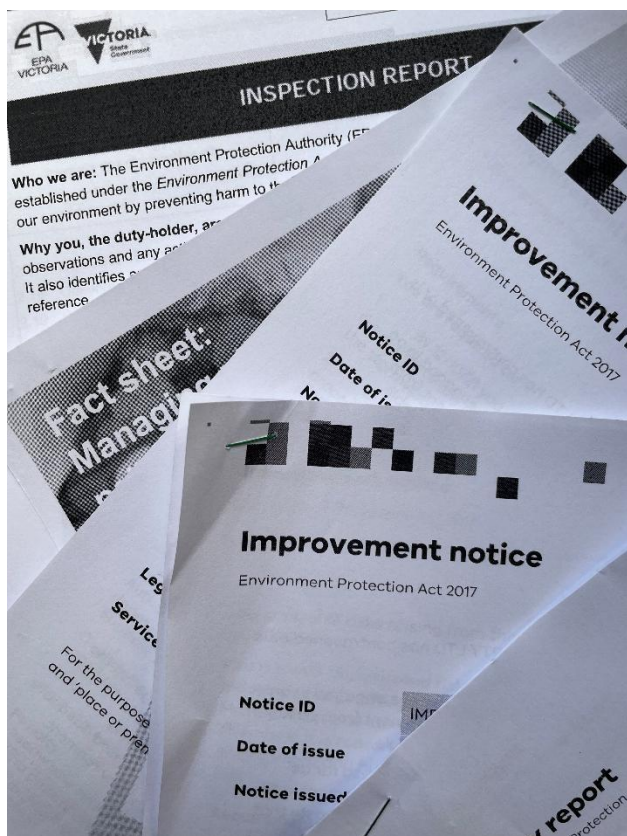


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The Crown Jewel of the Circular Economy: Why Metal Recycling is Australia's Best Performing Industry

By Andrew Swann

Australia is quietly winning the recycling race, and the metal recycling industry is the undisputed driving force behind this victory.

As governments and businesses pivot towards a sustainable circular economy, new national data reveals that Australia recovered 66% of its 75.6 million tonnes of total waste in 2022-23. However, one material category stands head and shoulders above the rest: **metals achieved a remarkable 90% recovery rate, making it the most successfully recovered material in the country.**

Whether it's steel beams from demolished buildings, copper wire, or household aluminium cans, metal recycling works because it makes both profound environmental and economic sense.

The Economic Powerhouse of Resource Recovery

The Australian scrap metal recycling industry is a lucrative and dynamic sector, significantly contributing to the national economy. Recent market size estimates value the

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industry between \$3.5 billion and \$5.07 billion, with expectations for continued growth driven by high global commodity prices and domestic demand.

Metals have a lasting economic value because they can be melted down and recycled endlessly without losing their strength or quality. Unlike plastics and paper, which degrade with each cycle, metals are inherently circular. This enduring quality ensures strong, well-established scrap markets for both ferrous (iron and steel) and non-ferrous (aluminium, copper, brass) materials.

In South Australia alone, scrap metal was the largest contributor to the state's resource recovery value in 2023-24, injecting an estimated \$360 million into the local economy.

Massive Environmental Savings

Beyond the financial returns, the environmental benefits of recycling scrap metal are monumental. Recycling metals requires significantly less energy and water compared to extracting and refining virgin ores.

- **Aluminium:** Recycling aluminium saves 95% of the energy it would take to make new primary aluminium. It is one of the most energy-efficient pathways to lower-emissions manufacturing.
- **Steel:** Recycling one tonne of steel saves the equivalent of 1.1 tonnes of carbon dioxide emissions, and saves 40% of the energy required to produce steel from raw materials.

Across Australia, the use of scrap metal in domestic steelmaking already contributes to the avoidance of over 3.75 million tonnes of greenhouse gas emissions (CO₂e) every single year.

Where Australia Shines: Industrial and Regional Leaders

The success of metal recycling represents a highly efficient industrial network of scrap collectors, processors, mills, and manufacturers. The industry captures massive volumes from the Construction & Demolition (C&D) sector, which boasts a nearly 95% metal recovery rate, and the Commercial & Industrial (C&I) sector, which recovers 93% of its metals.

Regionally, **South Australia continues to set the national benchmark, hitting an impressive 95.6% metal recovery rate in 2022–23.** This world-class performance stems from reliable local infrastructure, a strong Container Deposit Scheme introduced in 1977, and a mindset that treats scrap as a valuable resource rather than waste. Other regions are close behind, with New South Wales and the Australian Capital Territory also posting metal recovery rates above 90%.

One dark cloud on the metal recycling industry is the loss of 2.3 million tonnes overseas to recycle abroad. Under circularity laws all processing of recyclables should be performed domestically, but due to the burden of landfill taxes, operators are more profitable if they export all metal before processing to avoid the tax. This is hurting the industry significantly to the point that the metal recycling rates which historically have been well above 90% are dipping to 85% due to the market shortcutting the circular policy.

Closing the Gap and the "Green Steel" Future

While Australia's industrial metal recycling is a global success story, there is still room to grow. Metal recovery from household Municipal Solid Waste lags at 72%, indicating that consumer education and better source separation are needed to capture scattered, bulky household metals.

Furthermore, the future of the industry is intrinsically linked to the "green steel" revolution. Electric Arc Furnaces (EAF) are becoming the preferred method for sustainable steelmaking. In the EAF method, recycled steel scrap makes up a massive 45% of the total ingredients, compared to just 5% in traditional coal-heavy blast

furnaces.

By continuing to focus on "urban mining"—recovering metals from discarded infrastructure, vehicles, and e-waste—Australia has the opportunity to keep valuable scrap in a closed-loop system. This not only powers new infrastructure but significantly cuts emissions from raw mining, cementing metal recycling as the true champion of Australia's sustainable future.



