



# **PUBLIC DISCLOSURE STATEMENT**

CHARLES STURT UNIVERSITY

ORGANISATION CERTIFICATION  
CY2021

Australian Government

# Climate Active Public Disclosure Statement



Charles Sturt  
University



An Australian Government Initiative



|                          |                                                                                                                                                                                                                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NAME OF CERTIFIED ENTITY | Charles Sturt University                                                                                                                                                                                                                                                                          |
| REPORTING PERIOD         | 1 January 2021 – 31 December 2021<br>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>Signature here</i></p> <hr/> <p>Professor Renee Leon<br/>Vice-Chancellor<br/>Date</p> |



Australian Government  
Department of Industry, Science,  
Energy and Resources

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



# 1.CERTIFICATION SUMMARY

|                        |                                                                                                               |
|------------------------|---------------------------------------------------------------------------------------------------------------|
| TOTAL EMISSIONS OFFSET | 36,474 tCO <sub>2</sub> -e                                                                                    |
| OFFSETS BOUGHT         | 14% ACCUs, 6% VCU, 80% CERs                                                                                   |
| RENEWABLE ELECTRICITY  | Total renewables 19%.                                                                                         |
| TECHNICAL ASSESSMENT   | 28/05/2020<br>Gillian Hand-Smith<br>Sustainability by Innovation<br>Next technical assessment due: 30/04/2023 |
| THIRD PARTY VALIDATION | Not Relevant                                                                                                  |

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## 2. CARBON NEUTRAL INFORMATION

### Description of certification

This Carbon Neutral Certification is for the Organisational certification of CHARLES STURT UNIVERSITY's Australian business operations including its registered businesses, THE COMMUNICATION EXCHANGE, KAJULU COMMUNICATIONS, CHARLES STURT UNIVERSITY ENVIRONMENTAL AND ANALYTICAL LABORATORIES, AGRIPARK and AGRISCIENCES RESEARCH AND BUSINESS PARK.

### Organisation description

Charles Sturt University (Charles Sturt), ABN 83 878 708 551, is a multi-campus regional NSW University established in 1989. Its registered businesses include THE COMMUNICATION EXCHANGE, KAJULU COMMUNICATIONS, CHARLES STURT UNIVERSITY ENVIRONMENTAL AND ANALYTICAL LABORATORIES, AGRIPARK and AGRISCIENCES RESEARCH AND BUSINESS PARK.

It has six multi-faculty campuses which operate from Albury-Wodonga, Bathurst, Dubbo, Orange, Port Macquarie and Wagga Wagga. It has several specialist campuses including in the ACT and NSW, and Study Centres located in Sydney, Melbourne and Brisbane.

The Office of the Vice-Chancellor and President is located at The Grand Chancellery, Panorama Avenue, Bathurst, NSW, 2795. Charles Sturt's registered businesses principal place of business is Bathurst excepting for Charles Sturt University Environmental and Analytical Laboratories which is Wagga Wagga. As a national university, Charles Sturt attracted more than 40,000 students in undergraduate, post-graduate and non-award courses in 2021. This includes on-line and on-campus students, and enrolments through on-shore and off-shore partner institutions.

The University's regional locations enables it to make a distinctive contribution in such fields as health sciences, food and water security, environmental sustainability and economic prosperity. It is through this regional network of campuses that Charles Sturt is committed to maintaining a course and research profile that meets the needs and supports the aspirations of its communities and contributes to the enrichment of inland Australia.

The University has three Faculties (Faculty of Arts and Education, Faculty of Business, Justice & Behavioural Sciences, Faculty of Science and Health) which operate across campuses and are responsible for developing and delivering courses.

The faculties comprise more than 25 Schools and Centres for specific areas of study and research. Schools are generally located on a specific campus and carry responsibility for teaching subjects.

