



PUBLIC DISCLOSURE STATEMENT

XXXX ZERO

PRODUCT CERTIFICATION
CY2023

Australian Government
**Climate Active
Public Disclosure Statement**



NAME OF CERTIFIED ENTITY	Lion Pty Ltd
REPORTING PERIOD	1 January 2023 – 31 December 2023 [Arrears Report]
DECLARATION	<p><i>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.</i></p> <p><i>Tamara Sling-Ronen</i></p> <p>Tamara Sling-Ronen Environment Director Date: 23/05/2024</p>



Australian Government
**Department of Climate Change, Energy,
the Environment and Water**

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Version: January 2024



1.CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	661 tCO ₂ -e
CARBON OFFSETS USED	100% ACCUs
RENEWABLE ELECTRICITY	80.79%
CARBON ACCOUNT	Prepared by: Lion Pty Ltd
TECHNICAL ASSESSMENT	4/02/2022 Paola Martinez Ndevr Environmental Next technical assessment due: CY2025

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2. CERTIFICATION INFORMATION

Description of product certification

This certification covers all XXXX ZERO produced at our Toohey's Brewery Facility (Lidcombe NSW), owned, and operated by Lion Pty Ltd. The parent certification is submitted under Lion Pty Ltd organization certificate and has a Parent-Child relationship with the XXXX Zero product certification. This certification captures the overlapping emissions between Lion Pty Ltd and XXXX Zero. Under the Climate Active technical guidance manual, the liability for the shared emissions is offset as part of the organization certificate and will be deemed carbon neutral when linked to its child certifications.

This product certification is for XXXX ZERO - 0.0% alcohol, 100% carbon neutral.

- Functional unit: 1 litre of XXXX Zero alcohol-free beer produced
- Offered as: full coverage product
- Life cycle: cradle-to-gate

A Cradle-to-gate approach was used as it was not initially possible to map the stages between gate to grave as this would have required us to estimate data for a product that was yet to be distributed to the market. This approach is allowed under the Product & Services standard if function of the final product is not known or there are significant barriers to collecting data. Emissions related to activities/sources after the 'gate' stage:

- Retailing
- Consumer phase
- Post-consumer waste disposal.

These items are not part of this certification claim as the cradle-to-gate approach is taken.

The responsible entity for this product certification is Lion Pty Ltd, ABN 50 128 004 268.

This Public Disclosure Statement includes information for CY2023 reporting period.

Description of business

The story of XXXX starts back in 1878 when brothers Nicholas and Edward Fitzgerald had one goal in life; to create the finest ales known to Australians, loved by generations across this sun-drenched land.

With over 144 years of history brewing thirst-quenchers, XXXX has now crafted XXXX ZERO with the next generation in mind. XXXX ZERO is proudly Australia's first certified carbon neutral zero alcohol beer product. As a full flavoured, easy drinking, alcohol free lager, XXXX ZERO is made to represent the very best of the modern Aussie lifestyle.

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.

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.

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.

Inside emissions boundary

Quantified

Electricity
Natural gas
Fuels
Water
Wastewater
Raw materials
Packaging (primary)
Other packaging
Freight and Transport
Warehousing
Waste

Non-quantified

Hop malt extract
(flavouring)

