# PUBLIC DISCLOSURE STATEMENT

THE UNIVERSITY OF QUEENSLAND

OCEANIC THINKING EVENT (FORMERLY BLUE ASSEMBLY)

18 FEBRUARY TO 31 JULY 2022

POST-EVENT REPORT

Australian Government

# Climate Active
# Public Disclosure Statement

| | |
|---|---|
| RESPONSIBLE ENTITY NAME | THE UNIVERSITY OF QUEENSLAND |
| NAME OF EVENT | OCEANIC THINKING EVENT (FORMERLY NAMED BLUE ASSEMBLY)<br>Post-event report |
| EVENT DATE(S) | 18 February to 31 July 2022 |
| 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.*<br>  <br>Mr. Warren Mortlock<br>Program Officer Environment and Sustainability<br>9/1/2023 |

Australian Government
Department of Industry, Science, Energy and Resources



Version: March 2022

# 1.CERTIFICATION SUMMARY

| | |
|---|---|
| TOTAL EMISSIONS OFFSET | 359 $tCO_2$-e |
| OFFSETS BOUGHT | 100% ACCUs |
| RENEWABLE ELECTRICITY | 21.66% |
| TECHNICAL ASSESSMENT | Date: 5 December 2022<br>Name: Jane Gaffel<br>Organisation: The Ecoefficiency Group |
| THIRD PARTY VALIDATION | Date: 11 January 2023<br>Name: Alexander Stathakis<br>Organisation: Conversio |

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# 2. CARBON NEUTRAL INFORMATION

## Description of certification

Event name: Blue Assembly (Oceanic Thinking)
Event date(s): 18 February to 31 July 2022
Event location(s): UQ Art Museum. Mayne Centre
Actual attendees: 13,650

Activity data collected from previous similar events has informed the preparation of this carbon inventory.

*"Climate Active is important to UQ in its commitment to be a beyond carbon neutral university"*

## Event description

The University of Queensland ("UQ") Sustainability strategy includes commitments to be a beyond carbon neutral university, to measure carbon emissions and mitigation by scope, and to maintain gross annual energy consumption below a 2019 baseline.

UQ is piloting a range of initiatives in 2022 as part of work to reduce emissions. In first semester 2022, the University of Queensland Art Museum staged a major exhibition initially titled Blue Assembly (the event) and later named "Oceanic Thinking". The Blue Assembly Event was certified as a carbon neutral event under the Climate Active certification, which is a first for UQ Art Museum and UQ. The event was held at the University of Queensland Art Museum at the James and Mary Emelia Mayne Centre (St Lucia Campus) Brisbane and was attended by thousands of people. The event had not been run previously, but similar events have been held at the Art Museum.

The Blue Assembly Event (later named "Oceanic Thinking"), was certified carbon neutral and took place between 19 February and 31 July 2022. The event continued beyond these dates though it was not part of the scope of the carbon neutral event time period.

# 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 relevant and are quantified in the carbon inventory. This may include emissions that are not identified as arising due to the operations of the event, however are **optionally included**.

**Non-quantified emissions** have been assessed as relevant and are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. All material emissions are usually accounted for through an uplift factor, however these emissions from the event were considered to be immaterial and no uplift factor was applied. Further detail is available at Appendix C.

## Outside the emissions boundary

Excluded emissions are those that have been assessed as not relevant to the event's operations and are outside of its emissions boundary or are outside of the scope of the certification. These emissions are not part of the carbon neutral claim. Further detail is available at Appendix D.

The emission sources in the boundary diagram below are as per the emissions categories in the emission summary table.

The event occurs at the Mayne Centre exhibition spaces which are directly managed by UQ Art Museum. The program of events on the day has not been determined in detail, but estimates are based on data available from previous exhibitions and public event programs.

The emissions boundary refers to the coverage and extent of the carbon account. The boundary is established by identifying the emissions that arise because of the event taking place.

Conservative boundary approaches that impact emissions calculation:

- all emissions from mounting the event, including bringing artworks to the Mayne Centre for staging Blue Assembly, were counted.
- all emissions from day-to-day running of the Mayne Centre during the event accrue to the event tally, though not all the floor space is taken up with the exhibit.
- all emissions from having the Mayne Centre open are counted regardless of actual attendance figures.

