



PUBLIC DISCLOSURE STATEMENT

E-SMART SOLAR

ORGANISATION CERTIFICATION


CY2023

Australian Government
Climate Active
Public Disclosure Statement



An Australian Government Initiative



NAME OF CERTIFIED ENTITY	E-Smart Solar
REPORTING PERIOD	1 January 2023 – 31 December 2023
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>Dean Edmonds Founder & Managing Director Date 22/01/2025</p>



Australian Government

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

Public Disclosure Statement documents are prepared by the submitting organisation. The material in the Public Disclosure Statement document represents the views of the organisation and do not necessarily reflect the views of the Commonwealth. The Commonwealth does not guarantee the accuracy of the contents of the Public Disclosure Statement document and disclaims liability for any loss arising from the use of the document for any purpose.

Version August 2023.



1. CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	56 tCO ₂ -e
CARBON OFFSETS USED	100% VCU
RENEWABLE ELECTRICITY	0%
CARBON ACCOUNT	Prepared by: Pangolin Associates
TECHNICAL ASSESSMENT	Next technical assessment due: CY2024

Contents

1. Certification summary	3
2. Certification information	4
3. Emissions boundary	5
4. Emissions reductions	7
5. Emissions summary	10
6. Carbon offsets	13
7. Renewable Energy Certificate (REC) Summary	15
Appendix A: Additional Information	16
Appendix B: Electricity summary	17
Appendix C: Inside emissions boundary	20
Appendix D: Outside emissions boundary	20

Description of organisation certification

This inventory has been prepared for the calendar year from 1 January 2023 to 31 December 2023 and covers the business operations of E-Smart Solar ABN 12 600 689 361.

The operational boundary has been defined based on an operational control test, in accordance with the principles of the National Greenhouse and Energy Reporting Act 2007. This includes all operations which are controlled by E-Smart Solar.

The methods used for collating data, performing calculations and presenting the carbon account are in accordance with the following standards:

- Climate Active Standard for organisations
- The GHG Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
- National Greenhouse and Energy Reporting (Measurement) Determination 2008

Where possible, the calculation methodologies and emission factors used in this inventory are derived from the National Greenhouse Accounts (NGA) Factors in accordance with "Method 1" from the National Greenhouse and Energy Reporting (Measurement) Determination 2008.

The greenhouse gases considered within the inventory are those that are commonly reported under the Kyoto Protocol; carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and synthetic gases - hydrofluorocarbons (HFCs). No perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆) or nitrogen trifluoride (NF₃) were detected within the operational boundary. All emission sources have been expressed as carbon dioxide equivalents (CO₂-e) using relative global warming potentials (GWPs).

This certification does not include the services provided by E-Smart Solar.

Organisation description

E-Smart Solar (ABN 12 600 689 361) was founded in 2011, and initially traded as E-Smart Electrical Services. However, with increasing demands for solar installations, this soon became the main focus of the business. In 2011, E-Smart focused purely on solar solutions for E-Smart Solar customers and restructured to E-Smart Solar Pty Ltd.

E-Smart Solar are a team of qualified electricians and are Clean Energy Council Accredited installers and Network-level members; experienced and qualified in the design and installation of grid connect, hybrid (battery) and stand-alone solar power systems.

E-Smart Solar provide solar solutions for both residential and commercial clients across Sydney, as well as everywhere in the Blue Mountains of NSW. This is from Mudgee to Bathurst, and from Penrith and surrounding suburbs. The company's only site location is in Emu Plains, NSW, where it is headquartered.

The operational control approach has been chosen to define the organisational boundary. The company has no subsidiaries, joint ventures, etc, which need to be included in the boundary.

2. EMISSIONS BOUNDARY

This is a small organisation certification, which uses the standard Climate Active small organisation 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 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.

Inside emissions boundary

Quantified

- Accommodation
- Carbon neutral products and services
- Cleaning and chemicals
- Construction Materials and Services
- Electricity
- Food
- ICT services and equipment
- Machinery and vehicles
- Professional services
- Office equipment and supplies
- Postage, courier and freight
- Products
- Refrigerants
- Stationary energy and fuels
- Transport (air)
- Transport (land and sea)
- Waste
- Water
- Working from home

Non-quantified

N/A

Optionally included

N/A

Outside emission boundary

Excluded

Equipment and PV Systems installed for clients

3. EMISSIONS REDUCTIONS

Emissions reduction strategy

As a company committed to the development of renewable energy technologies, including solar PV, E-Smart Solar is wholeheartedly committed to the environment and sustainability.

