

# Snapshot

## Environmental Performance Review – Red Meat Processing Industry 2024

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2025-1004

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## Project Description

Red meat processing is a major Australian industry, contributing more than 138,000 full time jobs in Australia, with the majority in regional Australia. It is also a major export industry with red meat and livestock exports reaching \$17.7 billion in 2022-23. The industry is a major contributor to the Australian food system.

Continual improvement in resource use efficiency and sustainability is a priority according to the Red Meat Advisory Council. Energy and water use efficiency impact production costs, profitability and competitiveness. The industry also seeks to meet community expectations in terms of climate action, protection of water quality, and local amenity.

The industry has a long history of environmental performance improvement with industry-wide reviews conducted over more than 25 years. This report continues the series of environmental performance reviews, presenting results for the financial year ending June 30, 2024.

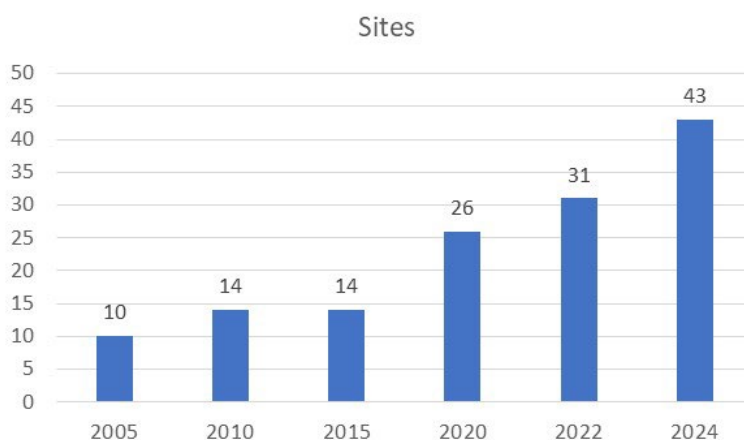
The project objectives included assessing environmental performance and evaluating critical variables, such as size of operation, and the adoption of environmental performance targets. In addition, the project contributes to environmental reporting under the Australian beef and sheep sustainability frameworks.

## Project Content

To enable performance tracking, this Environmental Performance Review followed the same approach as the previous review. AMPC contacted red meat processing facilities and invited their voluntary participation. An incentive for participation was the offer of a follow up appointment with an environmental consultant to discuss site-specific environmental improvement opportunities. The aim was to recruit as many sites as possible and obtain a broad sample that varied in terms of size of operations, animal mix, and location across Australia

The environmental aspects studied included water use, water quality, energy use, GHG emissions, waste to landfill, and the protection of local amenity (odour and noise control). Additional questions related to scope of operations as well as climate-related financial disclosures.

In total, 43 sites committed voluntarily to participate in this review, representing the highest level of participation to date, and a 38% increase in participation over 2022 (Fig. 1). These sites represented more than 68% of national production, they were located across Australia and ranged greatly in production output (Table 1). This level of industry coverage would generally be regarded as excellent, and the results are considered broadly representative of the industry overall.



**Figure 1: Number of sites participating in the AMPC Environmental Performance Review**

**Table 1: The diverse characteristics of sites included in the sample**

Parameter	Range
Annual production	From below 5,000 to almost 140,000 t HSCW
Animal mix	Beef cattle (22), Lamb <sup>1</sup> (14), Mixed (7)
Location	NSW (9), QLD (9), SA (3), TAS (3), VIC (11), WA (8)
Operations	Rendering (30), Without rendering (13)

<sup>1</sup> Some sites also processed goats and other small animals

In 2024, the red meat processing levels were 30% higher than in 2022 when difficulties in the operating environment prevailed and many plants were operating well below capacity, potentially undermining resource use efficiency and environmental performance. In making comparison to the 2022 results, these factors need to be considered. Operating conditions were more favourable in 2024, with production reaching 3.30 Mt HSCW, a 9% increase compared to 2020 when environmental performance was also reviewed.