## Materiality assessment

The emissions deemed 'material' to the event were determined and quantified. As UQ has operational control of the entire event, and no remote sites or partner activities took place, the materiality assessment focused on:

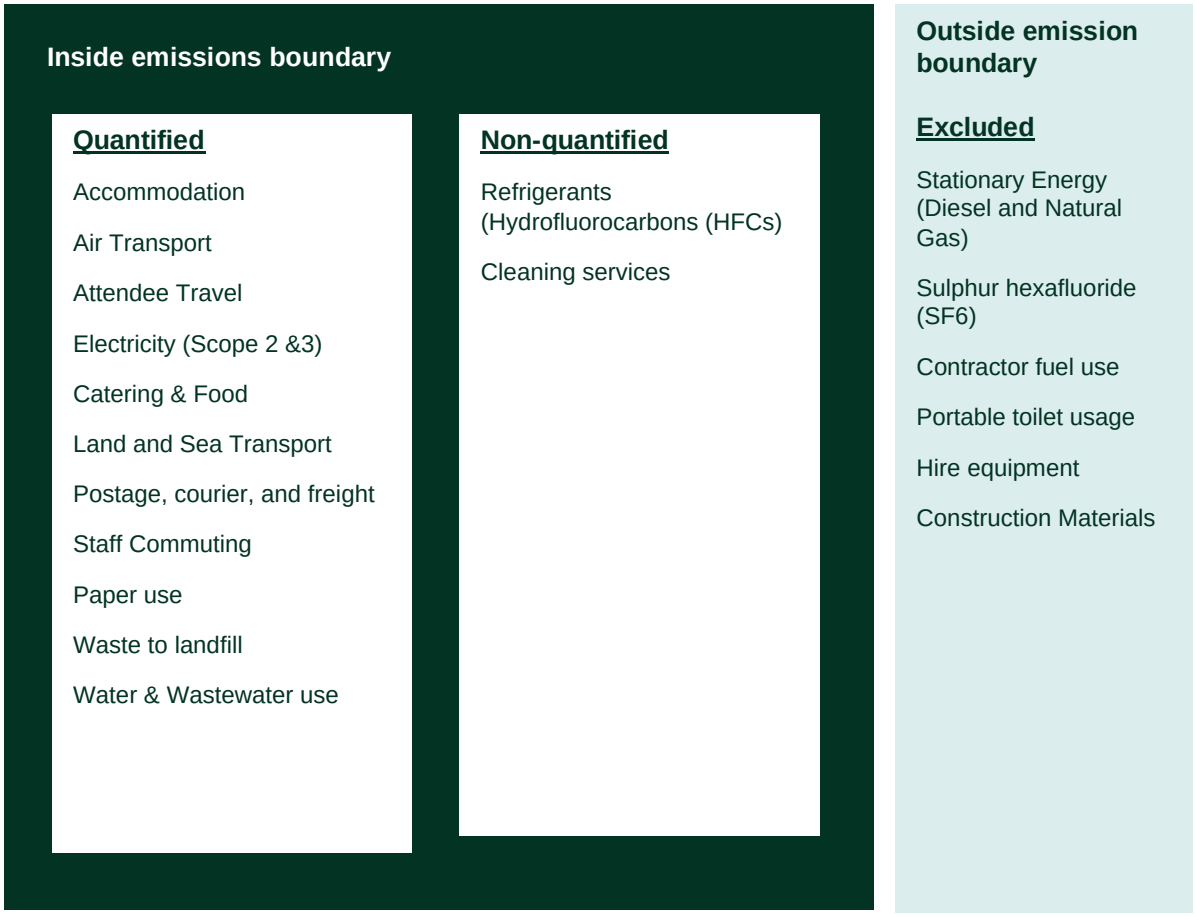
- the likely magnitude of the emissions from a source

- the significance to UQ and UQ Art Museum of counting that source
- the difficulty of counting the source (practicality) and the effort and expense required.

It may be significant to UQ or UQ Art Museum that some emissions are included in the emissions boundary even though the impact on total emissions is minor or insignificant. This may be because:

- they are highly visible to attendees
- we are not sure how big some emissions are
- they are emissions that UQ seeks to better understand
- they are emissions for which UQ wants to refine the approach to counting.

