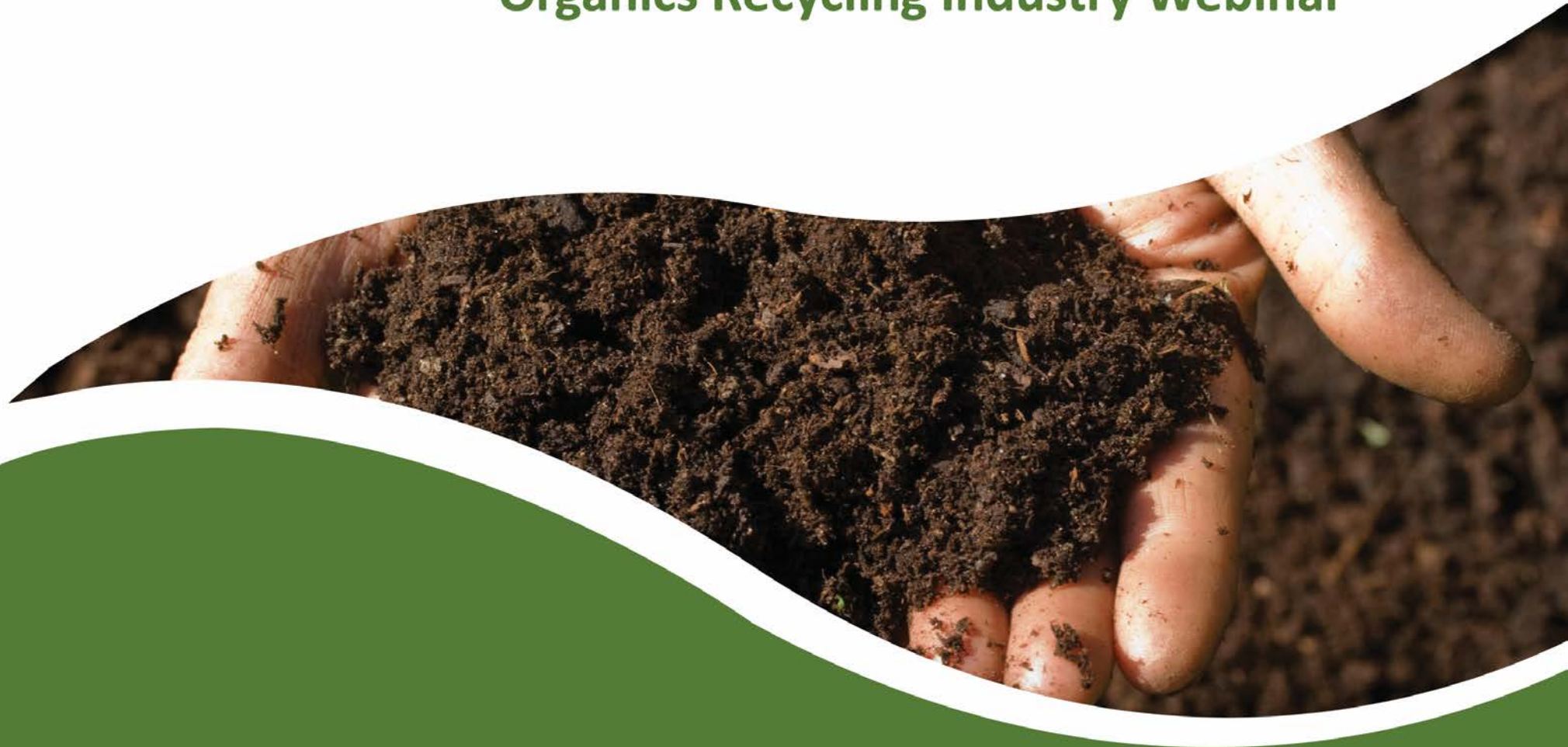




Welcome to the Economic Contribution of the Australian Organics Recycling Industry Webinar

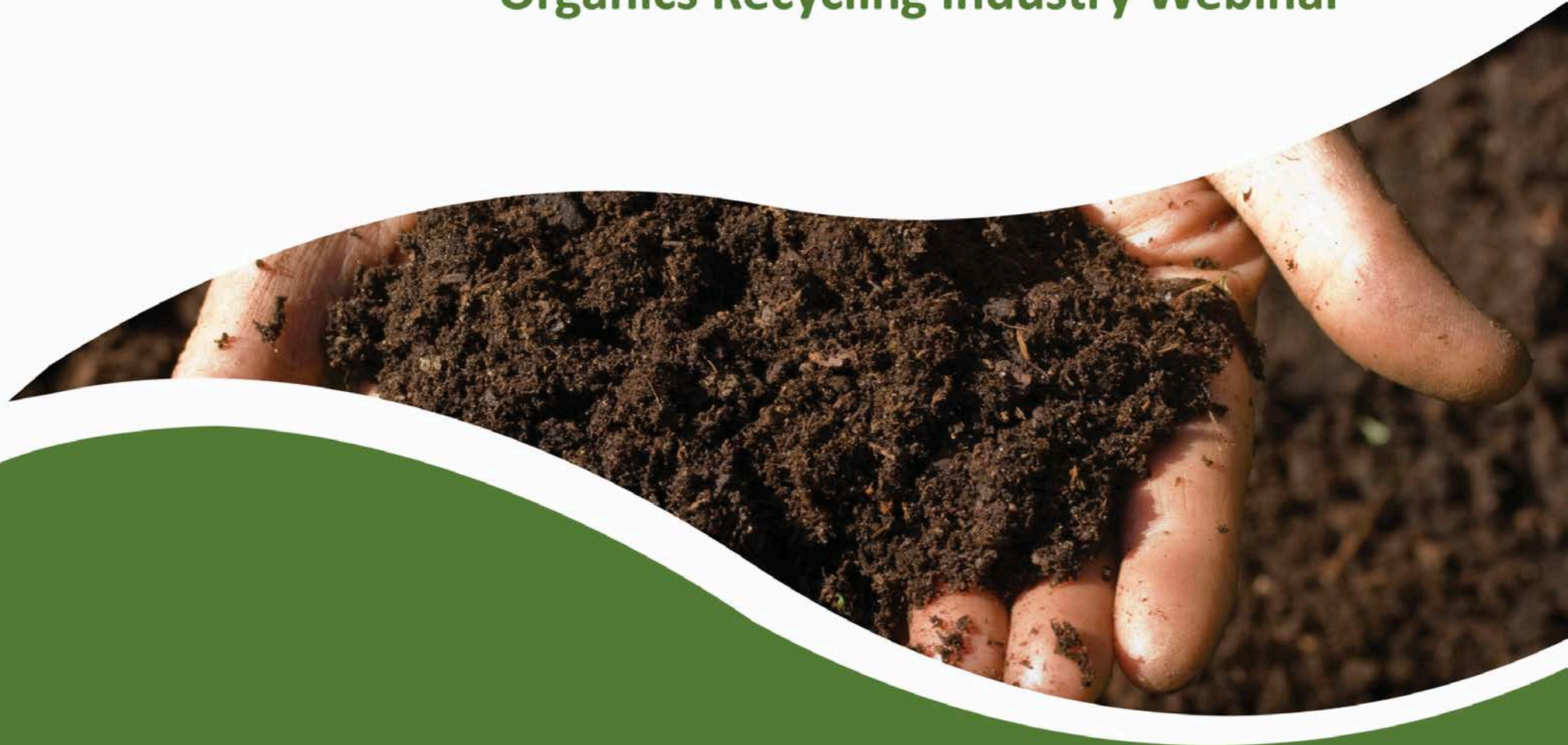


The Economic Contribution of the Australian and Western Australia Organics Recycling Industries

