- 01012016-31122016-0	2016	-	731	607	0	124	40%
9.5 MW wind energy based power generation by Interocean Group	CER	CDM – carbon offset platform	26 Oct 2023	<u>IN-5-314337771-2-2-0-</u> <u>10262 - IN-5-314338077-</u> <u>2-2-0-10262</u>	CP2	-	307	0	124	183	60%
Total offsets retired this report and used in this report								307			
Total offsets retired this report and banked for future reports 124											

Type of offset units	Eligible quantity (used for this reporting period)	Percentage of total
VCU (Verified Carbon Unit)	124	40%
CER (Certified Emission Reduction)	183	60%



7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) Summary

N/A

APPENDIX A: ADDITIONAL INFORMATION

N/A

APPENDIX B: ELECTRICITY SUMMARY

There are two international best-practice methods for calculating electricity emissions – the location-based method and the market-based method. Reporting electricity emissions under both methods is called dual reporting.

Dual reporting of electricity emissions is useful, as it provides different perspectives of the emissions associated with a business's electricity usage.

Location-based method

The location-based method provides a picture of a business's electricity emissions in the context of its location, and the emissions intensity of the electricity grid it relies on. It reflects the average emissions intensity of the electricity grid in the location (State) in which energy consumption occurs. The location-based method does not allow for any claims of renewable electricity from grid-imported electricity usage.

Market-based method

The market-based method provides a picture of a business's electricity emissions in the context of its renewable energy investments. It reflects the emissions intensity of different electricity products, markets and investments. It uses a residual mix factor (RMF) to allow for unique claims on the zero emissions attribute of renewables without double-counting.

For this certification, electricity emissions have been set by using the market-based approach.



Market Based Approach Summary			
Market Based Approach	Activity Data (kWh)	Emissions (kg CO2-e)	Renewable Percentage of total
Behind the meter consumption of electricity generated	0	0	0%
Total non-grid electricity	0	0	0%
LGC Purchased and retired (kWh) (including PPAs)	0	0	0%
GreenPower	87,399	0	84%
Climate Active precinct/building (voluntary renewables)	0	0	0%
Precinct/Building (LRET)	0	0	0%
Precinct/Building jurisdictional renewables (LGCs surrendered)	0	0	0%
Electricity products (voluntary renewables)	0	0	0%
Electricity products (LRET)	0	0	0%
Electricity products jurisdictional renewables (LGCs surrendered)	0	0	0%
Jurisdictional renewables (LGCs surrendered)	0	0	0%
Jurisdictional renewables (LRET) (applied to ACT grid electricity)	0	0	0%
Large Scale Renewable Energy Target (applied to grid electricity only)	19,665	0	19%
Residual Electricity	-2,465	-2,354	0%
Total renewable electricity (grid + non grid)	107,064	0	102%
Total grid electricity	104,599	0	102%
Total electricity (grid + non grid)	104,599	0	102%
Percentage of residual electricity consumption under operational control	100%		
Residual electricity consumption under operational control	-2,465	-2,354	
Scope 2	-2,177	-2,079	
Scope 3 (includes T&D emissions from consumption under operational control)	-288	-275	
Residual electricity consumption not under operational control	0	0	
Scope 3	0	0	

Total renewables (grid and non-grid)	102.36%
Mandatory	18.80%
Voluntary	83.56%
Behind the meter	0.00%
Residual scope 2 emissions (t CO2-e)	-2.08
Residual scope 3 emissions (t CO2-e)	-0.28
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO_2 -e)	0.00
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO ₂ -e)	0.00
Total emissions liability (t CO ₂ -e)	0.00
Figures may not sum due to rounding. Renewable percentage can be above 100%	



