PUBLIC DISCLOSURE STATEMENT

ORIGIN ENERGY LIMITED

ORIGIN GO ZERO (ELECTRICITY) PRODUCT CERTIFICATION

CY2021 TRUE UP

Australian Government

Climate Active
Public Disclosure Statement

An Australian Government Initiative

NAME OF CERTIFIED ENTITY	Origin Energy Limited
REPORTING PERIOD	1 January 2021 – 31 December 2021 True Up
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.*  Duncan Permezel General Manager, Retail Sales & Marketing Date 30.06.2022

Australian Government
Department of Industry, Science, Energy and Resources

Version March 2022. To be used for FY20/21/CY2021 reporting onwards.

1. CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	4.40 tCO2-e
THE OFFSETS BOUGHT	20% ACCUs, 80% VCUs
RENEWABLE ELECTRICITY	79.82%
TECHNICAL ASSESSMENT	18 May 2021 Jessica Boekhoff Point Advisory Next technical assessment due: 18 May 2024
THIRD PARTY VALIDATION	Type 3 17 May 2021 Tim Grant Lifecycles (Life Cycle Strategies Pty Ltd)

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2. CARBON NEUTRAL INFORMATION

Description of certification

This Public Disclosure Statement (PDS) relates to Origin Energy Limited (Origin)'s ongoing carbon neutral certification, for its electricity product under Climate Active. This product will be marketed and sold as "Origin Go Zero".

This is the first year of certification of Origin's "Origin Go Zero" product. The emissions reported in this PDS are for CY2021, being the base and the first year of certification. CY2021 data is based on actual sales from the various market segments applicable to "Origin Go Zero". Total emissions for "Origin Go Zero" are calculated to be 4.40 t CO2-e in CY2021. This number is lower than the initial certification forecast for CY2021, due to actual sales covering second half of CY2021.

"Carbon neutral certified products tackle a key component of Origin's scope 3 emissions and are the latest addition to our comprehensive climate change commitments."

Product/Service description

"Origin Go Zero" product will allow customers to offset greenhouse gas emissions associated with the production, transmission, distribution, and consumption of this electricity product.

"Origin Go Zero" will be offered as an opt-in product to Origin's electricity customers across all current and future market segments, including residential, small business, commercial and industrial customers, and consumers of electricity for electric vehicles.

The emissions boundary for this product entails relevant cradle-to-grave emissions. Further details are provided in Section 3, including quantified and non-quantified emissions. It includes all activities associated with production, transmission, distribution, and consumption of this electricity product through the Residential, Small business, Business Energy Team (C&I sales), as well as Electric Vehicles customers who opt-in to the product.

The functional unit is Megawatt hours (MWh) of electricity consumed by opt-in customers, with emissions expressed as tonnes of CO2-e per MWh.

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' that become the product, make the product and carry the product through its life cycle. These 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 consumed by opt-in customers by state during the reporting period, end use combustion

Electricity sold – extraction, processing, and distribution of fuels combusted

Origin retailing activities, including:

Advertising
Computers
Entertainment
Freight
Plant & Equipment
Postage
Printing & Stationery
Repairs and Maintenance
Telephone
Employee Commute
Work from home
Office electricity consumption
Office natural gas consumption
Waste
Business travel