*"Through becoming Australia's first carbon neutral university, Charles Sturt is living out the Wiradjuri phrase Yindyamarra Winhanganha, or 'the wisdom of respectfully knowing how to live well in a world worth living in'."*

In 2021, the University had four Centres of Research Excellence comprising:

- Graham Centre for Agricultural Innovation
- National Wine and Grape Industry Centre
- Institute for Land, Water and Society
- Centre for Public and Contextual Theology.

## 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 certified entity, 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 accounted for through an uplift factor. Further detail is available at Appendix C.

### Outside the emissions boundary

**Excluded emissions** are those that have been assessed as not relevant to an organisation's or precinct'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.

Emissions sources listed in the boundary diagram below as non-quantified must be noted in Appendix C and emissions sources listed as Excluded must be noted in Appendix D.

## Inside emissions boundary

### Quantified

- Accommodation and facilities
- International accommodation
  - Domestic hotels

#### Bespoke

- Cattle
- Sheep
- Horses
- Construction
- Paper Towel/Toilet tissue
- Air travel
- Employee commuting
- Town Water & Wastewater

#### Carbon Neutral Products

#### Electricity (Market Based)

- NSW
- ACT
- Partner / Study Centres
- Data Centre
- Exported Solar

#### ICT Services and equipment

- Computer & Electrical Components

#### Machinery & Vehicles

- Motor Vehicles

#### Office Equipment & supplies

- Office equipment
- Paper

#### Refrigerants

#### Stationary Energy (gaseous fuels)

- Natural Gas (NG)

#### Stationary Energy (liquid fuels)

- LPG
- Petrol/Gasoline
- Diesel Oil
- Petroleum based Oils

#### Transport (Land & sea)

- Ethanol post -2004
- Diesel oil post-2004
- Petrol / Gasoline post-2004
- Medium car: unknown fuel
- Taxi – National Average

#### General Waste (municipal waste)

#### Working From Home

- Calculator Result A - NSW

### Non-quantified

Nil

## Outside emission boundary

### Excluded

Use and end-of-life sold products

Facilities not under operational control

Franchises

Investments

Postage Courier & Freight

Food

Professional Services

Cleaning and Chemicals

- Sulphur Hexafluoride
- Acetylene

## 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

Charles Sturt's commitment to sustainability is embedded in its [Sustainability Statement](#). Sustainability in all its forms is a core institutional policy objective at Charles Sturt and its impact is wholistic for the university's business including its teaching, research and operational practices.

Charles Sturt is a signatory to the [University Commitment to Sustainable Development Goals](#) (SDG's) and manages the improvements and actions through its [Learning in Future Environments \(LiFE\)](#) index.

These programs inform Charles Sturt's sustainability practices and provide a framework for measurement and performance improvement.

Five of the 17 SDG's are focused on Energy and Climate Emissions.

These include:-

- SDG 7: Affordable and Clean Energy
- SDG 9: Industry, Innovation and Infrastructure
- SDG 11: Sustainable Cities and Communities
- SDG 12: Responsible Consumption and Production
- SDG 13: Climate Action

To deliver on these Charles Sturt has developed a comprehensive plan, the Clean Energy Strategy 2030. This plan sets out a pathway for Charles Sturt to be energy resilient, efficient and ready for a low carbon future.

The key objective of the Strategy is to remove all Scope 1 & 2 energy emissions from our operations by 2030, commencing from the base year of 2014.

The Strategy focusses on 6 core areas where environmental and economic benefits prevail.

These include:

1. External Power Purchase Agreements
2. Energy Efficiency
3. On-site Renewables + Energy Storage
4. Electric Vehicles
5. Elimination of Natural Gas (GONG – Get Out of Natural Gas)
6. Energy Productivity

### Emissions reduction actions

In 2021 Charles Sturt continued to progress its Clean Energy Strategy 2030 delivering further reductions in emissions associated with its operations.

Significantly, the groundwork for a transformational reduction in emissions in 2022 was also set.

The 2021 actions included:

- External Power (Electricity Grid) Purchase Agreement
  - In a transformational move, Charles Sturt negotiated with Iberdrola Australia to supply 100% renewable grid electricity from its Bodangora Wind Farm commencing 1<sup>st</sup> January 2022.