## Emissions boundary diagram




## Assumptions and limitations

Data used for the pre-event estimate was based on a combination of consultation with event organizers,

use of emissions factors and emissions calculations. The following assumptions were made:

- attendee numbers would not be heavily influenced by COVID 19 requirements.
- relevant emissions factors in 2022 will not be greatly different to those used in 2021.
- commuting choices by attendees were similar to those surveyed in September 2021.

## Data collection – changes since the pre-event report

The table below shows details of data collection for travel, accommodation, food, electricity, and all other significant emission sources. The methods used are the same as in the pre-event report, however actual data collected during the event replaced that used in the pre-event estimate. The exception is that electricity use (87% of emissions) is reported as required by Climate Active using both the location-based and market-based methods. Large-scale generation certificates (LGCs) retained and surrendered in relation to the event effectively reduce grid electricity use by 12,000 kWh. However, solar generation on-site used behind the meter is counted as if it were grid electricity because UQ did not retain and surrender the LGCs generated by this solar power system.

| Emission source | Data collection method | Assumptions / conservative approach |
|---|---|---|

| | | |
|---|---|---|
| Business Travel (air, fleet, taxi, rideshare) | Records kept of travel by staff, official visitors, and presenters. | All Business travel was captured.<br>Records including travel mode, kilometre, arrival and departure locations, and persons travelling |
| Staff commuting | Staff numbers for the event duration | Commuting mode choices by staff and distances travelled are similar to those of general UQ staff surveyed in 2018 and UQ Art Museum Travel Survey September 2021. |
| Attendee commuting | Attendee numbers for event duration | Commuting mode choices by attendees and distances travelled are similar to those of UQ Art Museum Travel Survey (of 'friends' email list) September 2021 and UQ staff students surveyed in 2018. |
| Accommodation | Management records of accommodation bookings | All Business accommodation was captured.<br>Accommodation was in a 5-star hotel. |
| Food | Ticket sales records and food consumption from caterers' invoices for two catered events held. | Emissions were based on average emissions per person for three sample events in 2021 (4.6 kgCO2e/person) where only non-meat meals are served. No meat meals are served by UQAM at events. |
| Fuels & gases (Scope 1) | Included in business travel | Very minor fleet vehicle use is included under Business Travel as it is very difficult to track such small quantities of diesel and gasoline fuels used. There is no LPG transport fuel used. Mayne centre does not use natural or LPG gas, has no SF6 containing switchgear, and does not have a dedicated backup generator. |
| Freight | Management records of freight arrangements and invoices | Distances were calculated using Google Maps. Generalised travel modes for freight segments were used. |
| Water & Wastewater | Metered water use at the Mayne Centre from meter readings on invoices | Wastewater is not metered, and activity data is based on the Sewerage discharge Factor (SDF) calculated by the service provider QUU. The emissions factor provided by Queensland Urban Utilities (0.8 tCO2e/ML) covers water supply AND wastewater treatment. |
| Paper consumption | Finance records and invoices for paper used by the event.<br>Cleaning contractor records of paper towel and toilet tissue use in washrooms | Based on average (sampled 90 days March to July) paper use of 39 A4 sheets/day. UQAM uses WINC A4 (5 x 500 sheet reams) 13kg box = 19.76 kgs CO2e/box of 2,500 sheets AND COS A3 100% recycled 80gsm, 500 sheets as 4.990 kg/500 sheets for 80gsm A3 copy paper. Toilet towel use was estimated by cleaners at 0.3kg/ day. Toilet tissue use is not known but was estimated as 4 rolls per day of Scott 5741 T/Tissue White 400Sht Ctn48 (7.3kgs/carton). |
| Waste to landfill | Surveyed bin weights and cleaners' records. Waste volume and waste data as obtained from a September 2021 survey of bin weights. | All paper towel goes to (composted) organics. Recycling has zero emissions. Waste to landfill is commercial waste. Australian National Greenhouse Accounts Factors for 2022 were used. |

# 4. EMISSIONS REDUCTIONS

## Emissions reduction measures

UQ identified sustainability initiatives with the potential to reduce emissions for the Blue Assembly event based on workshops with the UQ Art Museum team and the Sustainability Team within Property and Facilities Department at UQ. These as summarised in Table 1 using pre-event estimates except for electricity where the (more reasonable) post event total is used.