Non-quantified

N/A

Optionally included

N/A

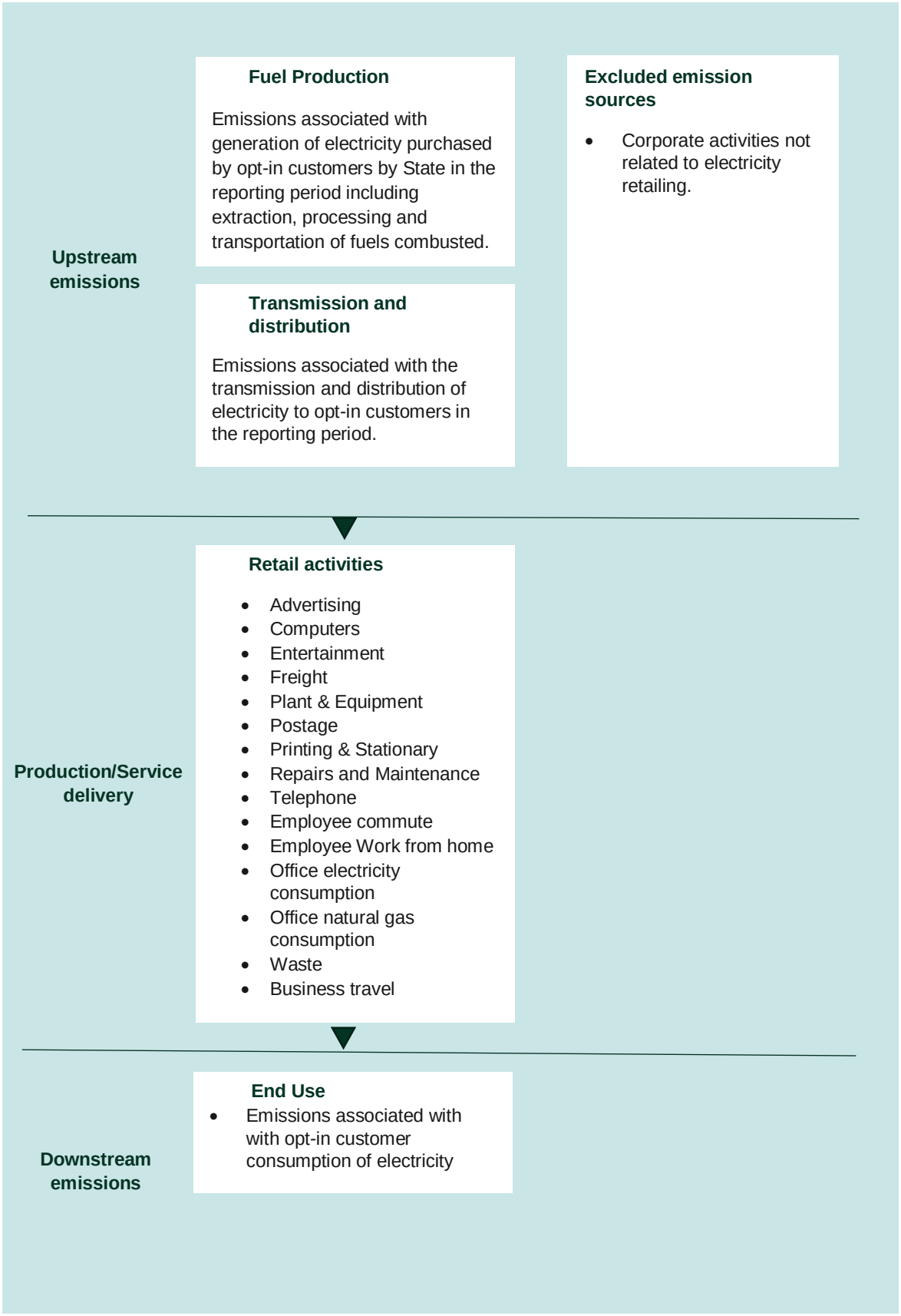
Outside emission boundary

Non-attributable

Corporate activities not related to electricity retailing.

Product/service process diagram

Cradle-to-grave



Data management plan for non-quantified sources

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

4. EMISSIONS REDUCTIONS

Emissions reduction strategy

Climate change is one of the most significant challenges facing society today and our strategic framework is anchored in a belief in decarbonisaton and the opportunities created by the energy transition. Our ambition is to lead the transition to net zero through cleaner energy and customer solutions. Our strategy seeks to deliver our ambition to achieve net zero emissions by 2050.

At an organizational level, Origin is a proud member of the 'We Mean Business' coalition, which is dedicated to accelerating corporate action on climate change. In 2017, Origin was the first Australian company to set a science-based emissions reduction target independently validated and approved by the Science-Based Target initiative (SBTi). This commitment includes halving our Scope 1 and Scope 2 greenhouse gas emissions by 2032 from a FY2017 baseline. We are progressing the update of our emissions reduction targets consistent with a 1.5°C pathway.

Our decarbonisation commitments also include a short-term emissions target to reduce Scope 1 emissions by 10 precent on average over the three financial years to FY2023, compared to our FY2017 SBTi baseline.