- The supply is for Charles Sturt's large market sites serving its main campuses which accounts for more than 95% of Charles Sturt's grid electricity consumption.
- This is expected to reduce Charles Sturt's Carbon Inventory (based on its 2021 Inventory) by 45% in total emissions. And by 52% of its Scope 1 and Scope 2/3 Emissions.
- **Energy Efficiency (Building)**
  - A novel building HVAC service contract focussed on building energy performance management as opposed to the traditional preventative maintenance contract was implemented.  
This contract covers 50% of the buildings (being the highest energy consumption buildings) under the Building Management System (BMS) control.
  - Integration of the BMS control with the Timetable booking system for approximately 8 of large energy consumption buildings.  
This eliminates the unnecessary conditioning of spaces when they are not occupied.
- **On-site Renewables (Solar PV Energy)**
  - In 2021 Solar PV generation across all Charles Sturt campuses was more than 4,595 MWh, an increase of 8% compared with 2020.
  - Additional PV generating capacity was under development including:
    - Commissioning of Port Macquarie Solar Stage II
    - Continuing installation of Bathurst Solar Stage II
    - Installation and commissioning of Orange Medical Health Solar
- **GONG (Get out of Natural Gas)**
  - On-going assessment of heat pumps across a range of capacities with the intent of replacing NG fired equipment.
- **Energy Productivity**
  - Given the COVID pandemic financial impacts a review of some facilities and activities was being undertaken to assess their financial and business benefits. As a result, and to the mutual benefit of GHGE reductions, facilities including the Print Shop, cafeterias, offices and study centres were being rationalised.

## 5.EMISSIONS SUMMARY

### Emissions over time

This is a comparison of reported emissions over time from the base year as well current and prior year. As shown by a comparison of emissions in the table below, in 2021 there was a 16% reduction in emissions compared to the base year.

More significantly there was a decline in emissions from 2019 to 2020 of 17%, and a further decline in 2021 of 12%. These successive annual reductions followed and significantly more than offset the increase in emissions of 14% from the base year to 2019.

While the 2021 result comes on the back of a marginal decline in student numbers measured as Equivalent Full-time Loads (EFTLs), one core measure of university activity, overall the emissions per EFTLs also reflects this decreasing trend with decreases of 15% and 7% respectively in the years 2020 and 2021.

| Emissions since base year |         | Total tCO <sub>2</sub> -e |
|---------------------------|---------|---------------------------|
| Base year:                | 2014–CY | 43,624                    |
| Year 1:                   | 2015–CY | 46,066                    |
| Year 2:                   | 2016–CY | 46,921                    |
| Year 3:                   | 2017–CY | 49,964                    |
| Year 4:                   | 2018–CY | 49,729                    |
| Year 5:                   | 2019–CY | 49,824                    |
| Year 6:                   | 2020–CY | 41,322                    |
| Year 7:                   | 2021–CY | 36,474                    |

### Significant changes in emissions

The 2021 emissions reduction performance as per the previous year, was significantly impacted and clouded by the operational mitigation actions to limit the COVID pandemic impacts.

Overall university activities were still significantly lower than 2019, the pre-COVID period.

While some of the COVID impacts are expected to be of a temporary nature, the need to rationalise operational activities and address operational waste to be more cost effective has delivered mutually beneficial outcomes including sustainable reductions in base load emissions. Other operational mitigation actions were of a temporary nature and a re-bound in operational activities will lead to an increase in emissions in future carbon accounts.

Further clouding the emission reduction assessment was the expansion of operational activities in the key strategic growth area of Allied Health. This has led to an increase in emissions for the Port Macquarie and Orange Campuses.

In addition, implementation of emission reduction actions as outlined above, has had significant impacts. Consequently, the overall sustainable reduction in the base-load emissions is not specifically quantifiable.

The aggregate of all emission changes resulted in a significant reduction of 4,850 tCO<sub>2</sub>-e, equivalent to 12% reduction compared with 2020.