Optionally included

None

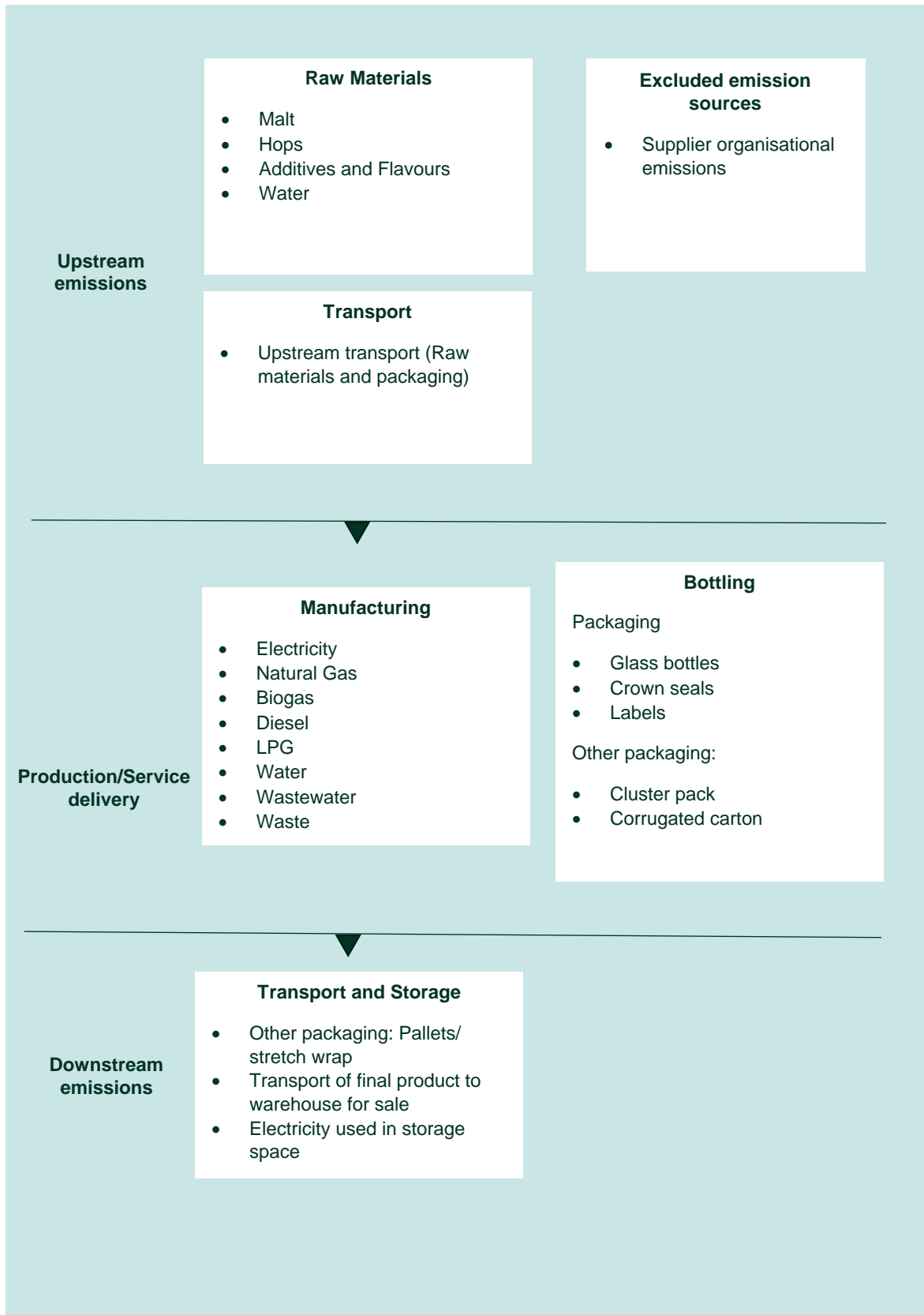
Outside emission boundary

Non-attributable

Organisation operations

Product / Service process diagram

Cradle-to-gate boundary



4. EMISSIONS REDUCTIONS

Emissions reduction strategy

At Lion, sustainability is a key part of who we are and is embedded in everything we do. Ultimately, we aim to bring to life Lion's core purpose in a way that ignites and engages our people, drives net positive change in our environment, and creates strong and resilient communities in which we operate. We are committed to playing a leading role in reducing carbon emissions.

In line with science-based targets to limit global warming to under 1.5°C, Lion has committed to a 55% reduction of Scope 1 and 2 emissions from a 2019 baseline by 2030. As part of this strategy, Lion has committed to using 100% renewable electricity across sites in the Australian and New Zealand network by 2025. In 2020, we commenced a 100% renewable Power Purchase Agreement (PPA) with our electricity supplier in NSW, including Toohey's Brewery in Lidcombe.