At E-Smart Solar, we not only encourage our clients to invest in clean technologies, but we also have developed an emission reduction strategy that sits in our sustainability reporting. The strategy includes the following key points:

We are reporting a decrease of our total footprint from 80.0 tCO₂-e in CY2022 to 55.8 tCO₂-e for CY2023. Our carbon footprint for CY2020 was 56.5 tCO₂e.

Most of our emissions fall within Scope 3, which accounts for 99.5% of our total emissions profile, and will be the focus of our reduction strategy.

Our largest contributing emissions category is now 'Machinery & Vehicles' (Scope 3) which accounted for 61.8% of the total emissions, an increase of 58% compared to 2022, when it was our second-largest category. This is by far the most significant category for us, with our second-largest Scope 3 category being 'Professional Services', which contributes only 13.1% to our total emissions profile, shortly followed by 'Postage, Courier & Freight' (7.8%) and 'Waste' (7.6%).

The largest percentage increase in 2023 was in 'Postage, Courier & Freight' (Scope 3), which increased from 0.2 tCO₂-e to 4.1 tCO₂-e from 2022, a 1,950% increase. This was because of an increased use of courier services due to a change in our business model looking to increase staff efficiencies on site. We will aim to reduce this category by increasing planning during our ordering process to ensure fewer trips from couriers and postage, as well as exploring carbon neutral providers.

For our Scope 3 transport emissions, we are exploring options with carbon neutral freight providers and Australia Post.

However, we did reduce our total transport emissions (across land, air and sea) by 99.1% compared with last year, eliminating emissions from air travel completely. These emissions in these categories were high in 2022 due to business travel, 37.3 tCO₂-e across all scopes. Of this, 2.9% was from business flights (Scope 3), 2.7% from hotel stays (Scope 3, falling within Climate Active's 'Accommodation & Facilities' category), but the largest emissions source was due to the use of leased diesel cars (Scope 1, 94.4%). Because of this, last year we set an internal target to reduce 'Business Travel' by 10% from 2020 by 2025, across all scopes. This year we reduced our 'Business Travel' emissions by 99.2% from CY2022, which was achieved by fewer interstate flights and associated travel expenses. We will continue focusing on keeping emissions low in the coming years. This also defines our overarching Climate Active target of reducing emissions more generally in 'Transport (Land & Sea)' by 10% by 2025 from a CY2020 baseline of 27.9 tCO₂-e. This has been achieved by through the means stated above.

We are considering the purchase of an EV ute and company vehicle if available on the market within the next 2 years (by 2026). We try to optimize our client site visits and reduce unnecessary transport.

We have an internal target of reducing our emissions from 'Business Travel' (including air, land and sea transport for business purposes, not employee commuting or other uses) by 10% by CY2025 from the CY2020 level. We are also committed to the holistic target of 10% reduction of emissions from 'Transport (Land & Sea)' from CY2020 by CY2025. We have a further target to reduce all our transport-related emissions (land, sea & air) by 30% by 2028 from the 2020 level, which has largely been achieved.

Last year, we also set a target of reducing our emissions from 'Products, Materials & Equipment' by 10% from 2022 to 2025, referring to the emissions generated by procurement of electrical equipment, lighting fixtures, batteries and generators, included in the Climate Active category 'Machinery & Vehicles'. Last year, we emitted 20.8 tCO₂-e in this category, which increased this year by 58% to 32.8 tCO₂-e. The reason for the increase is due to purchasing additional safety equipment ensuring the ongoing health and safety of our workers. To continue towards achieving our 2025 reduction target, we will aim to routinely maintain and service our equipment ensuring longevity, as well as thoroughly assess the requirements for new equipment. Our target is summarised as:

We have a target of reducing our emissions from 'Electrical Products, Materials & Equipment by' 10% by CY2025 from the CY2022 level, with a holistic target of reducing our emissions from 'Machinery & Vehicles' by 10% by CY2025 from CY2022 levels.

We also have a target to reduce our 'Professional Services' emissions by 75% by 2028 from the 2021 level.

The footprint from 'Professional Services' this year is 6.9 tCO₂-e, which is a 27% decrease from 2022 (9.6 tCO₂-e). This is generally due to a decreased spend across various services, including entertainment, accounting and advertising, although we did increase our spend on insurance and banking services. To keep emissions decreasing, we will continue to work with suppliers, encouraging them to make positive environmental choices.