Overall the significant changes in emissions came from 3 emission sources, being Electricity (market based) emissions, Bespoke – Construction emissions, and Stationary Energy (NG) emissions. (Refer Table below).

Overall Electricity emissions contributed to 81% of the reduction, Construction emissions contributed to 66% of the reduction and Stationary Energy (NG) contributed to an increase of 52%.

Other minor reductions and increases made up the balance of the 5% in the overall emission reductions.

#### Electricity Emissions.

Charles Sturt's Electricity Emissions (market based) in 2021 is 56% of its overall emissions.

The reduction in electricity emissions versus 2020 was 16%, and accounts for the majority (81%) of the total reduction of 4,850 tCO<sub>2</sub>-e.

The most significant single impact on these emissions resulted from a change in the mix of primary energy sources where NG replaced Grid Electricity via the COGEN plant, accounting for about 36% of the 16% total electricity emissions reduction.

The gross electricity emission was further reduced by the reduced Emission Factor in 2021, accounting for about 5% of the 16% reduction.

The balance, being 59% of the 16% reduction improvement resulted from numerous activities including building energy efficiencies, rationalisation of facilities and increased Solar PV Production.

These impacts are further detailed below.

- Main campus electricity consumption was reduced by 4% on the back of increased operational activity and with a focus of energy performance on BMS buildings.
- Rationalisation of upstream leased facilities accounted for an estimated 8% reduction of total electricity consumption.
- Solar PV Generation was increased by 8%.
- Construction Emissions.

Business constraints on spending resulted in an 87% reduction in construction spending.

The reduction in these emissions was 3,191 tCO<sub>2</sub>-e, accounting for 66% of the total change in emissions.

- Stationary Energy (NG) Emissions.

The overall consumption of NG was up significantly, resulting in an increase of 46% in emissions from this activity compared to 2020. About 36% resulted from the displacement of purchased electricity from increased electrical output from the COGEN plant.

The net impact of the increased COGEN electricity generation resulted in an estimated net savings of about 980 tCO<sub>2</sub>-e, equivalent to about 19% of the total 2021 emissions reduction saving.

| Emission source name                   | Current year (tCO <sub>2</sub> -e and/ or activity data) | Previous year (tCO <sub>2</sub> -e and/ or activity data) | Detailed reason for change                                                                                                                                                                                                                                                                |
|----------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electricity (Market Based)             | 20,504                                                   | 24,445                                                    | <ul style="list-style-type: none"> <li>Energy Mix (Increased NG versus decreased grid Electricity)</li> <li>Rationalisation of (leased) facilities</li> <li>Improved building energy efficiency</li> <li>Reduced Market Emission Factor</li> <li>Increased Solar PV Generation</li> </ul> |
| Bespoke - \$Construction Activity      | 513                                                      | 3,704                                                     | <ul style="list-style-type: none"> <li>Construction Activity (\$spend) declined by 87% as a result of spending constraints (COVID pandemic mitigation action).</li> </ul>                                                                                                                 |
| Stationary Energy (Gaseous Fuels – NG) | 7,895                                                    | 5,391                                                     | <ul style="list-style-type: none"> <li>Increased COGEN electricity output to displace purchased electricity.</li> <li>General increase compared to 2020.</li> </ul>                                                                                                                       |

## Use of Climate Active carbon neutral products and services

Climate Active carbon neutral products included 78 tCO<sub>2</sub>-e Carbon Neutral copy papers.

## Organisation emissions summary

A summary of the organisations emissions by category is tabulated below.

