



# **PUBLIC DISCLOSURE STATEMENT**


**ZOOS VICTORIA**

**ORGANISATION CERTIFICATION**

**FY2021-22**

Australian Government  
**Climate Active**  
**Public Disclosure Statement**



<b>NAME OF CERTIFIED ENTITY</b>	Zoos Victoria
<b>REPORTING PERIOD</b>	Financial year 1 July 2021 – 30 June 2022 Arrears Report
<b>DECLARATION</b>	<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>Kiam Yoong Senior Manager Environmental Sustainability 13/02/2023</p>



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

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Version March 2022.



# 1. CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	4,260 tCO <sub>2</sub> -e
OFFSETS BOUGHT	100% VCUs
RENEWABLE ELECTRICITY	Total renewables 100%
TECHNICAL ASSESSMENT	16/02/2023 Daniel Raftopoulos Organisation: Ndevr Environmental Pty Ltd Next technical assessment due: October 2025

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## 2. CARBON NEUTRAL INFORMATION

### Description of certification

This carbon neutral certification is for the business operations of Zoological Parks and Gardens Board (Zoos Victoria) (ABN: 96-913-959-053), covering Melbourne Zoo, Healesville Sanctuary and Werribee Open Range Zoo.

### Organisation description

Zoos Victoria (ABN: 96-913- 959-053), is a not-for-profit conservation organisation aimed at saving endangered wildlife from extinction. Zoos Victoria operates Healesville Sanctuary, Werribee Open Range Zoo and Melbourne Zoo and in 2021-22 welcomed 1.6 million visitors. Zoos Victoria is dedicated to connecting these visitors to wildlife and providing them with actions they can take to help save species in the wild. Zoos Victoria sees first-hand the impact of climate change and other human-induced threats to wildlife and this has spurred the organisation to take great lengths to decrease its environmental footprint.

As a voice for wildlife, Zoos Victoria considers any impact or threat to species as firmly within the scope of our purpose and our work. Climate change is claimed to be the most significant and immediate threat to the survival of people, habitats and wildlife globally. Zoos Victoria supports the United Nation's Intergovernmental Panel on Climate Change (IPCC) and the urgent call to slow global warming through achieving net zero CO2 emissions, along with strong reductions in other greenhouse gas emissions. As the first certified carbon neutral zoo in the world, we are doing everything we can to tackle this threat. Our carbon reduction measures include a renewable energy target of 100% from 1st July 2021 onwards, a zero waste to landfill program, resource efficiency projects and an Environmental, Social and Governance Procurement program. In 2021-22 we have reduced our carbon emissions by 71% since becoming certified carbon neutral in 2013. It is our duty to wildlife to call out climate change as a critical threat to the survival of all species, and one which must be addressed as a priority so we can secure a future where wildlife, the environment and people thrive together.

*“We believe in minimising our carbon footprint to help save the planet. That’s why Zoos Victoria is the world’s first carbon neutral zoo.”*