We work closely with our suppliers to ensure sustainability is part of our selection criteria. We encourage our suppliers in making positive environmental choices and support them in integrating those choices into everyday operations. And wherever possible, we'll help our suppliers reduce their carbon footprint. We are exploring ways to improve the sustainability of our procurement and select suppliers who are Climate Active certified for their products or services including telecommunications, IT and cloud services, freight and logistics, accounting services, office supplies including paper, food and catering.

For Scope 2, we have no emissions due to the procurement of carbon neutral electricity. We have a target to continue to source 100% carbon neutral (or renewable) electricity YoY.

Community Leadership and Advocacy

We are committed to developing solutions that are environmentally friendly, such as moving from paper-based billing to more flexible payment processes. Working with our industry and our community, we not only support the development of climate-friendly practices, but also adopt them to deliver ongoing, positive change.

Emissions reduction actions

The greatest reduction in emissions this period had been due to fewer interstate flights and accommodation. While there were benefits in previous flights for conferences etc., in previous years, we consciously opted for digital and remote access to these events.

We continued reporting our GHG emissions with Pangolin Associates and aiming at renewing our carbon neutral Climate Active certification.

4. EMISSIONS SUMMARY

Emissions over time

Emissions since base year		
	Total tCO ₂ -e (without uplift)	Total tCO ₂ -e (with uplift)
Base year: 2020	53.8	56.5
Year 1: 2021	44.5	46.8
Year 2: 2022	76.2	80.0
Year 3: 2023	53.1	55.8

Significant changes in emissions

We are reporting a significant decrease (-30.25%) in our total footprint from 80.0 tCO₂-e in CY2022 to 55.8 tCO₂-e for CY2023. Our carbon footprint for CY2020 was 56.5tCO₂e.

The reason for the change was largely due to a significant decrease in Business Travel emissions.

Significant changes in emissions			
Emission source	Previous year emissions (t CO ₂ -e)	Current year emissions (t CO ₂ -e)	Reason for change
Electrical equipment, lighting fixtures, batteries and generators	20.8	32.8	Additional safety equipment

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

Certified brand name	Product/Service/Building/Precinct used
Powershop	Electricity
Opal Australian Paper*	Paper
Pangolin Associates	Consulting services

*It should be noted that this paper was purchased prior to the brand no longer being certified. It was conservatively assumed that half of the supply purchased was certified as the Opal Australian Paper certification ended in November 2023.

Emissions summary

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

Emission category	Scope 1 emissions (tCO ₂ -e)	Scope 2 emissions (tCO ₂ -e)	Scope 3 emissions (tCO ₂ -e)	Total emissions (t CO ₂ -e)
Accommodation and facilities	0.00	0.00	0.30	0.30
Cleaning and Chemicals	0.00	0.00	0.00	0.00
Climate Active carbon neutral products and services	0.00	0.00	0.00	0.00
Construction Materials and Services	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00
Food	0.00	0.00	2.76	2.76
ICT services and equipment	0.00	0.00	0.00	1.27
Machinery and vehicles	0.00	0.00	32.80	32.80
Office equipment & supplies	0.00	0.00	0.00	0.00
Postage, courier and freight	0.00	0.00	4.14	4.14
Products	0.00	0.00	0.18	0.18
Professional Services	0.00	0.00	6.94	6.94
Refrigerants	0.00	0.00	0.00	0.00
Stationary Energy (gaseous fuels)	0.00	0.00	0.00	0.00
Stationary Energy (liquid fuels)	0.00	0.00	0.00	0.00
Stationary Energy (solid fuels)	0.00	0.00	0.00	0.00
Transport (Air)	0.00	0.00	0.00	0.00
Transport (Land and Sea)	0.25	0.00	0.06	0.31
Waste	0.00	0.00	4.05	4.05
Water	0.00	0.00	0.24	0.24
Working from home	0.00	0.00	0.11	0.11
Total emissions (tCO₂-e)	0.25	0.00	52.86	53.11

Uplift factors

An uplift factor is an upwards adjustment to the total carbon inventory to account for relevant emissions that cannot be reasonably quantified or estimated. This conservative accounting approach helps ensure the integrity of the carbon neutral claim.

