PUBLIC DISCLOSURE STATEMENT

ORIGIN ENERGY LIMITED
PRODUCT CERTIFICATION - ORIGIN GO ZERO LPG
CY2023

Australian Government

Climate Active
Public Disclosure Statement

NAME OF CERTIFIED ENTITY	Origin Energy Limited
REPORTING PERIOD	1 January 2023 – 31 December 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.*  Amber Fennell General Manager, LPG Date 26/08/2024

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

Version: January 2024

1.CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	5,978 tCO_2-e
CARBON OFFSETS USED	20% ACCUs, 80% VCUs
RENEWABLE ELECTRICITY	Total renewables 83.45%
CARBON ACCOUNT	Prepared by: Origin Energy Ndevr Environmental prepared the initial certification
TECHNICAL ASSESSMENT	03 December 2020 Timothy Harding Ndevr Environmental Next technical assessment due: CY2024

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2.CERTIFICATION INFORMATION

Description of product certification

This product certification is for Origin Energy Limited (Origin)'s ongoing carbon neutral Liquified Petroleum Gas (LPG) product under Climate Active. This product is marketed and sold as "Origin Go Zero LPG".

- Functional unit: tonnes (t) of LPG usage, with emissions expressed as tonnes of CO2-e (t CO2-e) per tonne of carbon neutral LPG sold.
- Offered as: opt-in product to Origin's LPG customers across all current market segments, including residential, small business, commercial and industrial customers.
- Life cycle: cradle-to-grave.

"Origin Go Zero LPG" allows customers to offset the greenhouse gas emissions associated with the sourcing, transmission, distribution, retailing and consumption of LPG.

The responsible entities for this product certification and their ABN are as follows:

Responsible entities	**ABN**
Origin Energy Electricity Limited	33 071 052 287
Origin Energy Retail Limited	22 078 868 425
Origin Energy LPG Limited They are wholly owned subsidiaries of Origin Energy Limited	77 000 508 369

This Public Disclosure Statement includes information for CY2023 reporting period.

Description of business

Origin Energy Electricity Limited, Origin Energy LPG Limited and Origin Energy Retail Limited are wholly owned subsidiaries of Origin Energy Limited, responsible for the reporting, marketing and selling of the "Origin Go Zero LPG" product.

Origin Energy LPG Limited and Origin Energy Retail Limited retail LPG and associated services to residential and business customers across the Australian Capital Territory, New South Wales, Northern Territory, Queensland, South Australia, Tasmania, Victoria and Western Australia. LPG is mostly sourced domestically, with some international purchases. It is transported from suppliers' refineries and ports to 44 Origin terminals and delivered to Origin's customers using a fleet of over 200 trucks, bulk tankers and installation vehicles. Origin Energy Electricity Limited is responsible for the reporting and offsetting of associated greenhouse gas emissions through the retirement of certificates in the relevant registries.

3.EMISSIONS BOUNDARY

Inside the emissions boundary

All emissions 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

LPG consumed by opt-in customers by state during the reporting period, end use combustion

LPG sold – extraction, processing, and distribution.

Origin retailing activities, including:

Construction Materials and Services

Electricity

ICT services and equipment

Office equipment & supplies

Postage, courier and freight

Professional services

Stationary Energy (gaseous fuels)

Transport (Air)

Transport (Land and Sea)

Waste

Working from home

Climate Active carbon neutral products and services

Non-quantified

Water use at corporate sites related to LPG retailing.