# 3. EMISSIONS BOUNDARY

## Inside the emissions boundary

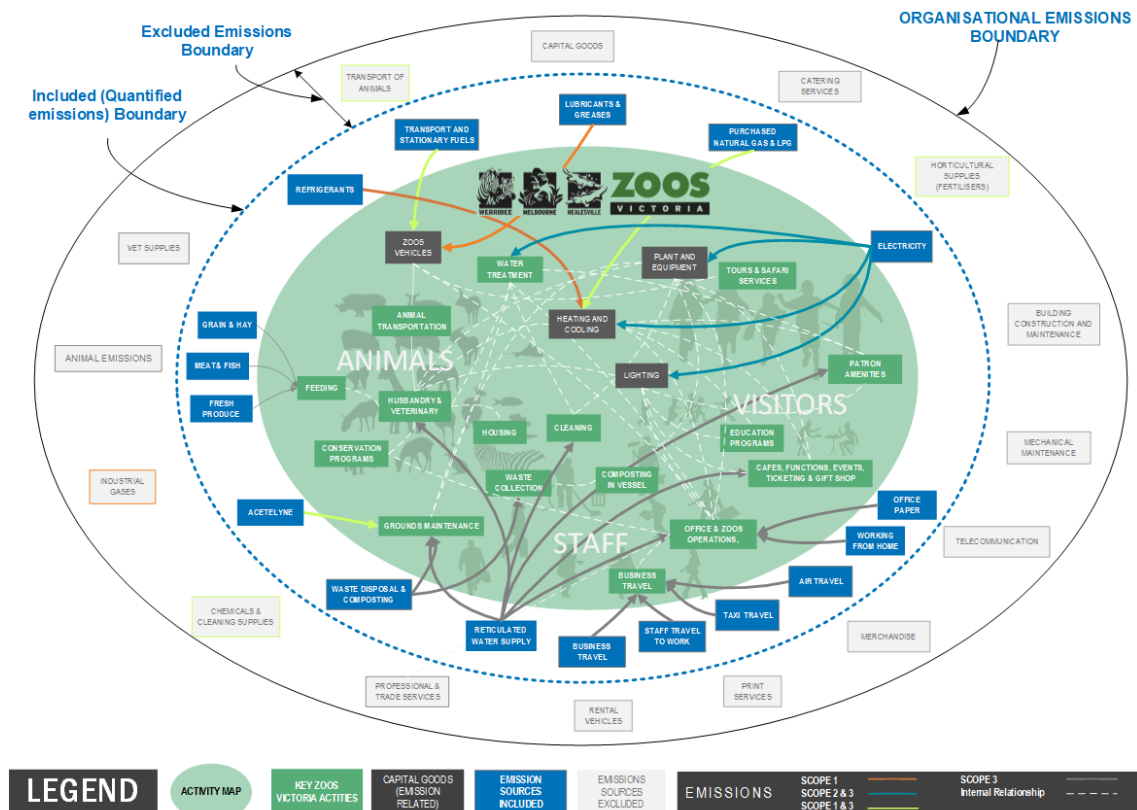
All emission sources listed in the emissions boundary are part of the carbon neutral claim.

**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.



Inside emissions boundary		Outside emission boundary
<p><b><u>Quantified</u></b></p> <ul style="list-style-type: none"> <li>Fuel for vehicles</li> <li>Refrigerant losses</li> <li>Natural gas</li> <li>Liquified petroleum gas</li> <li>Acetylene</li> <li>Organics waste composting</li> <li>Greases and lubricants</li> <li>Electricity</li> <li>Municipal and Construction &amp; Demolition waste</li> <li>Air travel</li> <li>Business accommodation</li> <li>Taxi</li> <li>Office paper</li> <li>Potable water</li> <li>Staff commute to work</li> <li>Purchased animal food</li> <li>Staff working from home</li> </ul>	<p><b><u>Non-quantified</u></b></p> <ul style="list-style-type: none"> <li>None</li> </ul>	<p><b><u>Excluded</u></b></p> <ul style="list-style-type: none"> <li>Transport of animals</li> <li>Rental vehicles</li> <li>Telecommunications</li> <li>Chemicals and cleaning supplies</li> <li>Vet supplies</li> <li>Animal emissions</li> <li>Mechanical maintenance</li> <li>Industrial gasses</li> <li>Horticulture supplies</li> <li>Professional and trade services</li> <li>Print services</li> <li>Building construction</li> <li>Catering services</li> <li>Merchandise</li> <li>Capital goods</li> </ul>

### 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

Zoos Victoria uses the ISO 14001:2015 Environmental Management System (EMS) to manage its environmental performance and minimise environmental impacts including its carbon emissions. Zoos Victoria has an Environmental Policy and plans that assist in guiding the organisation towards its environmental goals, which includes:

- Maintaining carbon neutrality.
- Investments in projects such as resource efficiency, waste management and on-site renewable energy projects through our [Zoos Victoria Environmental Sustainability Prospectus](#).
- Having a Waste Management program with a target of 90% diversion rate. Emissions reduction from this initiative (scope 3) accounts for 16% reduction (2,237 tonnes CO<sub>2</sub>e/yr).
- A target of 100% renewable energy from June 2021 onwards. This is achieved through a combination of on-site solar, a Power Purchase Agreement (PPA) for renewable energy produced from a wind farm and accredited GreenPower. The 675kW of on-site solar PV was installed across our three zoos reducing scope 2 and 3 emissions by 4% or 566 tonnes CO<sub>2</sub>e. Our PPA for electricity and LGCs from the Crowlands Wind farm for Healesville Sanctuary reduces scope 2 and 3 emissions by 8% or 1,049 tonnes CO<sub>2</sub>e. GreenPower for Melbourne Zoo and Werribee Open Range Zoo reduced emissions (scope 2 and 3) by 42% or 5,753 tonnes CO<sub>2</sub>e in 2012-22.
- Having an Environmental, Social and Governance Procurement Framework to progress sustainable procurement considering life cycle impacts (including carbon) from services and products we use.
- Encouraging staff and contractors to improve our overall environmental performance by providing training and awareness.
- Maintaining our water recycling program at Melbourne Zoo, recycling 90.6ML waste water to Class A recycled water for reuse in irrigation, refilling water bodies and cleaning exhibits.

Zoos Victoria have now reduced its greenhouse gas emissions by 71% from baseline year. A revised strategy will be developed in line with Zoos Victoria's Environmental Sustainability Prospectus 2024-2029. There will be an emphasis on further decarbonisation of gas and vehicle fuels.

### Emissions reduction actions

Summary of emissions reduction actions:

- Zoos Victoria has reduced greenhouse gas emissions by 71% from baseline year.
- From 1<sup>st</sup> July 2021, Zoos Victoria is powered by 100% renewable electricity. This is from a combination of the Greenpower, together with 675 kW of onsite solar PV and a PPA for renewable energy for Healesville Sanctuary.
- Progressing Environmental, Social and Governance (ESG) Procurement Framework to reduce life-cycle impacts (including emissions) from products and services we procure.
- Continuous improvement through our certified ISO14001:2015 Environmental Management System which includes management of programs such as reducing waste to landfill and water efficiency and energy efficiency.

## 5. EMISSIONS SUMMARY

### Emissions over time

Emissions since base year		Total tCO <sub>2</sub> -e
Base year:	2011-12	14,913.8
Year 1:	2012-13	14,730.8
Year 2:	2013-14	14,803.1
Year 3:	2014-15	14,560.3
Year 4:	2015-16	14,783.3
Year 5:	2016-17	14,306.5
Year 6:	2017-18	14,646.9
Year 7:	2018-19	12,245.3
Year 8:	2019-20	8,515.8
Year 9:	2020-21	7,964.8
Year 10:	2021-22	4,260.0

### Significant changes in emissions

Emission source	Previous reporting period		This reporting period		% change from previous year activity data	% contribution to inventory	Reason for change	Detailed reason for change
	Activity Data	Total Emissions (kg CO <sub>2</sub> -e)	Activity Data	Total Emissions (kg CO <sub>2</sub> -e)				
Meat	kg	779,248.20	kg	675,578.19	-13%	12%	organic growth	Animal need changes and efficiency program.
Natural Gas VIC (metro) (GJ)	GJ	639,653.40	GJ	941,793.09	47%	16%	climatic reasons	Animal heating welfare requirements due to colder climate
Diesel oil post-2004	kL	347,776.90	kL	316,174.79	-9%	6%	other (please explain)	Less diesel vehicle use in general fleet. But overall contribution increased due to going 100% renewable energy.
Medium Car: unknown fuel	km	463,728.74	km	823,106.57	41%	14%	Climate Active emission factor change	Changed calculation of staff travel to work using Climate Active calculator.
General waste (municipal waste)	Tonne	356,616.00	Tonne	462,016.00	30%	8%	organic growth	Increased visitation and activity after COVID19 lockdowns.
Water supply and wastewater treatment - Melbourne	kL	392,184.60	kL	367,893.65	-6%	6%	climatic reasons	Decrease consumption due to climatic reasons. But overall contribution increased due to going 100% renewable energy.
Total net electricity emissions (Market based)	kg CO <sub>2</sub> e	4378711	kg CO <sub>2</sub> e	0	-100%	0%	green procurement	GreenPower procurement.