The electricity summary is available in the Appendix B. Electricity emissions were calculated using a market-based approach.

| Emission category                    | Sum of Scope 1 (tCO <sub>2</sub> -e) | Sum of Scope 2 (tCO <sub>2</sub> -e) | Sum of Scope 3 (tCO <sub>2</sub> -e) | Sum of total emissions (tCO <sub>2</sub> -e) |
|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|----------------------------------------------|
| Accommodation and facilities         | 0.00                                 | 0.00                                 | 80.37                                | 80.37                                        |
| Bespoke                              | 2525.85                              | 0.00                                 | 2308.93                              | 4834.78                                      |
| Carbon neutral products and services | 0.00                                 | 0.00                                 | 0.00                                 | 0.00                                         |
| Electricity                          | 0.00                                 | 20504.23                             | 0.00                                 | 20504.23                                     |
| ICT services and equipment           | 0.00                                 | 0.00                                 | 537.39                               | 537.39                                       |
| Transport (Land and Sea)             | 290.33                               | 0.00                                 | 54.28                                | 344.61                                       |
| Machinery and vehicles               | 0.00                                 | 0.00                                 | 53.23                                | 53.23                                        |
| Office equipment & supplies          | 0.00                                 | 0.00                                 | 274.03                               | 274.03                                       |
| Refrigerants                         | 845.16                               | 0.00                                 | 0.00                                 | 845.16                                       |
| Stationary energy (gaseous fuels)    | 6208.44                              | 0.00                                 | 1686.75                              | 7895.19                                      |
| Stationary energy (liquid fuels)     | 189.25                               | 0.00                                 | 10.11                                | 199.36                                       |
| Waste                                | 0.00                                 | 0.00                                 | 760.40                               | 760.40                                       |
| Working from home                    | 0.00                                 | 0.00                                 | 144.79                               | 144.79                                       |
| <b>Total</b>                         | <b>10059.02</b>                      | <b>20504.23</b>                      | <b>5910.27</b>                       | <b>36473.52</b>                              |

## Uplift factors

N/A.

## 6. CARBON OFFSETS

### Offsets retirement approach

Charles Sturt purchases and retires offsets in arrears of the reporting period, once its annual inventory has been established and the total quantity of offsets is known.

Charles Sturt has established a series of four principles to help guide decisions associated with the procurement of carbon offsets.

These principles are as follows:

1. Support for locally based projects to the extent that is deemed financially viable
2. A preference for projects that align with Charles Sturt's values and offer high engagement value
3. Consideration of projects that offer regional connectivity with Charles Sturt's international partners, a number of which are listed here: <https://www.csu.edu.au/division/global-engagement-and-partnerships/partnerships/international-linkages>
4. The unit cost of the offset option.

| In arrears                                                         |               |
|--------------------------------------------------------------------|---------------|
| 1. Total number of eligible offsets banked from last year's report | 0 tCO2-e      |
| 2. Total emissions footprint to offset for this report             | 36,474 tCO2-e |
| 3. Total eligible offsets required for this report                 | 36,474 tCO2-e |
| 4. Total eligible offsets purchased and retired for this report    | 36,733 tCO2-e |
| 5. Total eligible offsets banked to use toward next year's report  | 259 tCO2-e    |

### Co-benefits

Charles Sturt University has selected offsets which have co-benefits that address some of the United Nations Sustainable Development Goals (SDGs). Otherwise known as the Global Goals, these are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity.

The Goals that are specifically addressed by the offsets include SDG 7, SDG 8, SDG 9, SDG 13, and SDG 15.



The projects selected for the purchase and retirement of offsets for this reporting period are as follows:

#### **Energising-India using Solar Energy Projects: India**

The project targets to reduce India's carbon emissions and take an ambitious step to move toward a clean energy future started in 2010 with the launch of the Jawaharlal Nehru National Solar Mission (JNNSM). The Mission had set up an ambitious target of deploying 20 GW of grid connected solar power by 2022.

#### **Arnhem Land indigenous savannah fire management Projects: Australia**

Greenhouse gases emitted from savanna fires make up 3% of Australia's total emissions. Savanna burning projects undertaken by Traditional Owners and Aboriginal rangers reduce GHG emissions by undertaking cool, lower intensity fires in the early dry season when the vegetation still contains some moisture from the wet season. This reduces the GHG emitted from high intensity, unmanaged fire in the late dry season when the country is dry.