At the same time as addressing our direct emissions, Lion recognizes that most of our products' lifecycle emissions come from Scope 3 (indirect) emissions sources. These emissions sources include ingredients and packaging used in our products as well as logistics services throughout the supply chain. We have set a science-based target to reduce our Scope 3 emissions by 30% by 2030, as compared to a 2019 baseline. To achieve this, we are engaging with our key suppliers to understand what causes these emissions to identify opportunities for reducing them.

Emissions reduction actions

The key emissions reduction actions taken in 2023 include:

- Continued 100% Purchased renewable electricity for the Toohey's Brewery in Lidcombe
- Increased biogas production through wastewater treatment plant optimisation
- CIP Optimisation
- Boiler optimisation

5. EMISSIONS SUMMARY

Emissions over time

Emissions since base year		
	Total tCO ₂ -e	Emissions intensity of the functional unit
Base year: 2021	1,189	1.17
Year 1: 2022	594	1.06
Year 2: 2023	723	1.04

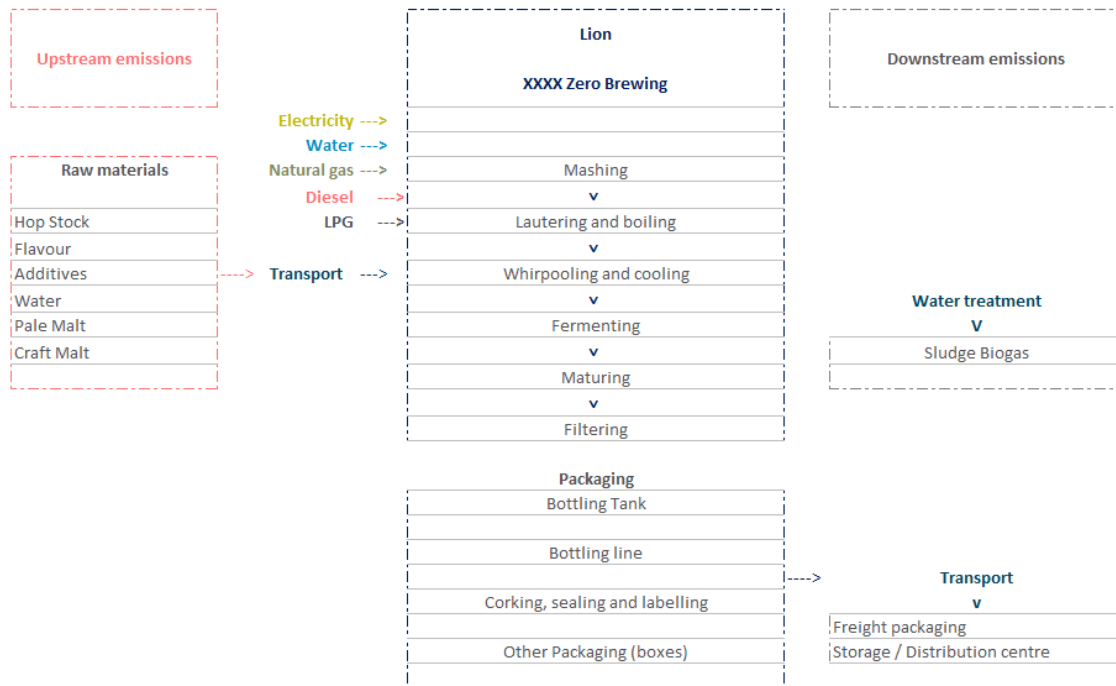
Significant changes in emissions

Significant changes in emissions			
Attributable process	Previous year emissions (t CO ₂ -e)	Current year emissions (t CO ₂ -e)	Reason for change
Malt	61.54	76.65	Driven by increase in production volume vs 2022
Glass	306.24	381.41	Driven by increase in production volume vs 2022
Electricity	6.47	13.57	Driven by increase in production volume vs 2022 and has increased assumed consumption of electricity in the downstream warehousing
Natural Gas NSW/ACT (metro) (GJ)	66.83	75.12	Driven by increase in production volume vs 2022
Downstream Road Freight (articulated truck)	94.27	114.07	Driven by increase in production volume vs 2022