10.00 am	Welcome
10.05 am	Presentation
10.40 am	Question and Answer Session
10.55 am	Closing



Welcome to the Economic Contribution of the Australian Organics Recycling Industry Webinar



AORI in 2018-19 recycled 7,519 kilotons of organic material - a 1.4 per cent increase on the previous financial year.

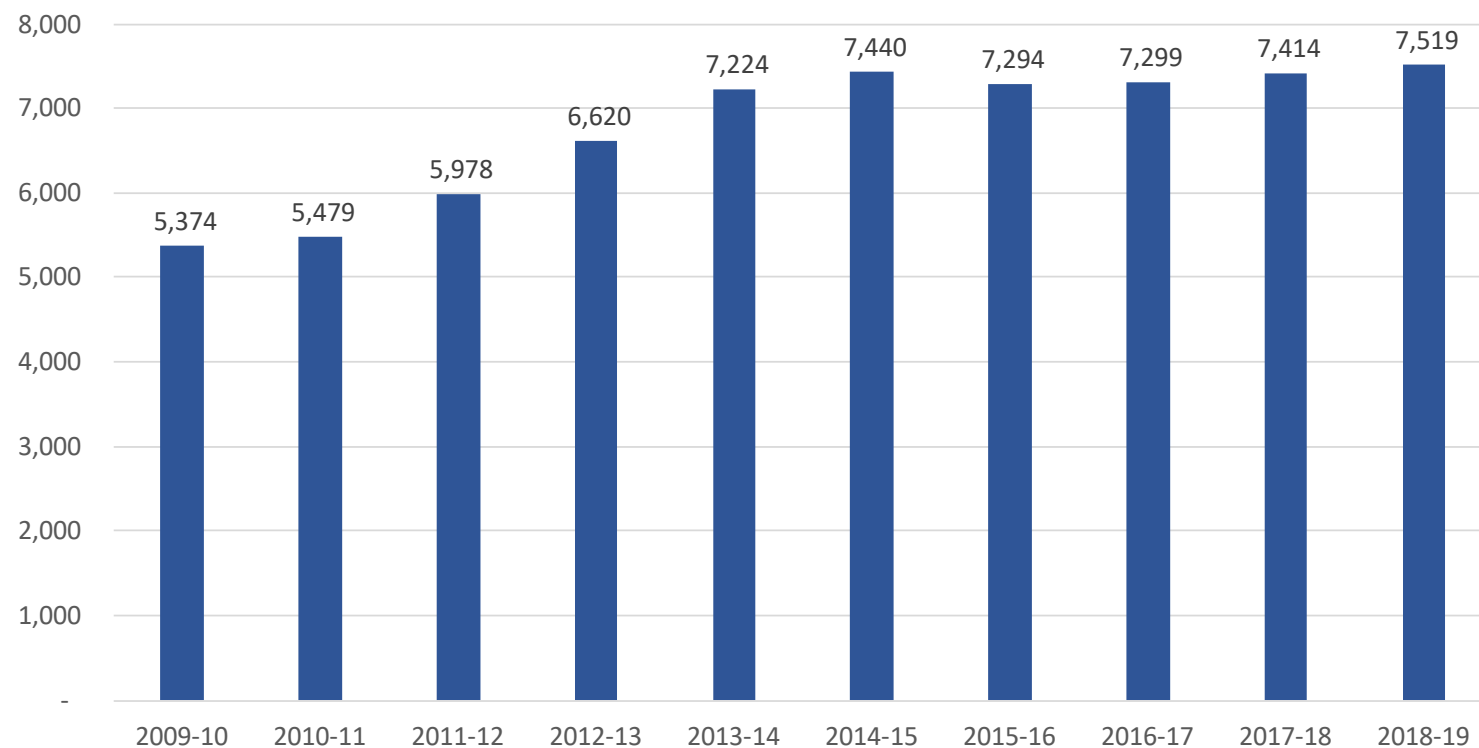
Across the decade AORI's recycled material has grown by 3.4 per cent each year and compares to Australia's average population growth rate over the same period of 1.4 per cent.

The noticeably higher growth rate for organic material recycled is largely representative of an increasingly higher portion of organic material being recycled.

This has been driven by:

- population growth;
- economic growth;
- technological change;
- access to recycling markets;
- Local Gov collection changes; and
- C/W & State Gov waste and carbon reduction policies.

Kilotons of Organic Material Recycled in Australia



In 2018-19 Australia produced 14.6 million tonnes of organic waste of which:

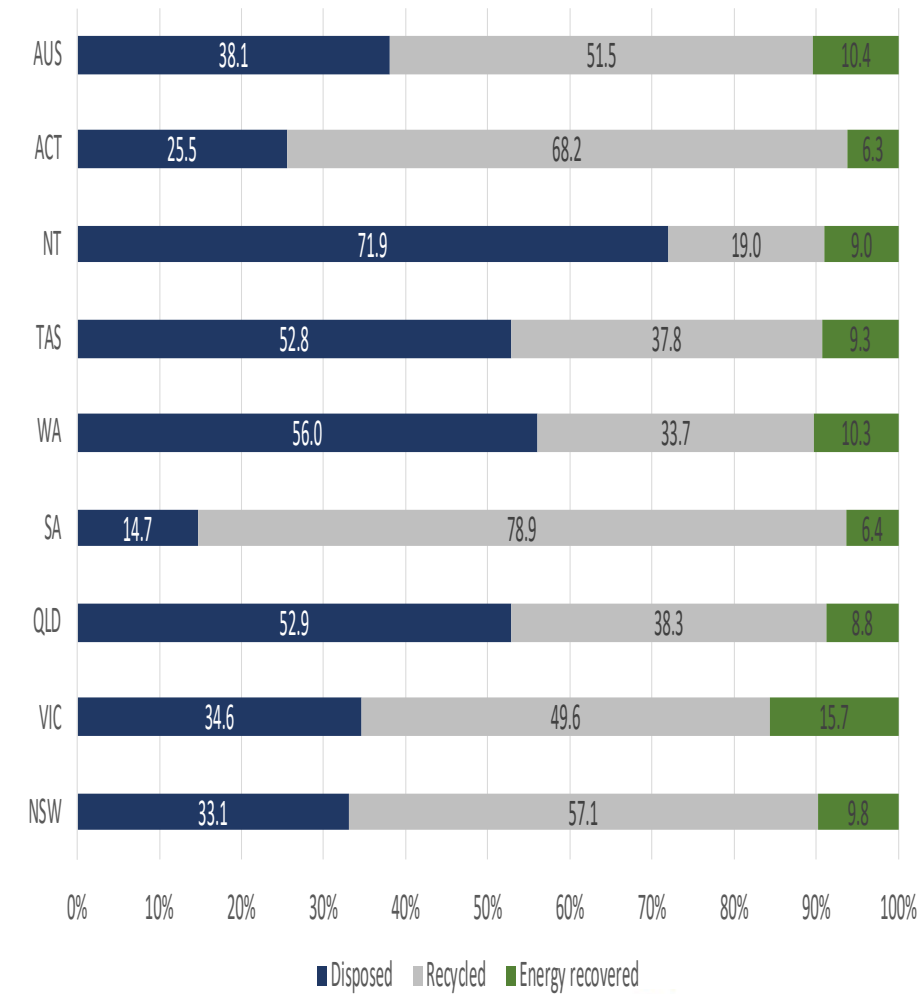
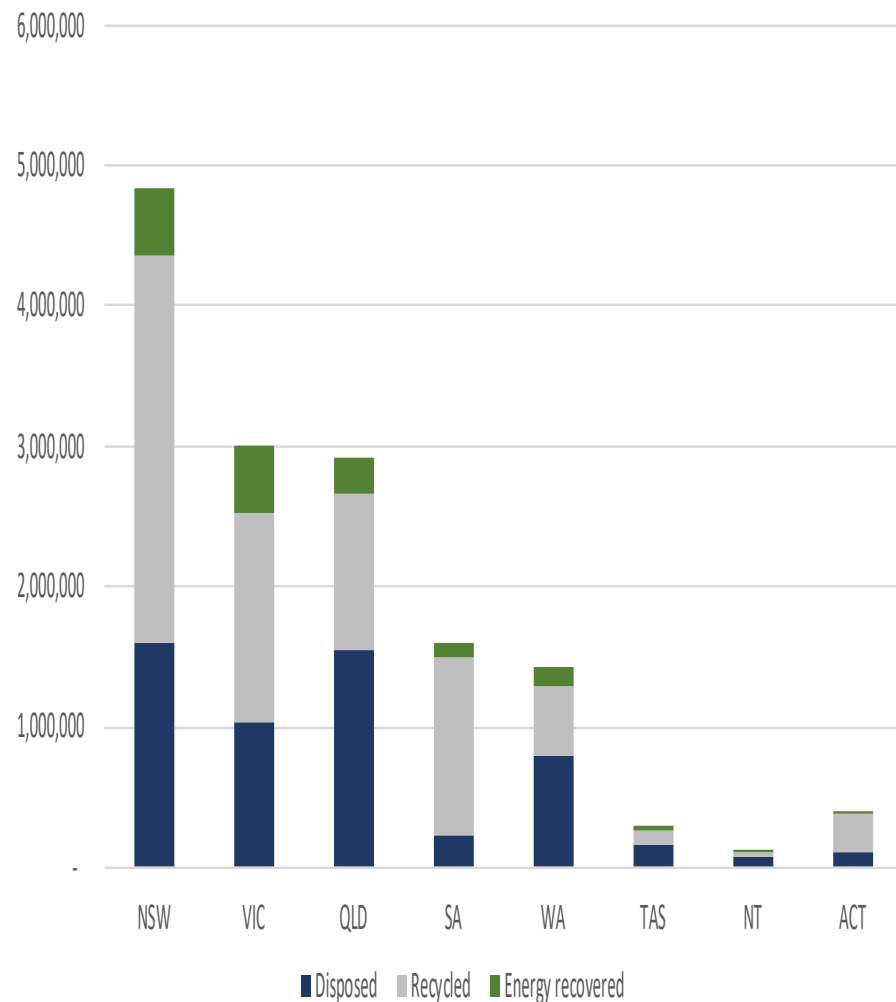
- 5.6 million tonnes was sent to landfill,
- 7.5 million was recycled and
- 1.5 million tonnes recovered through energy.

Australia's overall organic material recycling rate was 51.5 per cent and the recovered rate was 61.9 per cent.

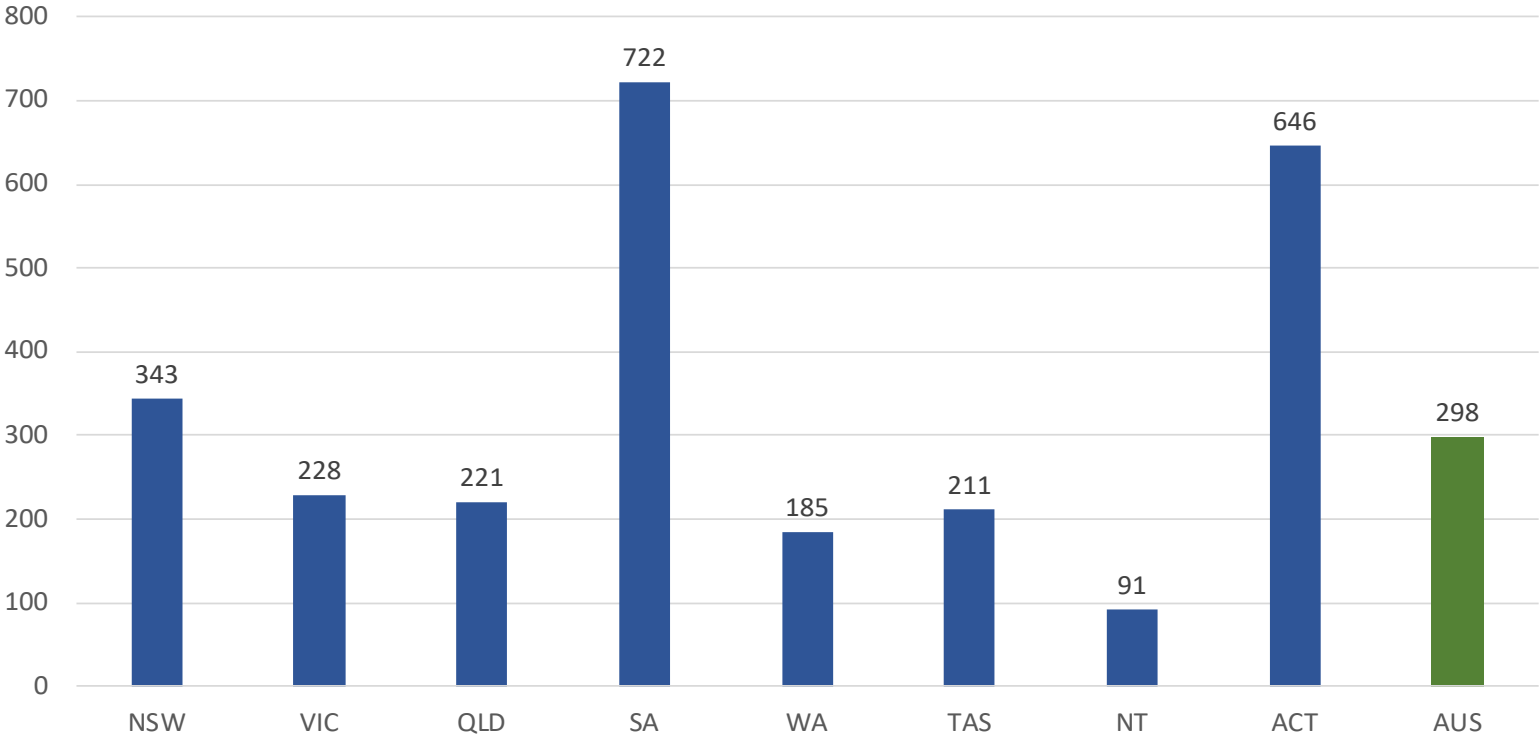
South Australia currently has the highest organics material recycling rate at 78.9 per cent, followed by the ACT (68.2%), NSW (57.1%), Victoria 49.6%, Queensland (38.3%) Tasmania (37.8%) and Western Australia (33.7%).

