Australian tyre consumption and recovery – 2023-24

Australia's love of driving

Australia is in the top 20 countries for vehicles per capita, with over 21 million registered road vehicles and a further 4.7 million caravans, trailers and plant and equipment[1]. Collectively, this means there are more than 100 million tyres on our roads.

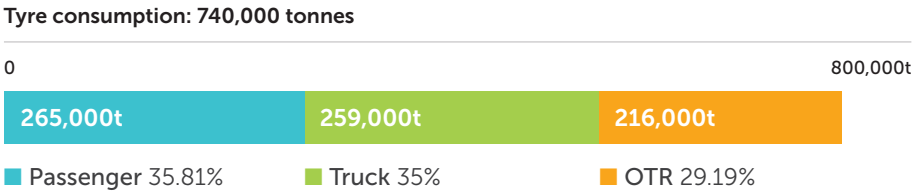
Driving and tyre use are increasing in Australia, roughly in line with population growth. Tyres play a key role in how a vehicle performs and drives, and they affect safety and fuel consumption. At their end of life, tyres should be recovered for beneficial use.

Tyre consumption and used tyre generation

- Australia imports all new tyres, and in 2023-24 we consumed 705,000 tonnes of new tyres or 74 million EPU. This was a slight decline on the previous year.
- Loose tyres accounted for 84% of the total new tyre imports by weight, and tyres imported on new vehicles accounted for 16%.
- A further 35,000 tonnes of used (secondhand or retread) tyres are consumed each year. Bringing the total consumption of new and used tyres in 2023-24 to an estimated 740,000 tonnes.
- In 2023-24 the generation of used tyres dropped to 537,000 tonnes, from an estimated 545,000 tonnes in 2022-23.

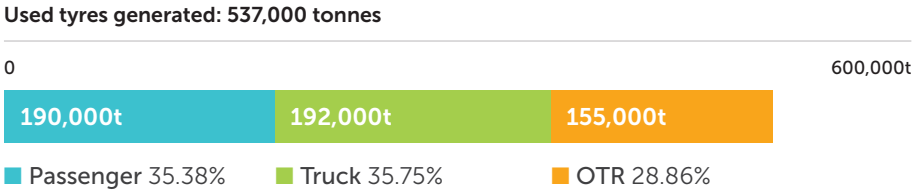
Tyre consumption

In 2023-24, Australia consumed around 740,000 tonnes of new and used tyres (78 million EPU).



Used tyres generated

In 2023-24, Australia generated an estimated 537,000 tonnes of used tyres to be recovered for beneficial use or disposal in 2023-24 (67 million EPU).



Terms and definitions

'Consumption' refers to the net import and export of new and used tyres to and from Australia, as well as local consumption of retreaded tyres or secondhand tyres sold in Australia.

An equivalent passenger unit (EPU) is a standard measurement for a passenger car tyre. The weight of an EPU for a new standard passenger car tyre is standardised as 9.5 kg; and the weight of a used EPU is standardised as 8 kg.

'Generation' refers to the number/tonnes of tyres that reach an end fate (reuse, recycling, energy recovery, disposal) or are dumped, stockpiled, and remain in the environment.

'Resource recovery rate' is the weight of used tyres allocated to the fates reuse, recycling or energy recovery divided by the weight of used tyres generated.

1. BITRE (Bureau of Infrastructure and Transport Research Economics, 2024) Road vehicles, Australia January 2024 – data set, online at: https://www.bitre.gov.au/publications/2024/road-vehicles-australia-january-2024

Recovery and disposal of used tyres

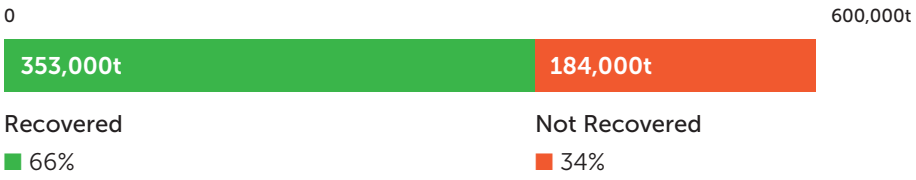
After two years of declining resource recovery rates, Australia experienced a rebound in 2023-24 with resource recovery estimated at 353,000 tonnes of the 537,000 tonnes of used tyres generated.

This equated to a resource recovery rate of 66% in 2023-24, up from an estimated 58% in 2022-23. This improvement was mainly due to the diversion of material from landfill. The quantity of used tyres not recovered in 2023-24 was around 184,000 tonnes, accounting for 34% of used tyres generated.

Used tyre resource recovery

In 2023-24, Australia recovered an estimated 353,000 tonnes of used tyres or 66% of used tyres generated (44 million EPU). Australia did not recover an estimated 184,000 tonnes (23 million EPU) of waste tyres in 2023-24.

Used tyres generated: 537,000 tonnes



Used tyre fates

The breakdown of the 537,000 tonnes of used tyres generated, both recovered (green and yellow) and unrecovered (red) is provided below.

Fates of used tyres generated

Reuse and Recycling

Resale as secondhand and retreaded tyres **(reuse)** accounted for around 9% (46,000 tonnes) of used tyres. While used tyres being converted into products or raw materials for use in a production system, excluding for energy, **(recycling)** accounted for 17% (89,500 tonnes) of used tyres. Collectively, 26% of used tyres are managed through reuse and recycling, therefore approximately a quarter of used tyres are going to circular product applications.