Use of Climate Active carbon neutral products, services, buildings or precincts

Certified brand name	Product/Service/Building/Precinct used
N/A	N/A

Emissions summary



Life cycle stage / Attributable process / Emission source	tCO ₂ -e
Bottling & packaging	416.7
Downstream transport & wholesale storage	118.0
Brewing	92.4
Raw material sourcing	84.6
Upstream transport	10.8
2% Uplift	14.5
Attributable emissions (tCO₂-e)	737.0

2% uplift factor has been implemented:

- 1% to account for hop malt extract (flavouring) as it's been identified as a non-quantified source as the emission factor was not found from any credible sources.
- 1% to address for regional uncertainty, and due to the likelihood that most internationally sourced factors are less intensive than local factors.

Life cycle stage / Attributable process / Emission source	Shared Emissions between Parent-Child tCO₂-e
Bottling & packaging	0
Downstream transport & wholesale storage	0.7
Brewing	75.1
Raw material sourcing	0
Upstream transport	0
2% Uplift	0
Shared emissions (tCO₂-e) – XXXX Zero emissions covered in the Parent Certification	75.8

Product offset liability	
Emissions intensity per functional unit	1.04 kgCO ₂ -e/L
Emissions intensity per functional unit including uplift factors	Confidential
Number of functional units covered by the certification	Confidential
Total emissions covered in the XXXX Zero Product Certification	737
Total emissions shared between Lion Pty Ltd Organisation Certification and XXXX Zero Product Certification	76
Total emissions (tCO₂-e) to be offset	661

6. CARBON OFFSETS

Eligible offsets retirement summary

Offsets retired for Climate Active certification

Type of offset units	Eligible quantity (used for this reporting period)	Percentage of total
Australian Carbon Credit Units (ACCUs)	661	100%

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 (%)
Mulga South Project	ACCU	ANREU	25-Feb-22	<u>3,809,626,998 – 3,809,628,214</u>	2021	NA	1,217	606	0	611	92%
Native woodland regeneration project WOO21	ACCU	ANREU	27-Apr-23	<u>8,351,221,708 - 8,351,222,948</u>	2023	NA	1,241	0	1,191	50	8%
Total offsets retired this report and used in this report										661	
Total offsets retired this report and banked for future reports									1,191		

Co-benefits

Project Type: Human-Induced regeneration of native forests

Widespread land clearing across Queensland has significantly impacted local ecosystems. Past land management has resulted in native vegetation loss, soil compaction and reduced water quality. This degradation and loss of plant species threatens the food and habitat on which other native species rely. Clearing native forests allows weeds and invasive animals to spread, contributes to greenhouse gas emissions and leads to soil erosion and salinity.

Lion is supporting a land regeneration project in south-west Queensland. Located near Quilpie, the project works with the landholder to establish and protect permanent native forests through assisted regeneration from local seed sources. The area harbours a number of indigenous plant species which provide important habitat and nutrients for native wildlife. By erecting fencing and actively and humanely managing invasive species, the project avoids emissions caused by clearing and achieves positive climate, environmental and biodiversity benefits.

Regenerating vegetation, supporting local waterways and increasing biodiversity is boosting the resilience of the landscape while delivering significant reductions in greenhouse gas emissions.

XXXX Zero's offsets are covered by the Woodland regeneration projects in the XXXX Zero CY23 product certification. Details of the shared emissions between XXXX Zero CY23 Product and Lion Organisation certifications can be found in the Lion Pty Ltd Organisation PDS.

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) Summary


The following RECs have been surrendered to reduce electricity emissions under the market-based reporting method. The number listed in the table is the proportion of LGCs surrendered to cover the electricity emissions from the production of the XXXX Zero product at the Toohey's facility. The 48 LGCs have been surrendered and form part of the LGCs surrendered in the Lion Pty Ltd organisation certification. Lion Pty Ltd PDS for the 2023 reporting period can be found in <https://www.climateactive.org.au/buy-climate-active/certified-members/lion>.