Optionally included

N/A

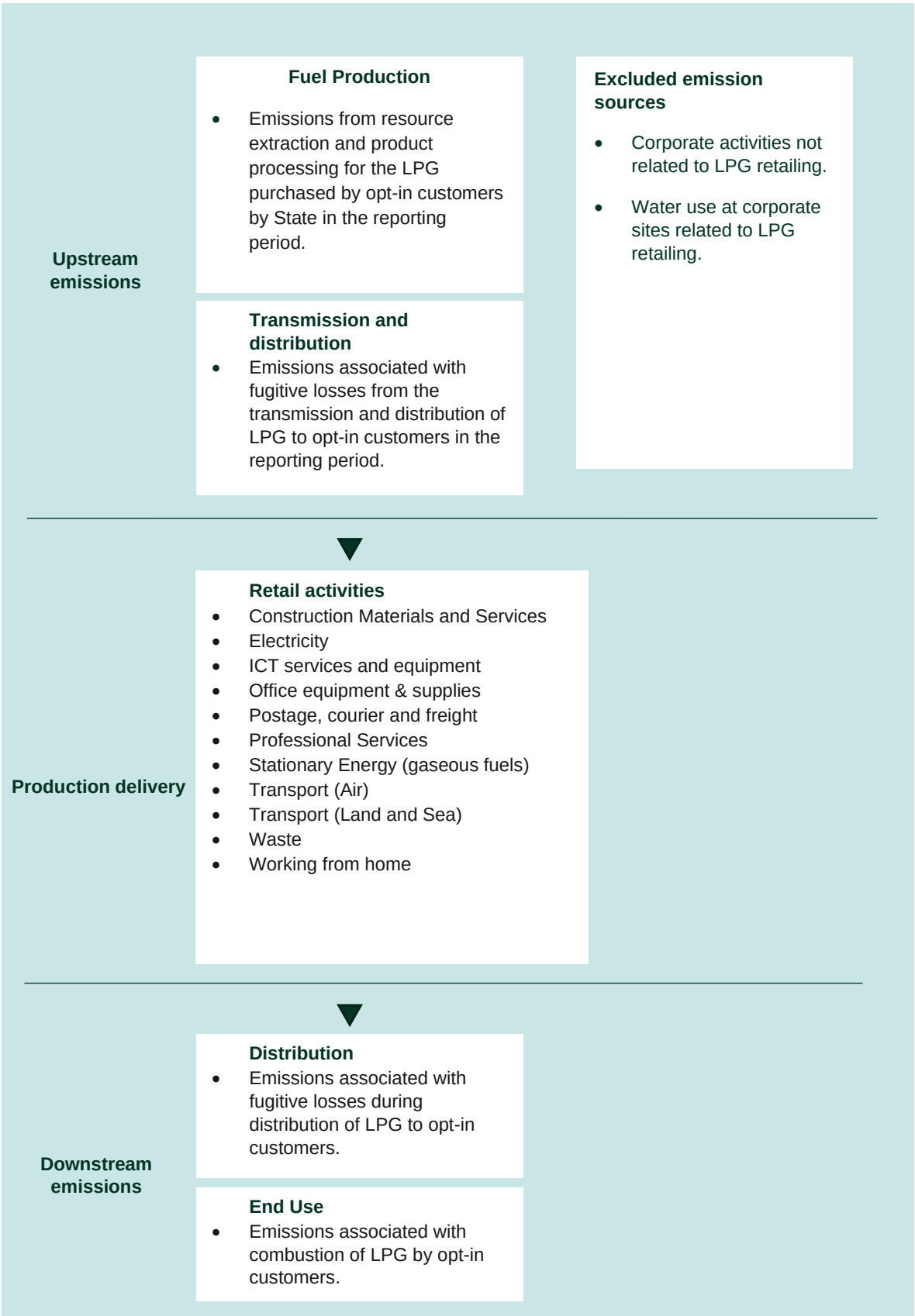
Outside emission boundary

Non-attributable

Corporate activities not related to LPG retailing.

Product process diagram

Cradle-to-grave boundary.



4. EMISSIONS REDUCTIONS

Emissions reduction strategy

Climate change is one of the most significant challenges facing society today. Origin's strategy is anchored in a belief in decarbonisation and the opportunities created by the energy transition.

In 2022, Origin released its first Climate Transition Action Plan (CTAP), which outlines the company's strategy and ambition to lead the energy transition through cleaner energy and customer solutions. Our ambition is supported by three strategic objectives and priorities to drive decarbonisation and evolve our portfolio. These are:

1. Unrivalled customer solutions and enable customers to decarbonise:
    - We are providing customers with a growing portfolio of simple, affordable lower-carbon products and cleaner energy solutions, including rooftop solar and batteries, renewable energy, electric vehicle solutions, renewable power PPAs, load and demand management, as well as our Origin Go Zero Electricity, Origin Go Zero Natural Gas, and Origin Go Zero LPG products, which are certified carbon neutral by Climate Active.
    - We aim to grow a portfolio of carbon credits that will be offered to customers to support them to achieve their decarbonisation commitments.
    - Grow scale at Octopus Energy[1], which is the number one electricity and number two gas retailer in the UK market by customer accounts. The electricity Octopus supplies to customers is 100 per cent sourced from renewable energy, including wind, hydroelectric and solar power.
2. Accelerate renewable and cleaner energy:
    - We aim to grow renewables and storage capacity within our generation portfolio to 4 GW by 2030
    - We aim to grow our Virtual Power Plant, which we expect to play an increasingly important role in helping us optimise the supply and demand balance in the electricity market – to 2 GW under management by FY2026.
    - Investments in Future Fuels. We are exploring both domestic and export market opportunities for hydrogen and ammonia through a number of projects, while recognising the early-stage nature of
    - the hydrogen market in Australia and the technology advancements required.
3. Deliver reliable energy through the transition and reduce emissions from our existing operations:
    - Accelerate Eraring closure. In 2022, we announced plans to accelerate our exit from coal-fired power generation at the Eraring Power Station to potentially as early as August 2025. Bringing forward our exit from coal-fired power generation is the most significant step we expect to take towards achieving our emissions targets.
    - Reduce emissions from our gas operations. As upstream operator for Australia Pacific LNG, we aim to reduce fugitive emissions by replacing equipment and devices with more efficient and advanced technologies, retrofitting facilities to reduce methane venting, and using targeted planning and the implementation of artificial intelligence tools.