Location-based approach summary						
Location-based approach	Activity data (kWh) total	Under operational control			Not under operational control	
Percentage of grid electricity consumption under operational control	100%	(kWh)	Scope 2 Emissions (kg CO ₂ -e)	Scope 3 Emissions (kg CO ₂ -e)	(kWh)	Scope 3 Emissions (kgCO ₂ -e)
WA	104,599	104,599	53,346	4,184	0	0
Grid electricity (scope 2 and 3)	104,599	104,599	53,346	4,184	0	0
WA	0	0	0	0		
Non-grid electricity (behind the meter)	0	0	0	0		
Total electricity (grid + non grid)	104,599					

Residual scope 2 emissions (t CO2-e)	53.35
Residual scope 3 emissions (t CO2-e)	4.18
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO2-e)	53.35
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO2-e)	4.18
Total emissions liability (t CO ₂ -e)	57.53

Operations in Climate Active buildings and

р	re	CÌI	nci	ts

Operations in Climate Active buildings and precincts	Electricity consumed in Climate Active certified building/precinct (kWh)	Emissions (kg CO2-e)	
N/A	0	0	
Climate Active carbon neutral electricity is not renewable electricity. These electricity emissions have been offset by another Climate Active member through their building or precinct certification. This electricity consumption is also included in the market based and location based summary tables. Any electricity that has been sourced as renewable electricity by the building/precinct under the market based method is outlined as such in the market based summary table.			

Climate Active carbon neutral electricity products

Climate Active carbon neutral product used	Electricity claimed from Climate Active electricity products (kWh)	Emissions (kg CO ₂ -e)	
N/A	0	0	
Climate Active carbon neutral electricity is not renewable electricity. These electricity emissions have been offset by another Climate Active member through their electricity product certification. This electricity consumption is also included in the market based and location-based summary tables. Any electricity that has been sourced as renewable electricity by the electricity product under the market-based method is outlined as such in the market based summary table.			



APPENDIX C: INSIDE EMISSIONS BOUNDARY

Non-quantified emission sources

The following emissions sources have been assessed as attributable, are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. These emissions are accounted for through an uplift factor. They have been non-quantified due to <u>one</u> of the following reasons:

- 1. Immaterial <1% for individual items and no more than 5% collectively
- 2. **Cost effective** Quantification is not cost effective relative to the size of the emission but uplift applied.
- 3. <u>Data unavailable</u> Data is unavailable but uplift applied. A data management plan must be put in place to provide data within 5 years.
- 4. Maintenance Initial emissions non-quantified but repairs and replacements quantified.

Excluded emission sources

Attributable emissions sources can be excluded from the carbon inventory, but still considered as part of the emissions boundary if they meet **all three of the below criteria**. An uplift factor may not necessarily be applied.

- 1. A data gap exists because primary or secondary data cannot be collected (no actual data).
- 2. Extrapolated and proxy data cannot be determined to fill the data gap (**no projected data**).
- 3. An estimation determines the emissions from the process to be immaterial).

	No actual data	No projected data	Immaterial
Refrigerants used in packing facility	Yes	Yes	Yes

Data management plan for non-quantified sources

There are no non-quantified sources in the emission boundary that require a data management plan.



APPENDIX D: OUTSIDE EMISSION BOUNDARY

Non-attributable emissions have been assessed as not attributable to a product or service (do not carry, make or become the product/service) and are therefore not part of the carbon neutral claim. To be deemed attributable, an emission must meet two of the five relevance criteria. Emissions which only meet one condition of the relevance test can be assessed as non-attributable and therefore are outside the carbon neutral claim. Non-attributable emissions are detailed below.

- 1. <u>Size</u> The emissions from a particular source are likely to be large relative to other attributable emissions.
- 2. Influence The responsible entity could influence emissions reduction from a particular source.
- 3. <u>**Risk**</u> The emissions from a particular source contribute to the responsible entity's greenhouse gas risk exposure.
- 4. <u>Stakeholders</u> The emissions from a particular source are deemed relevant by key stakeholders.
- 5. <u>Outsourcing</u> The emissions are from outsourced activities that were previously undertaken by the responsible entity or from outsourced activities that are typically undertaken within the boundary for comparable products or services.

N/A – no non-attributable processes have been identified as part of this product certification in this reporting period.







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