1. Large-scale Generation certificates (LGCs)*	48
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* LGCs in this table only include those surrendered voluntarily (including through PPA arrangements), and does not include those surrendered in relation to the LRET, GreenPower, and jurisdictional renewables. The 48 LGCs stated in this summary were derived from the Toohey's electricity consumption attributed to the proportion of XXXX Zero beer produced relative to the Toohey's site total production volume. Details of the LGCs surrendered that cover the electricity for Lion organisation including manufacturing of the XXXX Zero product are covered in the Lion organisation certification.

APPENDIX A: ADDITIONAL INFORMATION

Offset Retirement



Australian National Registry of Emissions Units

Logged in as: Andrew Grant / Industry User

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Transaction Details

Transaction details appear below.

Transaction Successfully Approved

Transaction ID	AU21421
Current Status	Completed (4)
Status Date	25/02/2022 17:02:35 (AEDT) 25/02/2022 06:02:35 (GMT)
Transaction Type	Cancellation (4)
Transaction Initiator	Grant, Andrew William Thorold
Transaction Approver	Grant, Andrew William Thorold
Comment	Retired on behalf of Lion Pty Ltd to meet carbon neutral claim against the Climate Active Carbon Neutral standard for product certification.

Transferring Account

Account Number	AU-2734
Account Name	Tasman Environmental Markets Pty Ltd
Account Holder	Tasman Environmental Markets Pty Ltd

Acquiring Account

Account Number	AU-1068
Account Name	Australia Voluntary Cancellation Account
Account Holder	Commonwealth of Australia

Transaction Blocks

Party	Type	Transaction Type	Original CP	Current CP	ERF Project ID	NGER Facility ID	NGER Facility Name	Safeguard	Kyoto Project #	Vintage	Expiry Date	Serial Range	Quantity
AU	KACCU	Voluntary ACCU Cancellation			ERF103100					2020-21		3,809,626,998 - 3,809,628,214	1,217

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Transaction Details

Transaction details appear below.

i Transaction Successfully Approved

Transaction ID	AU27094
Current Status	Completed (4)
Status Date	27/04/2023 10:48:33 (AEST) 27/04/2023 00:48:33 (GMT)
Transaction Type	Cancellation (4)
Transaction Initiator	Lewis, Alexander John
Transaction Approver	Lewis, Alexander John
Comment	Retired on behalf of Lion to meet its various carbon neutral claims against the Climate Active Carbon Neutral Standards for 2022 – 2025.

Transferring Account

Account Number	AU-3255
Account Name	Tasman Environmental Markets Australia Pty Ltd
Account Holder	Tasman Environmental Markets Australia Pty Ltd

Acquiring Account

Account Number	AU-1068
Account Name	Australia Voluntary Cancellation Account
Account Holder	Commonwealth of Australia

Transaction Blocks

Party	Type	Transaction Type	Original CP	Current CP	ERF Project ID	NGER Facility ID	NGER Facility Name	Safeguard	Kyoto Project #	Vintage	Expiry Date	Serial Range	Quantity
AU	KACCU	Voluntary ACCU Cancellation			ERF166168					2022-23		8,351,221,708 - 8,351,222,948	1,241

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**.

The electricity covered in the XXXX Zero product certification comes from 2 sources: electricity from production of the XXXX Zero product and electricity from downstream transport and wholesale storage. As the Lion organisation certification is the parent inventory, 48 LGCs have been specified to cover the emissions that were attributed to the production of XXXX Zero product from the Toohey's brewery. The residual emissions are then attributed to the downstream transport and wholesale storage which are not in the Lion organisation certification.