In addition to the carbon abatement the project is delivering 'core benefits' to country including:

- Managing country, the right way
- Revitalising connection to country
- Improving corridors to take pressure off wildlife
- Building new fire skills and experience for rangers.

#### **CO2 Australia Creating a Better Climate Project: Carbon Farming Initiative (Revegetation): Australia NSW**

This project establishes permanent plantings of Eucalyptus trees on land that was previously used for agricultural purpose.

The project is located in the local government areas of Bland, Carrathool, Coolamon, Dubbo, Greater Hume Shire, Lachlan, Narrandera, Narromine, Parkes and Wellington.

It was originally (prior to 18/01/2016) known as the Green State Power Forest Sequestration Project.

#### **Xinjiang Dabancheng Wind Farm Phase I Project: China**

This project is located in Zhouwan Town, Wuqi County, Yan'an City, Shaanxi Province, P. R. China.

The project is invested and operated by Guodian Shaanxi Wind Power Co., Ltd.

The proposed project reduces greenhouse gas (GHG) emissions by supplying zero-emission wind power to the Northwest Power Grid (NWPG), which replaces the same amount of electricity generated by fossil fuel fired power plants connected with the NWPG. Therefore, it avoids CO2 emissions in generation of the same amount of electricity provided by the fossil fuel fired power plants.

The annual grid-connected power output of the proposed project is estimated to be 86,229 MWh and the estimated annual GHG emission reductions are 77,291 tCO2e.

The project will not only supply renewable electricity to the grid, but also contribute to sustainable development of the local community.

## 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 <sub>2</sub> -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 (%) |
| Energising-India using Solar Energy Projects, India.                                                                             | VCUs                 | Verra    | 24 May 2022  | <a href="#">7387-391640492-391642724-VCU-034-APX-IN-1-1931-01012019-30062019-0</a>                             | 2019    |                  | 2,233                                   | 0                                                     | 0                                                     | 2,233                                            | 6%                      |
| Arnhem Land indigenous savanna fire management projects (Fish River Project, Savanna Burning Investment Ready Project Australia. | KACCUs               | ANREU    | 25 Feb 2022  | 3,782,917,643 – 3,782,917,673                                                                                  | 2018-19 |                  | 31                                      | 0                                                     | 0                                                     | 31                                               | 6%                      |
|                                                                                                                                  |                      |          | 18 Apr 2022  | 3,786,094,729 – 3,786,096,213                                                                                  | 2019-20 |                  | 1485                                    | 0                                                     | 259                                                   | 1226                                             |                         |
|                                                                                                                                  |                      |          | 18 Apr 2022  | 3,782,917,674 – 3,782,918,657<br><br>(Note: Copies of registry transaction records provided to Climate Active) | 2018-19 |                  | 984                                     | 0                                                     | 0                                                     | 984                                              |                         |

|                                                                 |        |       |             |                                                                                                                                                                                             |         |  |        |   |     |        |     |
|-----------------------------------------------------------------|--------|-------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--|--------|---|-----|--------|-----|
| CO2 Australia Creating a Better Climate Project                 | KACCUs | ANREU | 18 May 2022 | 8,338,888,207 -<br>8,338,888,234;<br>8,331,759,923 -<br>8,331,761,998;<br>8,342,111,316 -<br>8,342,111,711<br><br>(Note: Copies of registry transaction records provided to Climate Active) | 2021-22 |  | 2,500  | 0 | 0   | 2,500  | 7%  |
| Xinjiang Dabancheng Wind Farm Phase I Project                   | CER    | ANREU | 23 May 2022 | 1,126,844,016 -<br>1,126,873,515<br>(Note: Copies of registry transaction records provided to Climate Active)                                                                               | 2013-20 |  | 29,500 | 0 | 0   | 29,500 | 81% |
| Total offsets retired this report and used in this report       |        |       |             |                                                                                                                                                                                             |         |  |        |   |     | 36,474 |     |
| Total offsets retired this report and banked for future reports |        |       |             |                                                                                                                                                                                             |         |  |        |   | 259 |        |     |

| Type of offset units                   | Quantity (used for this reporting period claim) | Percentage of total |
|----------------------------------------|-------------------------------------------------|---------------------|
| Australian Carbon Credit Units (ACCUs) | 4,741                                           | 13%                 |
| Certified Emissions Reductions (CERs)  | 29,500                                          | 81%                 |
| Verified Carbon Units (VCUs)           | 2,233                                           | 6%                  |



## 7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

### Renewable Energy Certificate (REC) summary

N/A.