These emissions from the event are lowered due to UQ Art Museum sustainability initiatives and operational changes to reduce emissions over the last 5 years or more. It is possible to further reduce emissions from Blue Assembly and proposed activities may yield up to a 10 % reduction across the board in event emissions if applied consistently and well. As UQ Art Museum has direct control, there is a higher potential for emission reduction initiatives to be implemented

*Table 1: Emissions Reduction Strategy for the Oceanic Thinking/Blue Assembly event*

| Emission source | Reduction actions | Total emissions ($tCO_2$-e) | Potential reduction % | Potential reduction ($tCO_2$-e) |
|---|---|---|---|---|
| Use of grid electricity | Energy efficient lighting installed & efficiently used on exhibits. Energy efficient sound equipment. Building management system efficiency tuning. Crowd management. Centre fountain turned off from 6pm to 6am. | 304.30* | 10% | 30.43 |
| Business travel | Air travel & fleet vehicle use kept to a minimum. Promote public transport use by staff / artists | 1.225 | 10% | 0.12 |
| Commuting by Staff | Promote public transport use / low emission modes by staff | 6.61 | 10% | 0.66 |
| Event attendee travel | Actively promote public transport use by attendees/ low emission modes for attendance. | 37.67 | 10% | 3.8 |
| Catering, food, and beverage | Zero meat meals offered.<br>Small scale opening on outdoor site | 1.61 | 10% | 0.16 |
| Freight, postage, and couriers | All exhibit packaging material is retained and reused. Other packaging is recycled. | 1.466 | 5% | .70 |
| Waste and recycling | Minimise disposable packaging at opening<br>Encourage recycling with separate bins at opening event. Separate organics waste stream which is sent to composting | 0.321 | 10% | 0.03 |
| Water use | Turn off the Mayne Centre Fountain 6pm to 6am | 0.0084 | 5% | 0 |
| **TOTAL** | | | | **35.90** |

* Post-event emissions as pre-event emissions from electricity was a significant underestimate.

# 5. EMISSIONS SUMMARY

## Significant changes in emissions – pre-event vs post-event

Total emissions are seven times those in the pre-event report and most of this is due to more accurate data on electricity use being used, and some slight increases due to the (one month) longer event duration than at first envisaged. The following outlines reasons for any significant (+/- 5%) change in the total emissions per emission category.

| Emission source | Pre-event ($tCO_2$-e) | Post-event ($tCO_2$-e) | Reason for change |
|---|---|---|---|
| **Attendee travel** | 37.67 | 42.61 | Greater due to one month extra event duration |
| **Business accommodation** | 0.47 | 0.24 | Only 1 person not 2 accommodated |
| **Business travel** | 0.46 | 0.50 | Greater due to one month extra event duration |
| **Catering,** | 1.61 | 0.59 | COVID restrictions impacted planned events and led to some difference in this to the PEPDS. |
| **Freight** | 1.47 | 1.50 | Similar |
| **Grid electricity** | 10.80 | 304.30 | Actual electricity use was much higher than predicted pre-event PDS due to use of erroneous kWh usage data (used 15 minute not daily totals for a sample period in 2021) and under counting rules solar generation on-site but used behind the meter is regarded as grid electricity and adds to the total used because the LGCs generated were traded, not retained and surrendered by UQ. |
| **Paper Use** | 0.06 | 0.11 | Paper use was half that predicted due to sustainability initiatives. |
| **Staff Commuting** | 6.61 | 8.60 | Greater due to one month extra event duration |
| **Waste** | 0.17 | 0.13 | Similar |
| **Water & Wastewater** | 0.02 | 0.02 | Similar |
| **Total** | **59.33** | **358.60** | Better electricity data and slightly longer event duration. |

## Use of Climate Active carbon neutral products and services

No Climate Active carbon neutral products used.