The Northern Territory had the lowest organics recycling rate at 19 per cent in 2018-19.

Organic material recycled & energy recovered in 2018-19 (tonnes and recycling rate)



Kilograms of Organic Material Recycled Per Head of Population 2018-19



On a per head of population basis, South Australia is the Australian leader recycling 722 kilograms per person each year

WA is only 185 kilograms per person.

This compares to the Australian average of 298 kilograms per person.

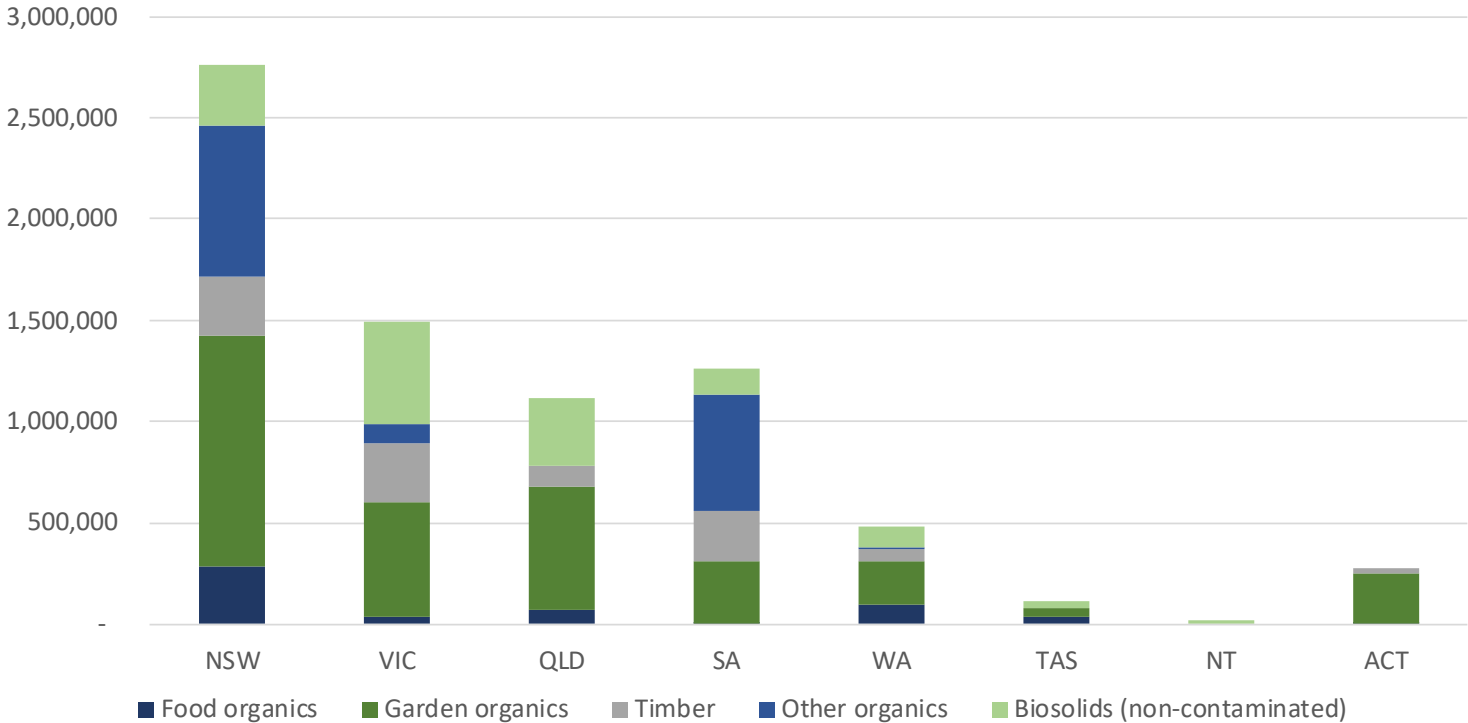




Why is South Australia our nation's leader?

Landfill Levy (2018-19)	Strategy Document	Other		
<p>Metro Adelaide:</p> <ul style="list-style-type: none"> • Solid waste \$100/t • Shredder flocculant \$62/t <p>Non-metro Adelaide:</p> <ul style="list-style-type: none"> • Solid waste \$50/t • Shredder flocculant \$31/t <p>No levy for packaged asbestos waste</p>	<p><i>South Australia's Waste Strategy 2015-2020</i></p> <p>By 2020:</p> <ul style="list-style-type: none"> • 35% reduction in landfill disposal from 2002-03 level • 5% reduction in waste generation per capita (from 2015 baseline) • landfill diversion targets in the metro area are: <ul style="list-style-type: none"> - 70% for MSW - 80% for C&I - 90% for C&D • maximise diversion in non-metro area. 	Container deposit scheme	✓	Introduced 1977
		Landfill bans	✓	Ban on a range of hazardous, problematic and recyclable materials, including most e-waste
		Single-use shopping bag ban	✓	Introduced May 2009
		Hazardous waste tracking	✓	
		Household chemical collections	✓	Statewide household chemical drop-off

Tonnes of Total Organic Material Recycled by Material 2018-19



Garden organics makes up the largest portion of organic materials recycled nationally comprising 41.6 per cent of materials followed by:

- biosolids (18.8%);
- timber (13.7%); and
- food organics with 7.2 per cent.