In our Retail business (Electricity and Natural Gas) , we are undertaking actions to help reduce Origin's and our customers' emissions including:

1. **E-billing**

   In most states Origin has offered its most competitively priced generally available plans to customers who sign up online and opt into e-billing and correspondence. Our phone sales customers are automatically assigned to e-billing and correspondence where an email address is provided. This initiative has encouraged over 2.5 million customer accounts to take up e-billing, resulting in lower paper use, printing, and stationery and a reduced reliance on postal services. This helps reduce our Scope 3 emissions. Other potential co-benefits of e-billing include lower emissions in the supply chain associated with travel for mail distribution and less paper waste ending up in landfill.

2. **Energy efficiency**

   Origin is focused on educating and encouraging customers to become more energy efficient. To support this work, Origin launched a '90 days of change' campaign during 2021, which ran across TV, social, radio and online over the year (https://www.originenergy.com.au/blog/90-ways-of-change/). Through this campaign, online content and blog articles aim to help customers understand their energy usage, and how they can be more efficient in their energy consumption.

   Phone sales consultants also assist customers seeking to be more energy efficient. We help identify appliances or behaviours that may be causing the high usage and then provide tips on how to manage usage in more efficient ways. This helps our customer to reduce their carbon footprint, while assisting in the reduction of Origin's Scope 3 emissions.

Another way Origin is making a difference to lower customers' emissions is through partnership with the NSW Government to install solar systems in low-income households. Through this partnership, we have installed over 250 3-kilowatt solar systems for eligible low-income customers in the Illawarra-Shoalhaven, Central Coast, and Greater Sydney regions. This has enabled these customers to reduce their electricity consumption from the grid, and emissions, through solar, which would otherwise be unaffordable. This also contributes to reducing Origin's Scope 3 emissions.

Emissions reduction actions

As this is the first year of our product certification and reporting, performance data on our emissions reduction actions will be published in the next reporting period.

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	4.40	0.8697 tCO2-e per MWh

Significant changes in emissions

The actual emissions reported in CY21 is 4.4 tCO2-e which is lower compared to the forecasted emissions in the initial certification of 55,265 tCO2-e, due to sales covering second half of calendar 2021.

Use of Climate Active carbon neutral products and services

N/A.

Product emissions summary

Stage	tCO2-e
Electricity - VIC Scope 2 combustion of fuels for electricity generation	1.9018
Electricity - SA Scope 2 combustion of fuels for electricity generation	0.1778
Electricity - NSW Scope 2 combustion of fuels for electricity generation	1.3076
Electricity - QLD Scope 2 combustion of fuels for electricity generation	0.5572
Electricity - ACT Scope 2 combustion of fuels for electricity generation	0.0000
Electricity - VIC Scope 3 EPT + T&D	0.2090
Electricity - SA Scope 3 EPT + T&D	0.0415
Electricity - NSW Scope 3 EPT + T&D	0.1173
Electricity - QLD Scope 3 EPT + T&D	0.0836
Electricity - ACT Scope 3 EPT + T&D	0.0000
Advertising	0.0002
Business Services	0.0001
Computer Equipment	0.0001
Entertainment	0.0000
Freight	0.0000
Office Equipment	0.0000
Postage, mailing services	0.0003
Printing & Stationary	0.0000
Repairs and Maintenance	0.0000
Telecommunications	0.0000
Travel facilitation	0.0000
Land and sea transport	0.0000
WFH emissions	0.0002
Waste	0.0001
Air transport	0.0000
Transport Fuel	0.0000
Office electricity use (market based)	0.0000
Office natural gas use	0.0000

No uplift factors were included in the emissions total.

Emissions intensity per functional unit	**0.8697 tCO2-e per MWh**
Number of functional units to be offset	5.06 MWh
Total emissions to be offset	4.40 tCO2-e

6. CARBON OFFSETS

Offsets retirement approach

ONGOING REPORT

In arrears		
1.	Total number of eligible offsets banked from last year's report	55,266
2.	Total emissions footprint to offset for this report	5.0
3.	Total eligible offsets required for this report	(55,261)
4.	Total eligible offsets purchased and retired for this report	5.0
5.	Total eligible offsets banked to use toward next year's report	55,261

Co-benefits

Origin has purchased Australian offsets generated from the Emission Reduction Fund (ERF) from **Paroo River South** and the **Nulla Carbon regeneration projects** in Queensland. The stated objectives and benefits of these projects are summarised below.