## Event emissions summary

The electricity summary is available in the Appendix B. Emissions from electricity consumption were calculated using a market-based approach.

| Emission category | Pre-event emissions ($tCO_2$-e) | Post-event emissions ($tCO_2$-e) |
|---|---|---|
| Attendee travel | 37.67 | 42.61 |
| Business accommodation | 0.47 | 0.24 |
| Business travel | 0.46 | 0.50 |
| Catering | 1.61 | 0.59 |
| Freight | 1.47 | 1.50 |
| Grid electricity | 10.80 | 304.30 |
| Paper use | 0.06 | 0.11 |
| Staff commuting | 6.61 | 8.60 |
| Waste | 0.17 | 0.13 |
| Water & Wastewater | 0.02 | 0.02 |
| **Total net emissions** | **59.33** | **358.60** |
| Difference between pre-event and post-event emissions | 299.27 | |

## Uplift factors

Not applicable

# 6. CARBON OFFSETS

## Eligible offsets retirement summary

| Offsets retired 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 (%)** |
| **Capture and Combustion of Landfill Gas from Willawong Landfill Project** | ACCU | ANREU | 26/11/2021 | 8,334,305,211 – 8,334,305,229 | 2021-22 | - | 19 | 0 | 0 | 19 | 5.3 % |
| **Mugga Lane Landfill Gas Upgrade Project** | ACCU | ANREU | 1/02/2022 | 8,338,865,197 – 8,338,865,231 | 2021-22 | - | 35 | 0 | 0 | 35 | 9.7 % |
| **Capture and Combustion of Landfill Gas from Benaraby Landfill Project** | ACCU | ANREU | 21/12/2022 | 8,355,515,391 - 8,355,515,695 | 2022-23 | - | 305 | 0 | 0 | 305 | 85 % |
| | | | | | | | | | **Total offsets retired this report and used in this report** | **359** | |
| | | | | | | | | | **Total offsets retired this report and banked for future reports** | **0** | |

| Type of offset units | Quantity (used for this reporting period claim) | Percentage of total |
|---|---|---|
| Australian Carbon Credit Units (ACCUs) | 359 | 100% |

## Co-benefits

**LGI Limited Capture and Combustion of Landfill Gas from Willawong Landfill Project**

LGI Limited project with Brisbane City Council to recover and beneficially use biogas from this small landfill in Brisbane. Closed for 20 years, and still producing enough biogas to fuel a power station, improve air quality, reduce risk of landfill gas migration to surrounding environment, reduce greenhouse gas emissions (methane) from the landfill, and contribute to the local economy. The project supplies consistent, dispatchable (peak and base load) power to help stabilise the local electricity system for planning future development in the region. Commissioned in 2011 as 1MW, in 2019 the generator was replaced with an optimally sized 600kW unit to match reduced biogas volumes from the closed landfill.

**Mugga Lane Landfill Gas Upgrade Project**

LGI Limited project with the ACT Govt. to recover biogas and abate carbon from the landfill at the Mugga Lane Resource Recovery Centre, improve air quality, reduce risk of landfill gas migration to surrounding environment, reduce greenhouse gas emissions (methane) from the landfill, and contribute to the local economy. LGI collaborates with the ACT Govt and site operator (Remondis) to optimise biogas extraction to improve air quality, increase local renewable dispatchable power, reduce greenhouse gas emissions and to contribute to the local economy. LGI designed, built and operates the new 4.2MW power station which was commissioned in June 2020 and has scope for expansion and enhancement, including with battery storage. Since commencing on site LGI doubled biogas recovery and carbon abatement in one year with biogas system upgrades and new power station – our most recent and largest in our growing portfolio.

**Benaraby Landfill Project**

LGI Limited project with Gladstone Regional Council to recover and beneficially use biogas from this regional landfill at Benaraby near Gladstone. This improves air quality, reduce risk of landfill gas migration to surrounding environment, reduce greenhouse gas emissions (methane) from the landfill, and contributes to the local economy. 1MW renewable power station designed, built and commissioned by LGI in 2016. It supplies consistent, dispatchable (peak and base load) power to help stabilise the local electricity system for planning future development in the region.

# 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)*** | 12 |
| **2. Other RECs** | 0 |

* 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 |
|---|---|---|---|---|---|---|---|---|---|
| University of Queensland - Solar - QLD | LGC | REC Registry | 03/12/2021 | SRPVQL08 | 2142 - 2153 | 2020 | 12 | Solar | Brisbane |
| | | | | | | *Total LGCs surrendered this report and used in this report* | **12** | | |

# APPENDIX A: ADDITIONAL INFORMATION

Not applicable

# APPENDIX B: ELECTRICITY SUMMARY

Electricity emissions are stated using both location and market-based approaches. However, **the market-based figures were used in this report** as LGCs were previously retired to reduce the emissions total and this is now only available under the market-based method.