## APPENDIX A: ADDITIONAL INFORMATION

N/A

## APPENDIX B: ELECTRICITY SUMMARY

Electricity emissions are calculated using a market-based approach.

### 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 <sub>2</sub> e) | Renewable Percentage of total |
|------------------------------------------------------------------------|---------------------|---------------------------------|-------------------------------|
| Behind the meter consumption of electricity generated                  | 124,068             | 0                               | 0%                            |
| <b>Total non-grid electricity</b>                                      | <b>124,068</b>      | <b>0</b>                        | <b>0%</b>                     |
| LGC Purchased and retired (kWh) (including PPAs & Precinct LGCs)       | 0                   | 0                               | 0%                            |
| GreenPower                                                             | 0                   | 0                               | 0%                            |
| Jurisdictional renewables (LGCs retired)                               | 86,238              | 0                               | 0%                            |
| Jurisdictional renewables (LRET) (applied to ACT grid electricity)     | 19,627              | 0                               | 0%                            |
| Large Scale Renewable Energy Target (applied to grid electricity only) | 4,695,524           | 0                               | 18%                           |
| Residual Electricity                                                   | 20,630,925          | 20,514,424                      | 0%                            |
| <b>Total grid electricity</b>                                          | <b>25,432,314</b>   | <b>20,514,424</b>               | <b>19%</b>                    |
| <b>Total Electricity Consumed (grid + non grid)</b>                    | <b>25,556,382</b>   | <b>20,514,424</b>               | <b>19%</b>                    |
| Electricity renewables                                                 | 4,925,457           | 0                               |                               |
| Residual Electricity                                                   | 20,630,925          | 20,514,424                      |                               |
| <b>Exported on-site generated electricity</b>                          | <b>13,967</b>       | <b>-10,196</b>                  |                               |
| Emissions (kgCO <sub>2</sub> e)                                        |                     | 20,504,228                      |                               |

|                                                                   |               |
|-------------------------------------------------------------------|---------------|
| <b>Total renewables (grid and non-grid)</b>                       | <b>19.27%</b> |
| <b>Mandatory</b>                                                  | <b>18.79%</b> |
| <b>Voluntary</b>                                                  | <b>0.00%</b>  |
| <b>Behind the meter</b>                                           | <b>0.49%</b>  |
| <b>Residual Electricity Emission Footprint (TCO<sub>2</sub>e)</b> | <b>20,504</b> |