Human Induced Revegetation projects promote regeneration activities to parts of properties where vegetation has previously been suppressed. Regeneration activities include:

- Management of the timing and extent of grazing;
- Management of feral animals;
- Cessation of mechanical or chemical destruction of regrowth; and
- Exclusion of livestock.

Origin has also purchased offsets from international projects accredited under the Verified Carbon Standard (VCS) and Climate, Community and Biodiversity Standard (CCB) Standard.

The **Kariba Redd+ project** has reduced deforestation in the project area and has added the following community benefits:

- Farmers trained for conservation agriculture;
- Establishment of community gardens which have improved nutritional outcomes;
- Promotion of beekeeping as an alternative and environmentally friendly source of income;

- Decrease in poaching pressure on wildlife.

The **Rimba Raya Biodiversity Reserve project** preserves more than 15,000 Ha of tropical forest. This project has added the following benefits:

- Stopped the conversion of the project area being converted to palm oil plantation, including associated activities such as logging and burning felled trees and forest.
- Created local employment to protect the area, including patrolling illegal logging and wildlife poaching in the area.
- Implementation of training programs such as agroforestry plantations, community firefighting, chicken farms, shrimp paste production, environmental education, forest patrols, solar power electrification operation, and water purification construction to enable local community members to expand skills and increase their climate resilience.
- Provision of water filtration systems in the project area to local communities to increase access to clean water.
- Provision of small-scale solar lighting to the local community to increase access to basic services.

The **Southern Cardamom REDD+ Project** protects 497,000 hectares of tropical rainforest in South-West Cambodia. The project uses global best practices of forest protection and community development to safeguard the forest and prevent more than 3,000,000 tons of carbon emissions annually. The benefits of this projects include:

- Biodiversity conservation, supporting threatened species including birds, mammals, reptiles and elephants.
- The watershed provides fresh water for the mangroves forest which is a nursery for the region's fisheries
- Project area provides food for Thailand, Cambodia, and Vietnam – project supports 20 waterways that feed 3,800 villages in over 6 provinces and supports regulation of climate for the Southeast Asian peninsula.
- The project directly supports 21 villages around the project area, and 8 additional villages eligible to receive educational scholarships.
- Community development and education programs to help locals switch to livelihoods compatible with sustainable use of the natural resources.
- Agricultural intensification and community-based ecotourism to help create greater financial security in the communities, and less need for unsustainable resource extraction from the project area.

Eligible offsets retirement summary

Offsets cancelled for Climate Active Carbon Neutral Certification											
Project description	**Type of offset units**	**Registry**	**Date retired**	**Serial number (and hyperlink to registry transaction record)**	**Vintage**	**Stapled quantity**	**Eligible quantity (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 (%)**
Paroo River South Environmental Project	ACCUs	ANREU	2 June 2021	Serial numbers: 3,792,533,208 - 3,792,533,272	2019-20	0	65	0	64	1	20
Paroo River South Environmental Project	ACCUs	ANREU	2 June 2021	Serial numbers: 3,779,577,408 - 3,779,577,573	2018-19	0	166	0	166	0	0
Nulla Carbon	ACCUs	ANREU	2 June 2021	Serial numbers: 3,792,020,723 - 3,792,026,018	2019-20	0	5,296	0	5,296	0	0
Rimba Raya Biodiversity Reserve Project	VCU's	VERRA	11 June 2021	Serial numbers: 9900-157724745-157746808-VCS-VCU-263-VER-ID-14-674-01012018-31122018-1 Public URL: https://registry.verra.org/myModule/rpt/myrpt.	2018	0	22,064	0	22,060	4	80%

				asp?r=206&h=129204							
KARIBA REDD+ PROJECT	VCU's	VERRA	11 June 2021	Serial numbers: 8259-5514620-5514661-VCS-VCU-352-VER-ZW-14-902-01012019-30062019-1 Public URL: https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=128296	2019	0	42	0	42	0	0
Southern Cardamom REDD+ Project	VCU's	VERRA	21 Sept 2021	Serial numbers: 9778-134302718-134325762-VCS-VCU-263-VER-KH-14-1748-01012016-31122016-1 Public URL: https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=142547	2016	0	23,045	0	23,045	0	0
Southern Cardamom REDD+ Project	VCU's	VERRA	21 Sept 2021	Serial numbers: 9778-134260763-134265350-VCS-VCU-263-VER-KH-14-1748-01012016-31122016-1 Public URL: https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=133883	2016	0	4,588	0	4,588	0	0
									Total offsets retired this report and used in this report	5	
									Total offsets retired this report and banked for future reports	55,261	