## Use of Climate Active carbon neutral products and services

Certified brand name	Product or Service used
N/A	

## Organisation emissions summary

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	4.50	4.50
Electricity	0.00	0.00	0.00	0.00
Food	0.00	0.00	724.97	724.97
Horticulture and Agriculture	0.00	0.00	158.30	158.30
Office equipment & supplies	0.00	0.00	3.31	3.31
Refrigerants	269.87	0.00	0.00	269.87
Stationary Energy (gaseous fuels)	874.04	0.00	67.85	941.88
Stationary Energy (liquid fuels)	29.20	0.00	1.78	30.98
Transport (Air)	0.00	0.00	23.41	23.41
Transport (Land and Sea)	327.21	0.00	890.83	1218.04
Waste	0.00	0.00	466.04	466.04
Water	0.00	0.00	367.89	367.89
Working from home	0.00	0.00	-18.19	-18.19
Composting on Site	69.04	0.00	0.00	69.04
<b>Grand Total</b>	<b>1569.36</b>	<b>0.00</b>	<b>2690.69</b>	<b>4260.05</b>

## Uplift factors

N/A.

## 6. CARBON OFFSETS

### Offsets retirement approach

In arrears	
1. Total number of eligible offsets banked from last year's report	3,471
2. Total emissions footprint to offset for this report	4,261
3. Total eligible offsets required for this report	790
4. Total eligible offsets purchased and retired for this report	5,000
5. Total eligible offsets banked to use toward next year's report	4,210

### Co-benefits

#### **Kariba REDD+ project, Zimbabwe**

This is a world's largest forest conservation project covering 785,000 hectares of forest. The project area is an important wildlife area with populations of elephants, lions, impalas, hippos and crocodiles along with a wide variety of birds. Threatened species include the critically endangered Black Rhino, endangered African Wild Dog and vulnerable species such as the Cheetah, Lion, Hippo, Elephant, Southern Ground Hornbill, Lappet-faced Vulture, and White-headed Vulture. The project area also serves as a wildlife corridor between national parks such as Mana Pools, Matsadona and Chizarira national parks. Social benefits include education programs on farming techniques to increase productivity and nutritional value of crops, and support to develop sustainable businesses that align with conservation goals. Funds from the project are also invested in infrastructure to support social needs. They include renovation of schools, subsidising of school fees and dedicating a health and education fund to benefit the poorest members of the community.

#### **Rimba Raya Biodiversity Project**

The project aims to protect and preserve 64,977ha of tropical lowland peat swamp forests; home of the endangered Borneo Orang-utan and other RED listed species. These forests are one of the most highly endangered ecosystems in the world. The Rimba Raya project also provides alternative income streams through capacity building, investments in micro-finance, programs that provide necessities and access to a conservation model that does not put the developing world's need for economic growth at odds with the desire to protect this fragile ecosystem.

## 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 (%)
Rimba Raya Biodiversity Reserve Project	VCU	VERRA	26 Oct 2021	<a href="#">7627-414485938-414490437-VCU-016-MER-ID-14-674-01072014-31122014-1</a>	2014	-	4,500	1,029	0	3,471	81.5%
KARIBA REDD+ PROJECT - Zimbabwe	VCU	VERRA	14 Nov 2022	<a href="#">13714-522756258-522758757-VCS-VCU-352-VER-ZW-14-902-01072014-31122014-1</a>	2014	-	2,500	0	2,500	0	0%
Rimba Raya Biodiversity Reserve Project	VCU	VERRA	14 Nov 2022	<a href="#">7627-414193806-414196305-VCU-016-MER-ID-14-674-01072014-31122014-1</a>	2014	-	2,500	0	1,710	790	18.5%
<b>Total offsets retired this report and used in this report</b>										4,261	
<b>Total offsets retired this report and banked for future reports</b>									4210		
Type of offset units		Quantity (used for this reporting period claim)					Percentage of total				
Verified Carbon Units (VCUs)		4,261					100%				