[1] Origin has a ~23% interest in Octopus Energy.

The CTAP also includes targets to accelerate emissions reduction across Origin and create value for shareholders, towards a long-term ambition to be net zero Scope 1, 2 and 3 emissions by 2050. Origin's medium-term emissions reduction targets are to:

- reduce Scope 1, 2 and 3 equity emissions intensity by 40 per cent by 2030, from a FY2019 baseline; and
- reduce absolute Scope 1, 2 and 3 equity emissions by 20 million tonnes by 2030, from a FY2019 baseline.

We believe our medium-term emissions intensity target and our long-term net zero emissions ambitions are consistent with the goals of the Paris Agreement to limit the increase in the average global temperature to 1.5°C above pre-industrial levels.[2]

Our CTAP also outlined an updated short-term target to reduce cumulative Scope 1 equity emissions by eight million tonnes CO2-e between FY2021 and FY2023, from a FY2017 baseline. We achieved this target with a cumulative reduction of 9.1 million tonnes CO2-e between FY2021 and FY2023.

Our latest Sustainability Report outlines our progress against our plan and targets.

Emissions reduction actions

For CY2023, our LPG business undertook the following actions:

1. Transitioning our light vehicle sales fleet to electric vehicles (EVs) where practicable. In CY23, we converted 4 petrol cars into EVs and 3 petrol cars into hybrids. This brings us to a total of 19 per cent EVs within our LPG light vehicle fleet. Our ongoing transition to EVs helps us lower fuel use and reduce Scope 1 emissions.
2. Encouraging our customers to switch from coal and / or diesel use in machinery to LPG, a lower emitting fuel than coal or diesel. In CY2023, we successfully facilitated two customers in transitioning from coal to LPG and continued to identify and evaluate further opportunities for customers to convert from coal or diesel to LPG.
3. Continue to roll-out of telemetry (LPG metering) technology, which enables remote gathering of LPG consumption data. By installing telemetry technology on LPG tanks, we can better manage LPG deliveries to our customers, resulting in fewer site visits. In CY2023, our fleet fuel consumption dropped by 36.3kL as a result of fewer site visits related to the installation of telemetry technology, helping to reduce our Scope 1 emissions.
4. We continue to operate three dual fuel (diesel and LPG) LPG Ships in our fleet. LPG ships are less emissions intensive than traditional marine diesel ships as LPG is a lower emitting fuel than diesel, helping to reduce our Scope 1 emissions.

[2] Pursuant to the methodology set out in the CTAP.

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	3,601.48	3.1980 t CO2-e per tonnes
Year 2:	2022	4,801.98	4.0103 t CO2-e per tonnes
Year 3:	2023	5,977.76	4.0115 t CO2-e per tonnes

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**
LPG- QLD Scope 3 EPT + T&D of LPG - Extraction, Processing, Transmission and Distribution	775.82	973.12	Increased uptake of the product in QLD
LPG- NSW Scope 1 Emissions associated with combustion of LPG	787.68	952.68	Increased uptake of the product in NSW
LPG- QLD Scope 1 Emissions associated with combustion of LPG	2,327.47	2,919.36	Increased uptake of the product in QLD

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

Certified brand name	Product/Service/Building/Precinct used
Barangaroo Precinct	Origin NSW offices is located in the Barangaroo Precinct (South).

Emissions summary

Emission source	Sum of Scope 1 (t CO2-e)	Sum of Scope 2 (t CO2-e)	Sum of Scope 3 (t CO2-e)	Sum of Total Emissions (t CO2-e)
Construction materials and services	0.00	0.00	0.00	0.00
Climate Active carbon neutral products & services	0.00	0.00	0.00	0.00
Electricity	0.00	0.04	0.00	0.05
ICT services and equipment	0.00	0.00	0.78	0.78
Postage, courier and freight	0.00	0.00	0.76	0.76
Professional services	0.00	0.00	1.02	1.02
Stationary energy (gaseous fuels)	0.14	0.00	0.03	0.17
Transport (air)	0.00	0.00	0.72	0.72
Transport (land and sea)	0.02	0.00	0.70	0.72
Waste	0.00	0.00	0.47	0.47
Working from home	0.00	0.00	0.46	0.46
Office equipment and supplies	0.00	0.00	0.24	0.24
LPG sold (Scope 3: Emissions associated with extraction, processing, transmission and distribution of LPG)	0.00	0.00	1493.09	1493.09
LPG sold (Scope 1: Emissions associated with combustion of LPG)	4479.28	0.00	0.00	4479.28
Total	**4479.44**	**0.04**	**1498.28**	**5977.76**

No uplift factors were included in the emissions total.