Garden organics represents the largest percentage of recycled materials in each of the Australian States.

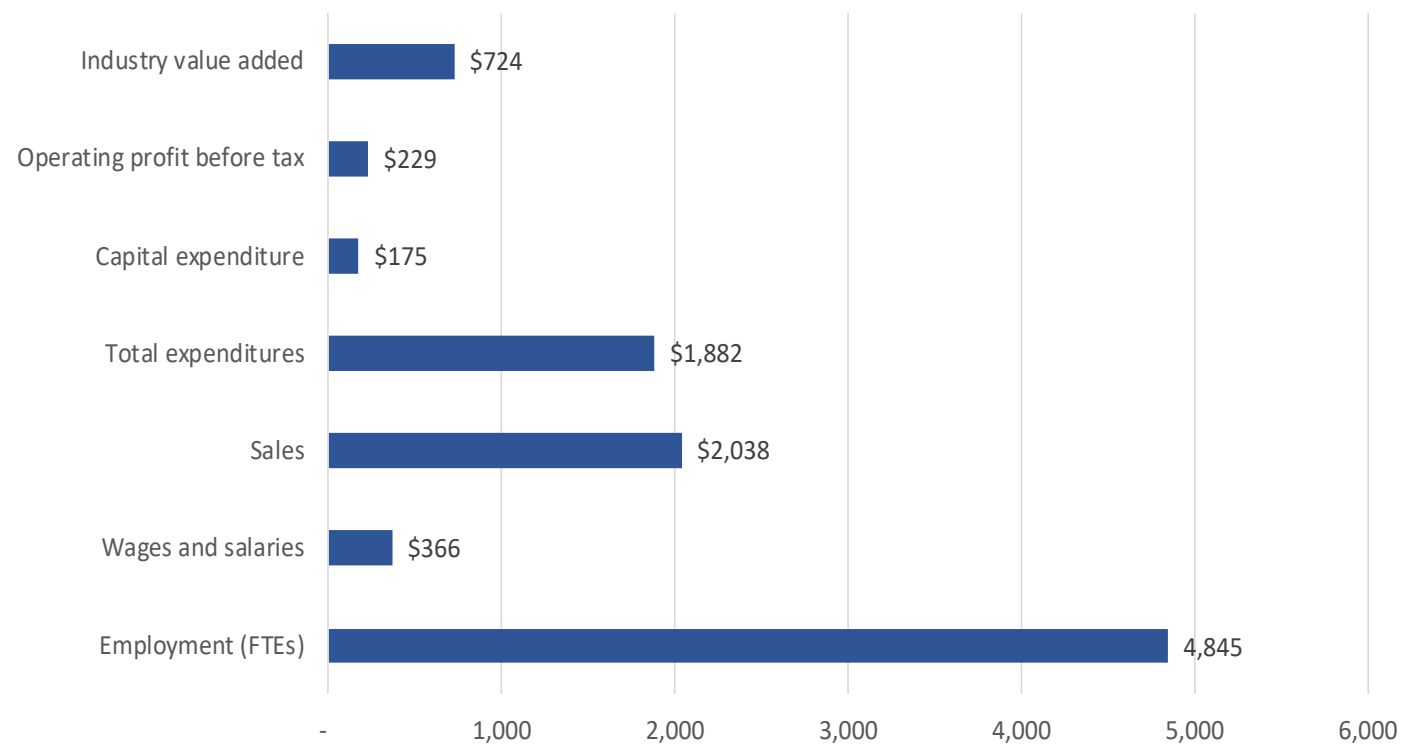


AORI is an important contributor to the Australian economy.

Results of a macro-economic analysis of the Industry reveal it is providing:

- 4,845 jobs to Australian residents, paying over a \$366 million in wages and salaries;
- Providing a livelihood to each employee within the industry of \$75,540;
- Has a collective industry turnover of over \$2 billion;
- Sourcing \$1.9 billion across its supply chain,
- Investing \$175 million in land, buildings, plant and equipment and vehicles each year; and
- Contributing \$724 million in industry value add to the Australian economy.

Contribution of Australian Organics Recycling Industry 2018-19 key economic metrics (\$ millions)



Economic contribution to Australian Economy 2009-10 to 2018-19 (\$ millions – current prices)

	Employment at end of June	Wages and salaries	Sales	Expenditure	Capital expenditure	Operating profit before tax	Industry value added
2009-10	3,466	262	1,458	1,347	125	164	518
2010-11	3,534	267	1,487	1,373	127	167	528
2011-12	3,856	291	1,622	1,498	139	182	576
2012-13	4,270	323	1,796	1,659	154	202	638
2013-14	4,660	352	1,960	1,810	168	220	697
2014-15	4,799	363	2,019	1,864	173	227	717
2015-16	4,706	356	1,980	1,828	170	222	704
2016-17	4,703	356	1,978	1,827	170	222	703
2017-18	4,777	361	2,010	1,856	172	226	714
2018-19	4,845	366	2,038	1,882	175	229	724

These economic metrics have collectively and progressively grown since 2009-10.

Growth over this period has been in the order of 40 per cent and compares with:

- GDP growth of 50 per cent;
- Population growth of 17 per cent; and
- CPI growth of 20 per cent.

COVID-19 Economic Crisis due to social distancing restrictions impacting on:

Commercial organic waste:

(restaurants, schools, universities, clubs, hotels etc)

Restrictions are now starting to be eased.

MSW largely influenced by population growth and behavior.

COVID-19 Economic Crisis solution is largely dependent upon COVID-19 pandemic resolution.