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)	48,000	0	62%
GreenPower	0	0	0%
Climate Active certified - Precinct/Building (voluntary renewables)	0	0	0%
Climate Active certified - Precinct/Building (LRET)	0	0	0%
Climate Active certified - Precinct/Building jurisdictional renewables (LGCs surrendered)	0	0	0%
Climate Active certified - Electricity products (voluntary renewables)	0	0	0%
Climate Active certified - Electricity products (LRET)	0	0	0%
Climate Active certified - 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)	14,718	0	19%
Residual electricity	14,910	13,568	0%
Total renewable electricity (grid + non grid)	62,718	0	81%
Total grid electricity	77,628	13,568	81%
Total electricity (grid + non grid)	77,628	13,568	81%
Percentage of residual electricity consumption under operational control	100%		
Residual electricity consumption under operational control	14,910	13,568	
Scope 2	13,271	12,077	
Scope 3 (includes T&D emissions from consumption under operational control)	1,638	1,491	
Residual electricity consumption not under operational control	0	0	
Scope 3	0	0	

Total renewables (grid and non-grid)	80.79%
Mandatory	18.96%
Voluntary	61.83%
Behind the meter	0.00%
Residual scope 2 emissions (t CO2-e)	12.08
Residual scope 3 emissions (t CO2-e)	1.49
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO2-e)	12.08
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO2-e)	1.49
Total emissions liability (t CO2-e)	13.57

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 CO2-e)	Scope 3 Emissions (kg CO2-e)	(kWh)	Scope 3 Emissions (kg CO2-e)
ACT	0	0	0	0	0	0
NSW	58,657	58,657	39,887	2,933	0	0
SA	0	0	0	0	0	0
VIC	0	0	0	0	0	0
QLD	18,971	18,971	13,849	2,846	0	0
NT	0	0	0	0	0	0
WA	0	0	0	0	0	0
TAS	0	0	0	0	0	0
Grid electricity (scope 2 and 3)	77,628	77,628	53,736	5,779	0	0
ACT	0	0	0	0		
NSW	0	0	0	0		
SA	0	0	0	0		
VIC	0	0	0	0		
QLD	0	0	0	0		
NT	0	0	0	0		
WA	0	0	0	0		
TAS	0	0	0	0		
Non-grid electricity (behind the meter)	0	0	0	0		
Total electricity (grid + non grid)	77,628					

Residual scope 2 emissions (t CO2-e)	53.74
Residual scope 3 emissions (t CO2-e)	5.78
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO2-e)	53.74
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO2-e)	5.78
Total emissions liability (t CO2-e)	59.51

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 one 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. **Data unavailable** 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.

Relevant non-quantified emission sources	Justification reason
Extracts (flavouring)	Data unavailable

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**).

Emissions Source	No actual data	No projected data	Immaterial
N/A	N/A	N/A	N/A

Data management plan for non-quantified sources

Although activity data exists, due to the inability to find an appropriate emission factor to determine the emissions associated with one of the flavorings added during the brewing process, the ingredient has been listed as non-quantified.

The data management plan below outlines how more rigorous quantification can be achieved for material (greater than 1%) non-quantified emission sources.

Lion expects to work with our supplier over the coming years to ensure we can include the flavoring as a quantified emission source for future reporting periods. And uplift factor has been added to the total inventory to account for this emission source.

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. **Size** 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. **Risk** The emissions from a particular source contribute to the responsible entity's greenhouse gas risk exposure.
4. **Stakeholders** The emissions from a particular source are deemed relevant by key stakeholders.
5. **Outsourcing** 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.

Non-attributable emissions sources summary

Emission sources tested for relevance	Size	Influence	Risk	Stakeholders	Outsourcing	Justification
Any emission sources related to organisational operations.	N	Y	N	N	N	<p>Size: The emissions source is not likely to be relative to the organisation’s electricity, stationary energy and fuel emissions.</p> <p>Influence: We do have the potential to influence the emissions from this source, however these emissions have already been captured by Lion Organisational certification.</p> <p>Risk: There are no relevant laws or regulations that apply to limit emissions specifically from this source, the source does not create supply chain risks, and it is unlikely to be of significant public interest.</p> <p>Stakeholders: Key stakeholders, including the public, are unlikely to consider this a relevant source of emissions for our product.</p> <p>Outsourcing: We have not previously undertaken this activity within our emissions boundary and comparable products do not typically undertake this activity within their boundary.</p>



An Australian Government Initiative