Reason for uplift factor	tCO ₂ -e
Mandatory 5% uplift for small organisations	2.66
Total of all uplift factors (tCO ₂ -e)	2.66
Total emissions footprint to offset (tCO₂-e) <i>(total emissions from summary table + total of all uplift factors)</i>	55.76

5. CARBON OFFSETS

Eligible offsets retirement summary

Offsets retired for Climate Active certification

Type of offset units	Eligible quantity (used for this reporting period)	Percentage of total
Verified Carbon Units (VCUs)	56	100%

Project description	Type of offset units	Registry	Date retired	Serial number (and hyperlink to registry transaction record)	Vintage	Stapled quantity	Eligible quantity retired (tCO ₂ -e)	Eligible quantity used for previous reporting periods	Eligible quantity banked for future reporting periods	Eligible quantity used for this reporting period	Percentage of total (%)
Bundled Solar Photovoltaic Project by ACME	VCU	Verra	7 Aug 2024	11045-273828131-273828186-VCS-VCU-997-VER-IN-1-1753-01022020-31122020-0	2020	-	56	0	0	56	100%
Total eligible offsets retired and used for this report										56	
Total eligible offsets retired this report and banked for use in future reports									0		

Co-benefits

Bundled Solar Photovoltaic Project by ACME in India

The project activity is a step towards supporting the implementation and installation of grid connected renewable solar energy power plants in India.

The project contributes to sustainable development using the following ways.

- **Social well-being:** The project would help in generating employment opportunities during the construction and operation phases. The project activity will lead to development in infrastructure in the region like development of roads and also may promote business with improved power generation.
- **Economic well-being:** The project is a clean technology investment in the region, which would not have been taken place in the absence of the VCS benefits the project activity will also help to reduce the demand supply gap in the state. The project activity will generate power using zero emissions solar based power generation which helps to reduce GHG emissions and specific pollutants like SO_x, NO_x, and SPM associated with the conventional thermal power generation facilities.
- **Technological well-being:** The successful operation of project activity would lead to promotion of solar based power generation and would encourage other entrepreneurs to participate in similar projects
- **Environmental well-being:** Solar being a renewable source of energy, it reduces the dependence on fossil fuels and conserves natural resources which are on the verge of depletion. Due to its zero emission the Project activity also helps in avoiding significant amount of GHG emissions.

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
---	-----

* 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	Project location	Eligible unit type	Registry	Surrender date	Accreditation code	Certificate serial number	Generation year	Fuel source	Quantity (MWh)
N/A									
Total LGCs surrendered this report and used in this report									0

APPENDIX A: ADDITIONAL INFORMATION

APPENDIX B: ELECTRICITY SUMMARY

There are two international best-practice methods for calculating electricity emissions – the location-based method and the market-based method. Reporting electricity emissions under both methods is called dual reporting.

Dual reporting of electricity emissions is useful, as it provides different perspectives of the emissions associated with a business's electricity usage.

Location-based method:

The location-based method provides a picture of a business's electricity emissions in the context of its location, and the emissions intensity of the electricity grid it relies on. It reflects the average emissions intensity of the electricity grid in the location (State) in which energy consumption occurs. The location-based method does not allow for any claims of renewable electricity from grid-imported electricity usage.

Market-based method:

The market-based method provides a picture of a business's electricity emissions in the context of its renewable energy investments. It reflects the emissions intensity of different electricity products, markets and investments. It uses a residual mix factor (RMF) to allow for unique claims on the zero emissions attribute of renewables without double-counting.

For this certification, electricity emissions have been set by using the **market-based approach**.

Market-based approach summary			
Market-based approach	Activity Data (kWh)	Emissions (kg CO ₂ -e)	Renewable percentage of total
Behind the meter consumption of electricity generated	0	0	0%
Total non-grid electricity	0	0	0%
LGC Purchased and retired (kWh) (including PPAs)	0	0	0%
GreenPower	0	0	0%
Climate Active precinct/building (voluntary renewables)	0	0	0%
Precinct/Building (LRET)	0	0	0%
Precinct/Building jurisdictional renewables (LGCS surrendered)	0	0	0%
Electricity products (voluntary renewables)	0	0	0%
Electricity products (LRET)	0	0	0%
Electricity products jurisdictional renewables (LGCs surrendered)	0	0	0%
Jurisdictional renewables (LGCs surrendered)	0	0	0%
Jurisdictional renewables (LRET) (applied to ACT grid electricity)	0	0	0%
Large Scale Renewable Energy Target (applied to grid electricity only)	0	0	0%
Residual Electricity	4,880	4,440	0%
Total renewable electricity (grid + non grid)	0	0	0%
Total grid electricity	4,880	4,440	0%
Total electricity (grid + non grid)	4,880	4,440	0%
Percentage of residual electricity consumption under operational control	100%		
Residual electricity consumption under operational control	4,880	4,440	
Scope 2	4,343	3,952	
Scope 3 (includes T&D emissions from consumption under operational control)	536	488	
Residual electricity consumption not under operational control	0	0	
Scope 3	0	0	