Type of offset units	Quantity (used for this reporting period claim)	Percentage of total
Australian Carbon Credit Units (ACCUs)	1	20%
Verified Carbon Units (VCUs)	4	80%

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.

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

Project supported by LGC purchase	Eligible units	Registry	Surrender date	Accreditation code (LGCs)	Certificate serial number	Generation year	Quantity (MWh)	Fuel source	Location
N/A									
						Total LGCs surrendered this report and used in this report			

APPENDIX A: ADDITIONAL INFORMATION

N/A

APPENDIX B: ELECTRICITY SUMMARY

Electricity emissions are calculated using a market-based approach. At the initial certification, the GreenPower LGCs purchased and retired for our offices were excluded as the actual full year data were not available and we had the opportunity to amend the true up report to reflect actual data.

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.

Market Based Approach Summary

Market Based Approach	**Activity Data (kWh)**	**Emissions (kgCO2e)**	**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 LGCs)	0	0	0%
Barangaroo renewable (LGCs retired)	0	0	6%
Barangaroo (LRET)	0	0	1%
GreenPower	0	0	55%
Jurisdictional renewables (LGCs retired)	0	0	0%
Jurisdictional renewables (LRET) (applied to ACT grid electricity)	0	0	0%
Large Scale Renewable Energy Target (applied to grid electricity only)	0	0	17%
Residual Electricity	0	0	0%
Total grid electricity	**0**	**0**	**80%**
Total Electricity Consumed (grid + non grid)	**0**	**0**	**80%**
Electricity renewables	0	0	
Residual Electricity	0	0	

Exported on-site generated electricity	**0**	**0**
Emissions (kgCO2e)		0

Total renewables (grid and non-grid)	**79.82%**
Mandatory	**18.54%**
Voluntary	**61.28%**
Behind the meter	**0.00%**
Residual Electricity Emission Footprint (TCO2e)	**0**
Figures may not sum due to rounding. Renewable percentage can be above 100%	
Voluntary includes LGCs retired by Barangaroo Precinct (MWh)	0

Location Based Approach Summary

Location Based Approach	**Activity Data (kWh)**	**Scope 2 Emissions (kgCO2e)**	**Scope 3 Emissions (kgCO2e)**
ACT	0	0	0
NSW	0	0	0
SA	0	0	0
Vic	0	0	0
Qld	0	0	0
NT	0	0	0
WA	0	0	0
Tas	0	0	0
Grid electricity (scope 2 and 3)	**0**	**0**	**0**
ACT	0	0	0
NSW	0	0	0
SA	0	0	0
Vic	0	0	0
Qld	0	0	0
NT	0	0	0
WA	0	0	0
Tas	0	0	0
Non-grid electricity (Behind the meter)	**0**	**0**	**0**
Total Electricity Consumed	**0**	**0**	**0**

Emission Footprint (TCO2e)	**0**
Scope 2 Emissions (TCO2e)	0

Scope 3 Emissions (TCO2e)	0

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	(1) Immaterial	(2) Cost effective (but uplift applied)	(3) Data unavailable (but uplift applied & data plan in place)	(4) Maintenance
N/A				

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
N/A			

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.

Relevance test					
Non-attributable emission	*The emissions from a particular source are likely to be large relative to the organisation's electricity, stationary energy and fuel emissions*	*The emissions from a particular source contribute to the organisation's greenhouse gas risk exposure.*	*Key stakeholders deem the emissions from a particular source are relevant.*	*The responsible entity has the potential to influence the reduction of emissions from a particular source.*	*The emissions are from outsourced activities previously undertaken within the organisation's boundary, or from outsourced activities typically undertaken within the boundary for comparable organisations.*
Corporate activities not related to electricity retailing	No	No	No	No	No

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