Reserve Bank of Australia

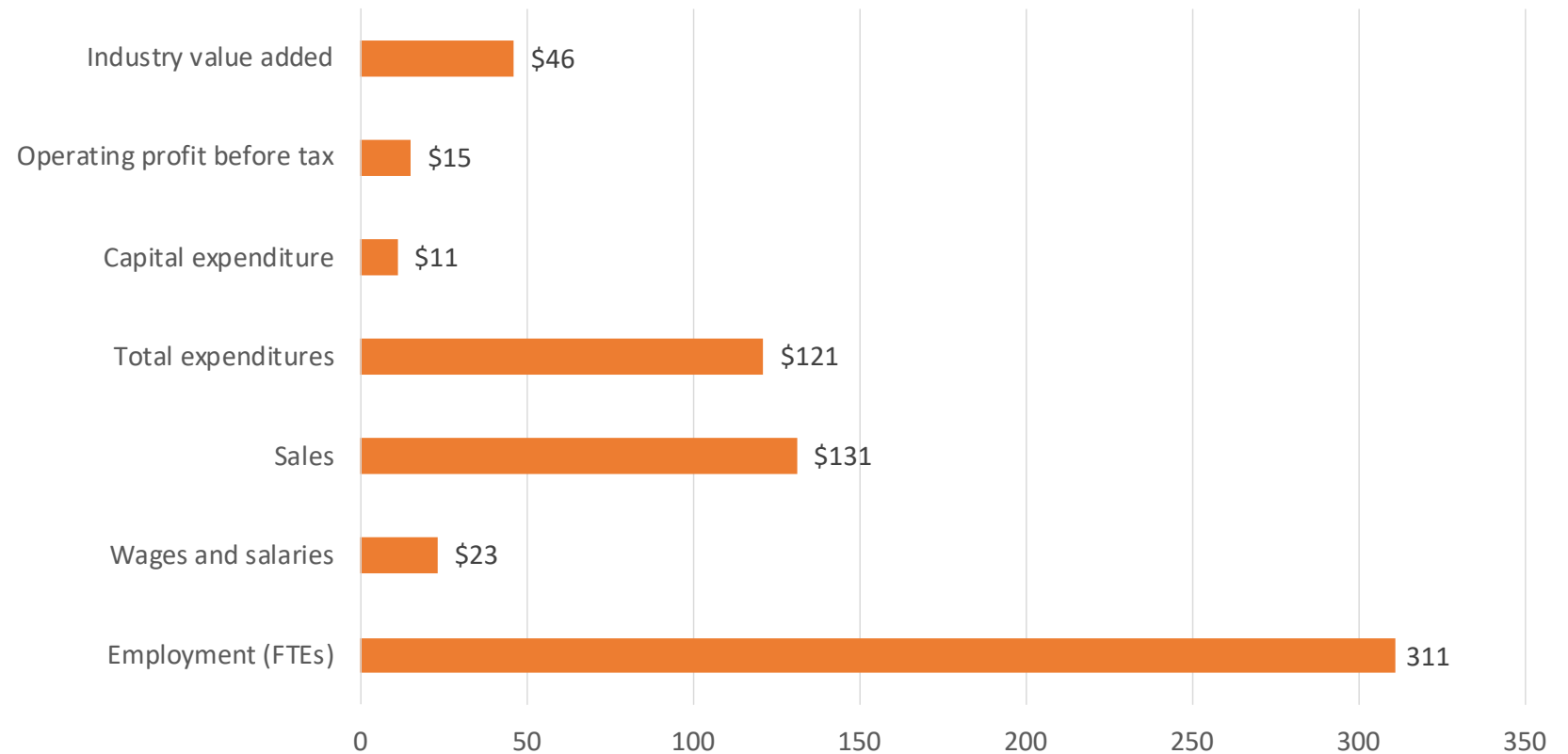
Output Growth and Inflation Baseline Forecasts (per cent)

	Year-ended					
	Dec 2019	June 2020	Dec 2020	June 2021	Dec 2021	June 2022
GDP growth	2.2	-8	-6	7	6	5
(previous)	(2)	(2)	(2¾)	(3)	(3)	(3)
Unemployment rate ^(c)	5.2	10	9	8½	7½	6½
(previous)	(5.2)	(5¼)	(5)	(5)	(4¾)	(4¾)
CPI inflation	1.8	-1	¼	2¾	1¼	1½
(previous)	(1.8)	(1¾)	(1¾)	(1¾)	(2)	(2)
Trimmed mean inflation	1.6	1½	1¼	1¼	1¼	1½
(previous)	(1.6)	(1¾)	(1¾)	(1¾)	(2)	(2)
	Year-average					
	2019	2019/20	2020	2020/21	2021	2021/22
GDP growth	1.8	-1	-5	-3	4	6
(previous)	(1¾)	(2)	(2¼)	(2¾)	(3)	(3)

WA's ORI is an important but largely unrealised contributor to the Western Australian economy. Results reveal it is providing:

- 311 jobs to WA residents, paying over a \$23 million in wages and salaries;
- Has a collective industry turnover of over \$131 million;
- Sourcing \$121 million across its supply chain,
- Investing \$11 million in land, buildings, plant and equipment and vehicles each year and
- Contributing \$46 million in industry value add to the VIC economy.

Contribution of the Western Australian Organics Recycling Industry 2018-19 key economic metrics (\$ millions)



Economic contribution by State in 2018-19 (\$ millions)

	Employment at end of June	Wages and salaries	Sales	Expenditure	Capital expenditure	Operating profit before tax	Industry value added
NSW	1,778	134	748	691	64	84	266
VIC	960	73	404	373	35	45	144
QLD	720	54	303	280	26	34	108
SA	812	61	342	315	29	38	121
WA	311	23	131	121	11	15	46
TAS	72	5	30	28	3	3	11
NT	15	1	6	6	1	1	2
ACT	177	13	74	69	6	8	26
AUS	4,845	366	2,038	1,882	175	229	724

The infancy of Western Australia's organic recycling industry is highlighted by its economic contribution relative to other Australian states.