In terms of scope of operations, on average sites produced carcasses and carcase parts (13.7%), primal cuts (82.1%) and retail ready cuts (4.1%). Around half of products left site chilled and the rest frozen. Sites also produced hides and were engaged in blood processing (81%), offal production (95%), rendering (70%), and the production of other products (77%). These other products included compost, hair, intestines, and products for medical and specialty use. New or increased production of co-products was noted at several sites.

The majority of sites currently met the NGER reporting threshold (86%). A preliminary assessment suggests that 86% of sites are also likely to meet the threshold for mandatory climate-related financial disclosure. More than half of sites expressed interest in further support from AMPC around this topic.

## Project Outcome

Overall, the 2024 results saw improvement across many key indicators (Table 2).

**Table 2: Summary of Environmental Performance indicators**

Indicator	2010	2015	2020	2022	2024
Water intake (kL/t HSCW)	9.4	8.6	7.9	8.0	7.3
Water demand met by recycling (%)	11	13	11	12	16
Untreated wastewater (mg/L)					
Phosphorus	42	33	30	36	40
Nitrogen	233	250	175	169	239
Biological oxygen demand	3707	2657	2257	2171	2344
Fats, oils and grease	1593	1780	1143	1256	959
Nutrients discharged to rivers (mg/L)					
Phosphorus		28	44	18	13
Nitrogen		47	99	31	23

Energy use (MJ/t HSCW)	4108	3005	3316	3435	2897
Energy demand met by biogas (%)			5.8	7.7	7.4
GHG emissions (kg CO <sub>2e</sub> /t HSCW)	554	432	397	447	330
Waste to landfill (kg/t HSCW)	11.3	5.9	11.9	17.3	21.5
Local amenity					
Odour complaints (no/site/year)	8.9	7.1	3.8	1.7	2.6
Noise complaints (no/site/year)	<1	<1	<1	<0.1	<1

- ◆ Water intake was 7.3 kL/t HSCW, an 8.9% reduction compared to 2022 and a 22.5% reduction since 2010.
- ◆ Untreated wastewater quality results were mixed, although they reflect a broadly steady or downward trend over time and need to be viewed in the context of overall lower levels of wastewater generation and increasing levels of wastewater as a source of biogas. Few sites discharged treated wastewater directly to the aquatic environment and where this was the case, discharge of nitrogen and phosphorus were lower.
- ◆ Energy use was 2897 MJ/t HSCW, a 15.7% reduction compared to 2022 and a 29.5% reduction since 2010. Changes in the energy mix were evident with reductions in coal and increased use of natural gas. Biomass and biogas from wastewater treatment remained at similar levels compared to 2022. There was an increase in use of solar PV with several sites reporting new installations or planned installations.
- ◆ GHG emissions were 330 kg CO<sub>2e</sub>/ t HSCW, a 26.1% reduction since 2022 and a 40.4% reduction since 2010. Reductions in GHG emissions intensity were related to overall reductions in energy use intensity. Also contributing was a 9.8% reduction in GHG emissions intensity of electricity, and 5.1% reduction in GHG emission intensity of other parts of the energy mix. The emissions intensity of wastewater treatment also fell with such measures as the installation of covered anaerobic lagoons.
- ◆ Waste sent to landfill was 21.5 kg/t HSCW, an increase compared to 2022. In this survey, a subgroup of sites reported disposing of large quantities of organic waste to landfill due to lack of other local beneficial processing options. A few sites also reported atypical demolition and construction waste.
- ◆ Regarding local amenity, odour and noise complaints continued to be low.

## Benefit for Industry

Individual sites have their own unique characteristics meaning that priorities for environmental improvement need to be determined at the local site level. Nevertheless, large variation in environmental indicator results were evident across sites, suggesting that there remains ample opportunity for further gains across the industry.

For individual processors, these results can be beneficial for benchmarking site performance. As a statement of overall industry levels, they can also be used to build trust with communities and stakeholders by demonstrating commitment to transparency and ongoing environmental performance improvement.

Finally, the results can inform strategic research investment and the development of environmental management tools and resources.

The project Final Report includes metrics for the Australian beef and sheep sustainability frameworks.