Energy Recovery

Recovery for processing into tyre derived fuel **(energy recovery)**, mainly for export to Asia, represents 40% (217,500 tonnes) of used tyre end fates. Energy recovery is not circular, as the material is lost once it is burnt as fuel.

Landfill/Buried onsite

Unfortunately, 30% (160,000 tonnes) of used tyres are still unrecovered and disposed of into landfills or buried onsite, and a smaller amount burnt on farms, with onsite burial occurring almost entirely at mine sites **(landfill/buried onsite)**.

Dumped/Stockpiled

Tyres that have been dumped or stockpiled in our environment and are yet to be cleaned up account for 4% (24,000 tonnes) of waste tyres. This figure represents only a snapshot of tyres that remained dumped or stockpiled at the end of 2023-24, rather than the total dumping and stockpiling activity throughout the year.

Dumping comes at a high environmental and financial cost that is felt across our community, with the clean-up of illegally dumped tyres costing Australian councils alone about $6.5 million[2] in 2022-23.

[2]. Stockpiling and illegal dumping of tyres: cost to local governments and others, Tyre Stewardship Australia, 2024

Recovery by tyre types

When it comes to the recovery by tyre types, Australia recovers most automotive tyres (passenger, truck/bus tyres) with a combined recovery rate of 87% in 2023-24. In contrast, only 13% of OTR tyres were recovered, despite having quality rubber compound and steel that is valuable.

The factors currently contributing to the low recovery of OTR tyres include their size and structural features that make handling challenging, and that the mining sector, the main user by weight, is commonly permitted by governments to bury used tyres at mine sites.

Tyre percentage recovered and unrecovered by tyre group (2023-24)

Domestic and international markets for used tyres and tyre derived products

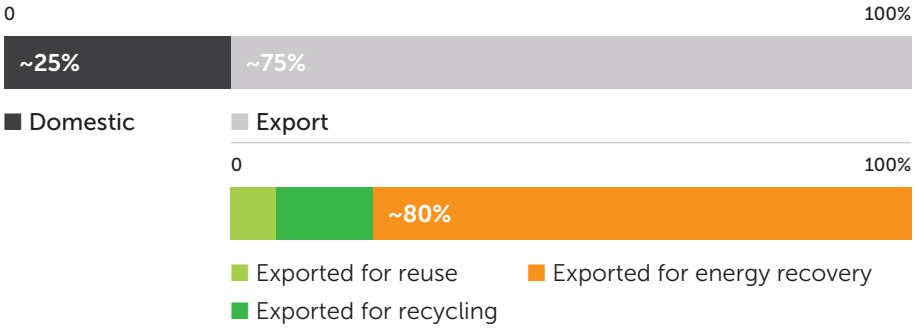
The markets for tyre derived products can be separated into international (export) and domestic markets.

The international market represents the majority of the market at around 75% of the weight of recovered material in 2023-24, matching the average over the past five years. Of this export market, around 80% by weight is exported for energy recovery. The remaining is exported for further processing and recycling, or for reuse and retreading.

Markets

Australia exported an estimated 264,000 tonnes of used and processed tyres in 2023-24, with 212,000 tonnes exported for energy recovery.

Domestic and international markets percentage of recovered material by weight (2023-24)



Tyre Materials (Rubber compounds)

Excluding tyres that are reused as tyres through retread or secondhand sale, approximately 378,000 tonnes of rubber compound could be extracted from the generated waste stock, based on the average tyre composition.

Tyre materials

Tyres are composed of a complex mix of materials to provide optimal performance. The main components that can be retrieved from tyres are rubber compound, steel, and textiles.

Tyre Stewardship

The recovery of used tyres within Australia is supported by the National Tyre Product Stewardship Scheme, administered by Tyre Stewardship Australia (TSA).

The objective of the Scheme is to develop Australia's tyre recycling industry, and markets for tyre-derived products.

TSA seeks to increase the recovery of used tyres while minimising the environmental, health and safety impacts.

Since 2014, TSA has invested over $10 million in more than 70 projects supporting market development: see link for more information https://www.tyrestewardship.org.au/project/

TSA Levy-paying tyre importers and auto brands

ASCENSO never stop rising
BEARCAT TYRES • WHEELS • RUBBER TRACKS
BRIDGESTONE
BRIDGESTONE Solutions for your journey
Continental
GETAGRIP TYRES & FLEET
GOODYEAR DUNLOP GOODYEAR DUNLOP TYRES • AUSTRALIA NEW ZEALAND
HANKOOK driving emotion
KALTIRE Mining Tire Group
KUMHO TYRES
MICHELIN
PIRELLI
PORSCHE
TOYO TIRES
YOKOHAMA

Data sources used in the compilation of this information sheet: ***Australian Tyre consumption and recovery – 2023-24*** include: *Road Vehicles, Australia*, BITRE 2024, *International Trade in Goods and Services*, Australian Bureau of Statistics, *VFACTs Reports*, FCAI, and *Tyres material flow analysis*, TSA 2024 unpublished.

Tyre Stewardship Australia have exercised due care and skill in the preparation and compilation of the information and data in this fact sheet. No representation expressed or implied is made as to the currency, accuracy, reliability, or completeness of the information contained in this sheet.

TyreStewardship AUSTRALIA **TSA** Driving sustainable outcomes for end-of-life tyres

Australian Government Accredited Product Stewardship Scheme

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