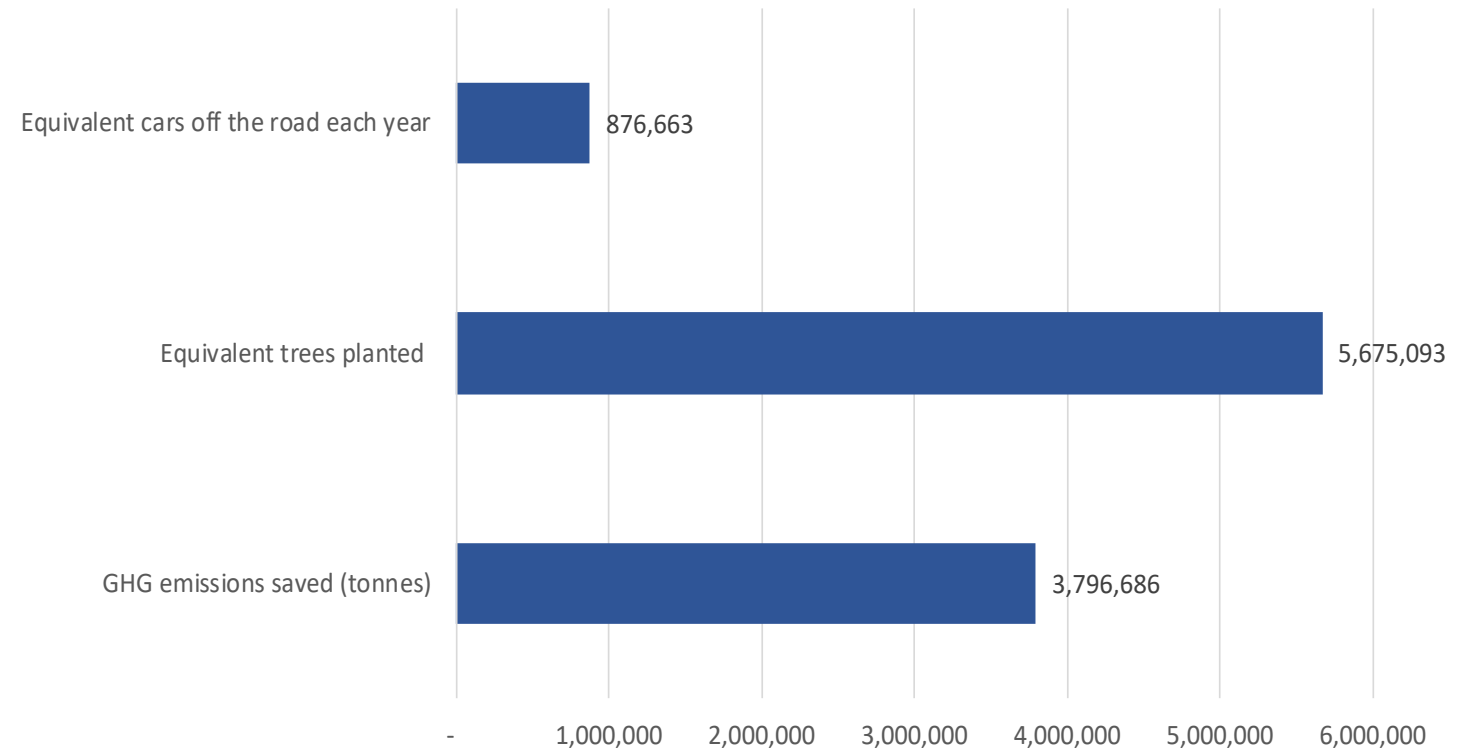
- WA metrics account for approx. 6.4 per cent of Australia's total.
- WA's GSP as a percentage of AUS GDP is 14.6 per cent.
- WA's population as a percentage of AUS population is 10.3 per cent.

Australian Organics Recycling Industry - Environmental Benefits 2018-19

The total estimated greenhouse gas savings from organics recycling of materials received in Australia in 2018-19 is approximately 3.8 million tonnes of CO₂-e.

These GHG savings are considered approximately equivalent to:

- 5.7 million trees that would have to be planted to absorb the same amount of CO₂.
- The greenhouse gas emissions that 876,663 cars would produce in a year.



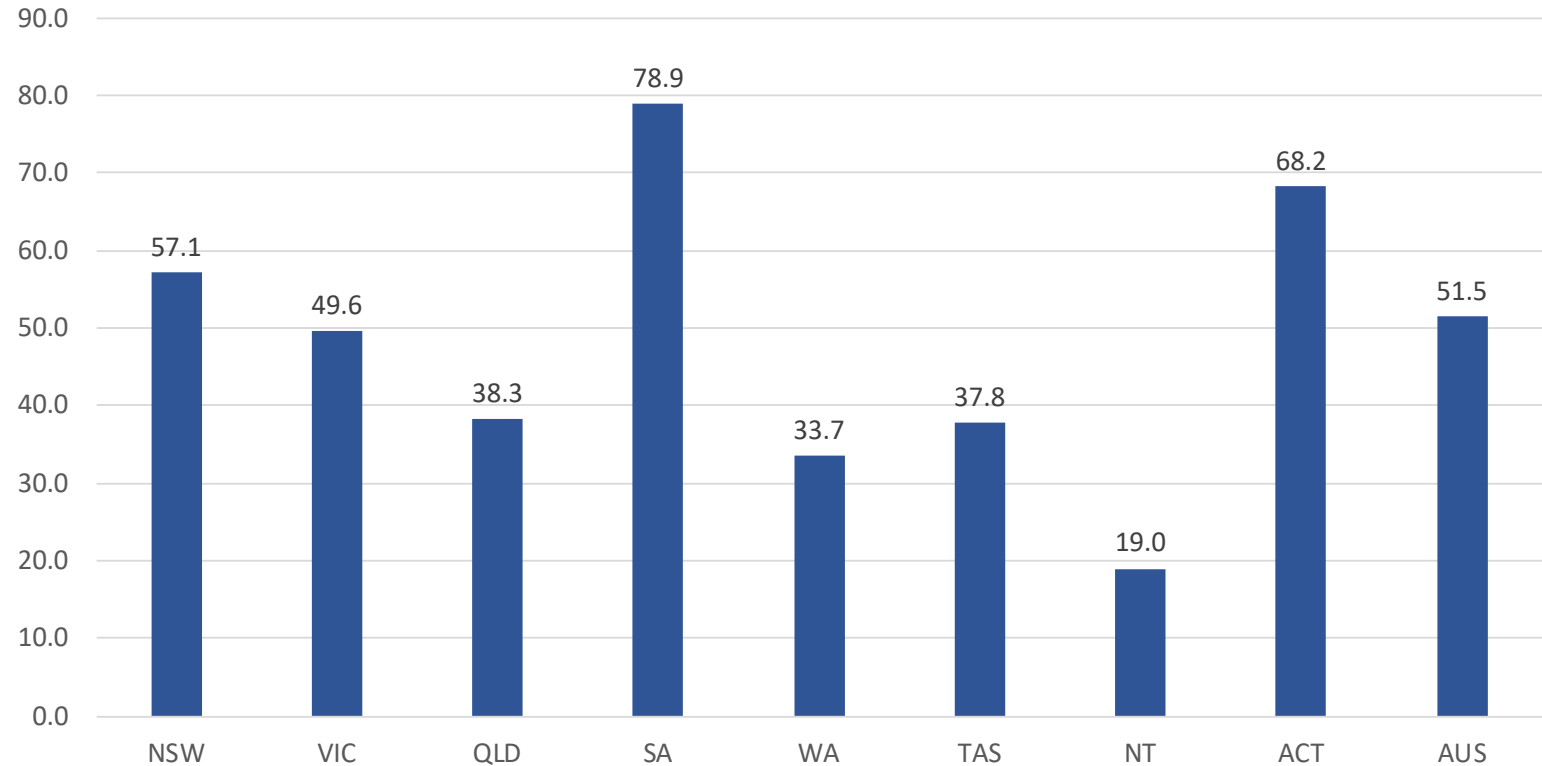
Australian Organics Recycling Industry - Environmental Benefits Summary 2018-19

The maturity of South Australia's organic recycling industry is leading to better environmental benefits than other states.