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 ($kgCO_2$-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 & Precinct LGCs) | 12,000 | 0 | 3% |
| GreenPower | 0 | 0 | 0% |
| Jurisdictional renewables (LGCs retired) | 0 | 0 | 0% |
| Jurisdictional renewables (LRET) (applied to ACT grid) | 0 | 0 | 0% |
| Large Scale Renewable Energy Target (applied to grid electricity only) | 72,577 | 0 | 19% |
| Residual electricity | 305,832 | 304,292 | 0% |
| **Total grid electricity** | 390,409 | 304,292 | 22% |
| **Total electricity consumed (grid + non grid)** | 390,409 | 304,292 | 22% |
| Electricity renewables | 84,577 | 0 | |
| Residual Electricity | 305,832 | 304,292 | |
| **Exported on-site generated electricity** | 0 | 0 | |
| Emissions ($kgCO_2$-e) | | 304,292 | |

| | |
|---|---|
| **Total renewables (grid and non-grid)** | **21.66%** |
| **Mandatory** | **18.59%** |
| **Voluntary** | **3.07%** |
| **Behind the meter** | **0.00%** |
| **Residual Electricity Emission Footprint ($tCO_2$-e)** | **304** |

*Figures may not sum due to rounding. Renewable percentage can be above 100%*

## Location-based approach summary

| Location-based approach | Activity data (kWh) | Scope 2 emissions ($kgCO_2$-e) | Scope 3 emissions ($kgCO_2$-e) |
|---|---|---|---|
| QLD | 390,409 | 312,327 | 46,849 |
| **Grid electricity (scope 2 and 3)** | **390,409** | **312,327** | **46,849** |
| QLD | 0 | 0 | 0 |
| **Non-grid electricity (Behind the meter)** | **0** | **0** | **0** |
| **Total electricity consumed** | **390,409** | **312,327** | **46,849** |

| **Emissions footprint ($tCO_2$-e)** | **359** |
|---|---|
| *Scope 2 emissions ($tCO_2$-e)* | 312 |
| *Scope 3 emissions ($tCO_2$-e)* | 47 |

## Climate Active carbon neutral electricity product summary

| Carbon neutral electricity offset by Climate Active product | Activity data (kWh) | Emissions ($kgCO_2$-e) |
|---|---|---|
| N/A | **0** | **0** |

*Climate Active carbon neutral electricity is not renewable electricity. The emissions have been offset by another Climate Active member through their product certification.*

# APPENDIX C: INSIDE EMISSIONS BOUNDARY

## Non-quantified emission sources

The following sources emissions have been assessed as relevant, are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. These emissions have been non-quantified as they are **Immaterial** <1% for individual items and no more than 5% collectively.

| Relevant-non-quantified emission sources | (1) Immaterial | (2) Cost effective (but uplift applied) |
|---|---|---|
| Refrigerants | Yes | No uplift applied |
| Cleaning services | Yes | No uplift applied |

# APPENDIX D: OUTSIDE EMISSIONS BOUNDARY

## Excluded emission sources

Excluded emission sources for the boundary were considered due to potential stakeholder expectation.

None of these sources occurred during the event.

| Emission sources tested for relevance | (1) Size | (2) Influence | (3) Risk | (4) Stakeholders | (5) Outsourcing | Included in boundary? |
|---|---|---|---|---|---|---|
| Stationary Energy (Diesel and Natural gas) | No | No | No | No | No | No. No stationary energy was used. No mains natural gas connection. No dedicated backup generator |
| Sulphur hexafluoride (SF6) | No | No | No | No | No | No SF6 switching gear |
| Contractor fuel use | No | No | No | No | No | No contractors used. |
| Portable toilet usage | No | No | No | No | No | No. Portable toilets were not used |
| Hire equipment | No | No | No | No | No | No hire equipment was used. |
| Construction Materials | No | No | No | No | No | No construction occurred as part of this Event |

An Australian Government Initiative

Climate Active