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

Voluntary includes LGCs retired by the ACT (MWh) 86

## Location Based Approach Summary

| Location Based Approach                        | Activity Data (kWh) | Scope 2 Emissions (kgCO <sub>2</sub> e) | Scope 3 Emissions (kgCO <sub>2</sub> e) |
|------------------------------------------------|---------------------|-----------------------------------------|-----------------------------------------|
| ACT                                            | 105,865             | 82,575                                  | 7,411                                   |
| NSW                                            | 24,565,549          | 19,161,128                              | 1,719,588                               |
| SA                                             | 0                   | 0                                       | 0                                       |
| Vic                                            | 683,883             | 622,334                                 | 68,388                                  |
| Qld                                            | 77,017              | 61,614                                  | 9,242                                   |
| NT                                             | 0                   | 0                                       | 0                                       |
| WA                                             | 0                   | 0                                       | 0                                       |
| Tas                                            | 0                   | 0                                       | 0                                       |
| <b>Grid electricity (scope 2 and 3)</b>        | <b>25,432,314</b>   | <b>19,927,650</b>                       | <b>1,804,629</b>                        |
| ACT                                            | 0                   | 0                                       | 0                                       |
| NSW                                            | 124,068             | 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                                       |
| <b>Non-grid electricity (Behind the meter)</b> | <b>124,068</b>      | <b>0</b>                                | <b>0</b>                                |
| <b>Total Electricity Consumed</b>              | <b>25,556,382</b>   | <b>19,927,650</b>                       | <b>1,804,629</b>                        |
| <b>Emission Footprint (TCO<sub>2</sub>e)</b>   | <b>21,732</b>       |                                         |                                         |
| <i>Scope 2 Emissions (TCO<sub>2</sub>e)</i>    | 19928               |                                         |                                         |
| <i>Scope 3 Emissions (TCO<sub>2</sub>e)</i>    | 1805                |                                         |                                         |

## Climate Active Carbon Neutral Electricity summary

| Carbon Neutral electricity offset by Climate Active Product | Activity Data (kWh) | Emissions (kgCO <sub>2</sub> 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

All Relevant Emission sources are quantified and quantified within the Activity data hierarchy classification levels 1 to 4. No Uplift factors (data classification level 5) were applied.

(Refer Climate Active Technical Guidance Manual, September 2021 p47.)

### 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 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 |
|------------------------------------------|----------------|-----------------------------------------|----------------------------------------------------------------|-----------------|
| Nil                                      | N/A            | N/A                                     | N/A                                                            | N/A             |

## APPENDIX D: OUTSIDE EMISSIONS BOUNDARY

### Excluded emission sources

The below emission sources have been assessed as not relevant to an organisation's or precinct's operations and are outside of its emissions boundary. These emissions are not part of the carbon neutral claim. Emission sources considered for relevance must be included within the certification boundary if they meet two of the five relevance criteria. Those which only meet one condition of the relevance test can be excluded from the certification boundary.

Emissions tested for relevance are detailed below against each of the following criteria:

1. **Size** The emissions from a particular source are likely to be large relative to the organisation's electricity, stationary energy and fuel emissions
2. **Influence** The responsible entity has the potential to influence the reduction of emissions from a particular source.
3. **Risk** The emissions from a particular source contribute to the organisation's greenhouse gas risk exposure.
4. **Stakeholders** Key stakeholders deem the emissions from a particular source are relevant.
5. **Outsourcing** 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.

The following emission sources have been excluded as they have been assessed as not relevant according to the relevance test.

- Use of Sold Products
- Franchises
- Investments
- Professional Services (Other External)
- Postage Courier and Freight (External Services)
- Cleaning and Chemicals (Sulphur Hexafluoride)
- Cleaning and Chemicals (Acetylene)

Relevance Test results are tabulated as follows.

| Emission sources tested for relevance | (1) Size | (2) Influence | (3) Risk | (4) Stakeholders | (5) Outsourcing | Included in boundary? |
|---------------------------------------|----------|---------------|----------|------------------|-----------------|-----------------------|
| Use and end-of-life of sold products  | No       | No            | No       | No               | No              | No                    |
| Franchises                            | No       | No            | No       | No               | No              | No                    |

| Emission sources tested for relevance             | (1) Size | (2) Influence | (3) Risk | (4) Stakeholders | (5) Outsourcing | Included in boundary? |
|---------------------------------------------------|----------|---------------|----------|------------------|-----------------|-----------------------|
| Investments                                       | No       | No            | No       | Yes              | No              | No                    |
| Professional Services (Other External)            | No       | No            | No       | No               | No              | No                    |
| Postage Courier and Freight (External Services)   | No       | No            | No       | No               | No              | No                    |
| Cleaning & Chemicals (Sulphur Hexafluoride - SF6) | No       | No            | No       | No               | No              | No                    |
| Cleaning & Chemicals (Acetylene)                  | No       | No            | No       | No               | No              | No                    |



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