Conversely the infancy of Western Australia's organic recycling industry means that the potential benefits to the environment are not fully realised.

	GHG emissions saved (tonnes)	Equivalent trees planted required for carbon absorption	Equivalent cars off the road each year
NSW	1,393,438	2,082,840	321,748
VIC	752,447	1,124,719	173,742
QLD	564,708	844,096	130,392
SA	636,229	951,003	146,907
WA	243,431	363,868	56,209
TAS	56,628	84,645	13,076
NT	11,290	16,876	2,607
ACT	138,516	207,046	31,984
AUS	3,796,686	5,675,093	876,663

Organic material recycling rates in 2018-19



Utilising the economic and environment benefit metrics modelled AORA has recalculated the metrics after increasing the tonnes of organic material recycled to achieve a:

- 70 per cent;
- 80 per cent;
- 90 per cent; and
- 95 per cent recycling rate in each State.

Economic Gain by State (\$ millions) – 95 per cent recycling rate

If all Australian states were able to achieve 95 per cent recycling rate for organic material the Australian economy would benefit from:

- Organics recycling businesses would generate an extra \$1.7 billion in sales providing an additional \$1.6 billion in supply chain opportunity with an extra \$612 million in industry value add towards the Australian economy;
- Organics recycling businesses would provide 4,094 extra jobs paying \$309 million in livelihood to everyday Australians.

	Employment at end of June (FTE)	Wages and salaries	Sales	Expenditure	Capital expenditure	Operating profit before tax	Industry value added
NSW	1,181	89	497	459	43	56	177
VIC	878	66	369	341	32	41	131
QLD	1,068	81	449	415	39	50	160
SA	166	13	70	64	6	8	25
WA	566	43	238	220	20	27	85
TAS	109	8	46	42	4	5	16
NT	58	4	24	23	2	3	9
ACT	69	5	29	27	3	3	10
AUS	4,094	309	1,722	1,590	148	193	612

Environmental Benefits – 95 per cent recycling rate

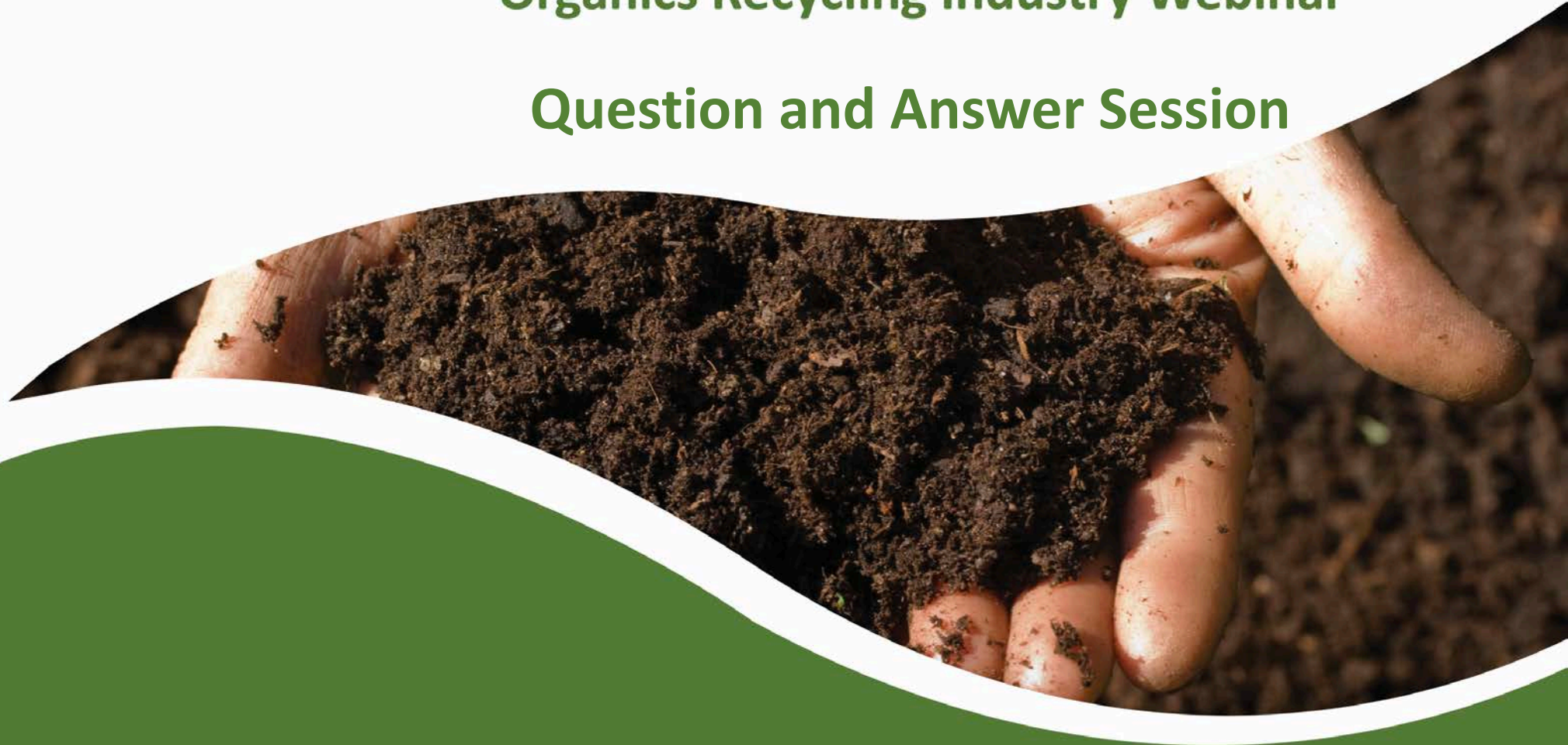
If all Australian states were able to achieve 95 per cent recycling rate for organic material the Australian environment would benefit from an extra 3,208,451 tonnes of greenhouse gas emissions saved which is equivalent to:

- 4,797,587 trees planted; and
- 741,524 cars taken off the road each year.

	GHG emissions saved (tonnes)	Equivalent trees planted required for carbon absorption	Equivalent cars off the road each year
NSW	925,170	1,383,479	213,851
VIC	688,101	1,028,900	159,025
QLD	837,003	1,251,461	193,403
SA	129,735	194,114	30,031
WA	443,387	662,924	102,446
TAS	85,540	127,897	19,765
NT	45,032	67,325	10,403
ACT	54,483	81,487	12,599
AUS	3,208,451	4,797,587	741,524



**Welcome to the
Economic Contribution of the Australian
Organics Recycling Industry Webinar
Question and Answer Session**



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