## 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.

<b>1. Large-scale Generation certificates (LGCs)*</b>	1,152
<b>2. Other RECs</b>	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
Wind Farm	LGC	REC Registry	1/4/2022	WD00VC32	197023-197310	2021	288	Wind	Victoria, Australia
Wind Farm	LGC	REC Registry	1/4/2022	WD00VC32	217184-217465	2021	282	Wind	Victoria, Australia
Wind Farm	LGC	REC Registry	March 2023	WD00VC32	216314-216584	2021	271	Wind	Victoria, Australia
Wind Farm	LGC	REC Registry	March 2023	WD00VC32	222037-222347	2021	311	Wind	Victoria, Australia
<b>Total LGCs surrendered this report and used in this report</b>							<b>1,152</b>		

## 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	593,829	0	8%
<b>Total non-grid electricity</b>	<b>593,829</b>	<b>0</b>	<b>8%</b>
LGC Purchased and retired (kWh) (including PPAs & Precinct LGCs)	1,152,570	0	15%
GreenPower	6,322,366	0	85%
Jurisdictional renewables (LGCs retired)	0	0	0%
Jurisdictional renewables (LRET) (applied to ACT grid electricity)	0	0	0%
Large Scale Renewable Energy Target (applied to grid electricity only)	1,279,197	0	17%
Residual Electricity	-1,873,032	-1,863,599	-25%
<b>Total grid electricity</b>	<b>6,881,102</b>	<b>-1,863,599</b>	<b>92%</b>
<b>Total Electricity Consumed (grid + non grid)</b>	<b>7,474,930</b>	<b>-1,863,599</b>	<b>125%</b>
Electricity renewables	9,347,962	0	
Residual Electricity	-1,873,032	-1,863,599	
<b>Exported on-site generated electricity</b>	<b>53,732</b>	<b>-39,225</b>	
Emissions (kgCO <sub>2</sub> e)		0	
<b>Total renewables (grid and non-grid)</b>	<b>125.06%</b>		
<b>Mandatory</b>	<b>17.11%</b>		
<b>Voluntary</b>	<b>100.00%</b>		
<b>Behind the meter</b>	<b>7.94%</b>		
<b>Residual Electricity Emission Footprint (TCO<sub>2</sub>e)</b>	<b>0</b>		

*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 (kgCO2e)	Scope 3 Emissions (kgCO2e)
Vic	6,881,102	6,261,802	688,110
<b>Grid electricity (scope 2 and 3)</b>	<b>6,881,102</b>	<b>6,261,802</b>	<b>688,110</b>
Vic	593,829	0	0
<b>Non-grid electricity (Behind the meter)</b>	<b>593,829</b>	<b>0</b>	<b>0</b>
<b>Total Electricity Consumed</b>	<b>7,474,930</b>	<b>6,261,802</b>	<b>688,110</b>

<b>Emission Footprint (TCO2e)</b>	<b>6,950</b>
Scope 2 Emissions (TCO2e)	6262
Scope 3 Emissions (TCO2e)	688

### Climate Active Carbon Neutral Electricity summary

Carbon Neutral electricity offset by Climate Active Product	Activity Data (kWh)	Emissions (kgCO2e)
None	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. 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
None				



# 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.

Emission sources tested for relevance	(1) Size	(2) Influence	(3) Risk	(4) Stakeholders	(5) Outsourcing	Included in boundary?
Transport of Animals	No	No	No	No	No	No
Rental vehicle	No	No	No	No	No	No
Telecommunications	No	No	No	No	No	No
Chemicals and Cleaning Chemicals	No	No	No	No	No	No
Vet Supplies	No	No	No	No	No	No
Animal Emissions	No	No	No	No	No	No
Mechanical Maintenance	No	No	No	No	No	No
Industrial Gasses	No	No	No	No	No	No
Horticulture Supplies	No	No	No	No	No	No
Professional & Trade Services	No	No	No	No	Yes	No

Print Services	No	Yes	No	No	No	No
Building Construction	No	Yes	No	No	No	No
Catering Services	No	Yes	No	No	No	No
Merchandise	No	No	No	No	No	No
Capital Goods	No	No	No	No	No	No



An Australian Government Initiative