Total renewables (grid and non-grid)	0.00%
Mandatory	0.00%
Voluntary	0.00%
Behind the meter	0.00%
Residual scope 2 emissions (t CO₂-e)	3.95
Residual scope 3 emissions (t CO₂-e)	0.49
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO₂-e)	0.00
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO₂-e)	0.00
Total emissions liability (t CO₂-e)	0.00

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

Location-based approach summary						
Location-based approach	Activity Data (kWh) total	Under operational control			Not under operational control	
Percentage of grid electricity consumption under operational control	100%	(kWh)	Scope 2 Emissions (kgCO ₂ -e)	Scope 3 Emissions (kgCO ₂ -e)	(kWh)	Scope 3 Emissions (kgCO ₂ -e)
NSW	4,880	4,880	3,318	244	0	0
Grid electricity (scope 2 and 3)	4,880	4,880	3,318	244	0	0
NSW	0	0	0	0		
Non-grid electricity (behind the meter)	0	0	0	0		
Total electricity (grid + non grid)	4,880					

Residual scope 2 emissions (t CO₂-e)	3.32
Residual scope 3 emissions (t CO₂-e)	0.24
Scope 2 emissions liability (adjusted for already offset carbon neutral electricity) (t CO₂-e)	0.00
Scope 3 emissions liability (adjusted for already offset carbon neutral electricity) (t CO₂-e)	0.00
Total emissions liability	0.00

Operations in Climate Active buildings and precincts

Operations in Climate Active buildings and precincts	Electricity consumed in Climate Active certified building/precinct (kWh)	Emissions (kg CO ₂ -e)
N/A	0	0
<i>Climate Active carbon neutral electricity is not renewable electricity. These electricity emissions have been offset by another Climate Active member through their building or precinct certification. This electricity consumption is also included in the market based and location-based summary tables. Any electricity that has been sourced as renewable electricity by the building/precinct under the market-based method is outlined as such in the market-based summary table.</i>		

Climate Active carbon neutral electricity products

Climate Active carbon neutral electricity product used	Electricity claimed from Climate Active electricity products (kWh)	Emissions (kg CO ₂ -e)
Powershop	4,879.6	0
<i>Climate Active carbon neutral electricity is not renewable electricity. These electricity emissions have been offset by another Climate Active member through their electricity product certification. This electricity consumption is also included in the market based and location-based summary tables. Any electricity that has been sourced as renewable electricity by the electricity product under the market-based method is outlined as such in the market-based summary table.</i>		

APPENDIX C: INSIDE EMISSIONS BOUNDARY

Non-quantified emission sources

The following emissions sources have been assessed as relevant, are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. They have been non-quantified due to one of the following reasons:

1. **Immaterial** <1% for individual items and no more than 5% collectively
2. **Cost effective** Quantification is not cost effective relative to the size of the emission but uplift applied.
3. **Data unavailable** Data is unavailable but uplift applied. A data management plan must be put in place to provide data within 5 years.
4. **Maintenance** Initial emissions non-quantified but repairs and replacements quantified.

Relevant non-quantified emission sources	Justification reason
N/A	

APPENDIX D: OUTSIDE EMISSIONS BOUNDARY

Excluded emission sources

The below emission sources have been assessed as not relevant to organisation'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 or precincts.

Excluded emissions sources summary

Emission sources tested for relevance	Size	Influence	Risk	Stakeholders	Outsourcing	Justification
Equipment & PV systems installed for clients	Y	N	N	N	N	<p>Size: The emissions are expected to be large relative to the activities of E-Smart Solar</p> <p>influence: These emissions associated with this source are the responsibility of the clients of E-Smart Solar and would fall under their Scope 3 emissions.</p> <p>Risk: There are no relevant laws or regulations that apply to limit emissions specifically from this source, the source does not create supply chain risks, and it is unlikely to be of significant public interest</p> <p>Stakeholders: Key stakeholders, including the public, are unlikely to consider this a relevant source of emissions for our business.</p> <p>Outsourcing: We have not previously undertaken this activity within our emissions boundary and comparable organisations do not typically undertake this activity within their boundary.</p>



An Australian Government Initiative