Since this is an opt-in product, this emissions summary represents the attributable emissions from customers who have opted-in to the product only.

Product offset liability	
Emissions intensity per functional unit	4.0115 t CO2-e per tonnes
Emissions intensity per functional unit including uplift factors	N/A
Number of functional units covered by the certification	1,490 tonnes
Total emissions (tCO_2-e) to be offset	**5,977.76 t CO2-e**

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)	1,196	20%
Verified Carbon Units (VCUs)	4,782	80%

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 (%)
West Arnhem Land Fire Abatement (WALFA) Project	ACCUs	ANREU	22 Apr 2024	Serial numbers: 8,329,169,219 - 8,329,191,938	2021		1,196	0	0	1,196	20.00%
Rimba Raya Biodiversity Reserve Project	VCUs	VERRA	22 Apr 2024	Serial numbers: 9900-157848884-157853665-VCS-VCU-263-VER-ID-14-674-01012018-31122018-1 Public URL: https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=243233	2018		4,782	0	0	4,782	80.00%
									Total offsets retired this report and used in this report	**5,978**	
									Total offsets retired this report and banked for future reports	**0**	

Co-benefits

N/A

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) Summary

N/A.

The following RECs have been surrendered to reduce electricity emissions under the market-based reporting method.

1. Large-scale Generation certificates (LGCs)*	N/A

* 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.

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 ($kgCO_2$-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	159	0	53%
Climate Active precinct/building (voluntary renewables)	0	0	0%
Precinct/Building (LRET)	42	0	14%
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)	49	0	16%
Residual Electricity	50	45	0%
Total renewable electricity (grid + non grid)	**251**	**0**	**83%**
Total grid electricity	**301**	**45**	**83%**
Total electricity (grid + non grid)	**301**	**45**	**83%**
Percentage of residual electricity consumption under operational control	100%		
Residual electricity consumption under operational control	**50**	**45**	
Scope 2	44	40	
Scope 3 (includes T&D emissions from consumption under operational control)	5	5	
Residual electricity consumption not under operational control	**0**	**0**	
Scope 3	0	0	

Total renewables (grid and non-grid)	**83.45%**
Mandatory	**30.40%**
Voluntary	**53.05%**
Behind the meter	**0.00%**
Residual scope 2 emissions (t CO_2-e)	**0.04**
Residual scope 3 emissions (t CO_2-e)	**0.00**
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO_2-e)	**0.04**
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO_2-e)	**0.00**
Total emissions liability (t CO_2-e)	**0.05**

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 ($kgCO_2$-e)**	**Scope 3 Emissions ($kgCO_2$-e)**	**(kWh)**	**Scope 3 Emissions ($kgCO_2$-e)**
ACT	0	0	0	0	0	0
NSW	42	42	29	2	0	0
SA	58	58	15	5	0	0
VIC	99	99	78	7	0	0
QLD	101	101	74	15	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)	**301**	**301**	**195**	**29**	**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)	**301**					

Residual scope 2 emissions (t CO_2-e)	**0.20**
Residual scope 3 emissions (t CO_2-e)	**0.03**
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO_2-e)	**0.17**
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO_2-e)	**0.03**
Total emissions liability	**0.19**

Operations in Climate Active buildings and precincts

Operations in Climate Active buildings and precincts	Electricity consumed in Climate Active certified building/precinct (kWh)	Emissions (kg CO_2-e)
Level 29-32, 100 Barangaroo Avenue, Barangaroo NSW 2000	**42**	**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.

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
Water use at corporate sites related to LPG retailing	Immaterial

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
Water use at corporate sites related to LPG retailing	No. Water invoices are generally included in lease arrangement.	Yes. Water usage for one building cannot be applied to other sites due to sites not being comparable.	Yes. Based on existing historical data and assumptions for our sites, we confirmed that the emissions attributable to this product is immaterial < 1%.

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. **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
Corporate activities not related to LPG retailing	Y	N	N	N	N	**Size:** The emissions source is likely to be large compared to other attributable emissions, however it does not become part of this product.

An Australian Government Initiative

Climate Active