

INDUSTRY STATISTICS

Aluminum Supply | 2008

24.5 Billion Pounds

Domestic Primary Production
52%

Imports
14%

Recycling
34%



U.S. Aluminum Can Reclamation

■ ■ ■ Number of Cans Collected ▲ Percent of Cans Collected



U.S. Aluminum Supply

■ Primary ■ Recycling ■ Imports

Total Supply



BUILDING & CONSTRUCTION



- **Buildings account for 70 percent of all electricity consumed in the U.S.** and generate 136 million tons of construction and demolition debris annually.
- Aluminum is **durable, flexible, lightweight, and strong and recyclable.**
- According to a study by Delft University of Technology in 2004, **95% of aluminum in buildings gets recycled, today.**
- 75% of all aluminum ever produced **is still in use**
- Aluminum building components can **contribute unique environmental and energy benefits** to green buildings.
- Aluminium building products are made from alloys that are **weather-proof, corrosion-resistant, and immune to the harmful effects of ultraviolet rays.**
- Aluminum's low weight allows architects to design **lighter structures with more stability and greater design flexibility**, while minimizing expenditure on foundations.
- Aluminum building components can be **repeatedly recycled back into similar products with no loss of quality.**
- The recycled content of aluminum flat-rolled products in the U.S. building market is estimated at 85 percent—**60 percent of which is from post-consumer sources.**
- Using materials that contain recycled materials such as **aluminum can help projects qualify for green status** under the Leadership in Energy and the Environmental Design (LEED).

BUILDING & CONSTRUCTION

- Aluminum roofs, which can reflect up to 95 percent of the sun's light can **dramatically lower summertime attic temperatures** and, by extension air-conditioning expenses.
- Sustainable design features made from aluminum that are commonly incorporated into commercial buildings include **sunshades and transpired solar collectors**.
- An upfront investment of 2 percent of construction costs in green building designs, on average, results in **savings of 20 percent of operation and maintenance costs (O&M)** over the life-cycle of the building.
- The Aluminum Association will be exhibiting at green build shows including **METALCON and Green Build**.
- The Association has partnered with global aluminum associations to launch a new content-rich Green Architecture Website, **greenbuilding.world-aluminium.org**

FOR FURTHER INFORMATION

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Aluminum sets the standard for environmental performance across the transportation sector. Here's a few reasons why:

- Lightweighting the world's transportation fleet – passenger cars, light and heavy-duty trucks, rail vehicles, air and sea craft – has the **potential of reducing green house gas emissions by 660 million tons annually**, or nearly 9 percent of global, transportation-related green house gas emissions.
- The use of aluminum for lightweighting passenger and commercial vehicles **can deliver a substantial reduction in CO2** and other emissions over the life of the vehicle through fuel savings, even when considering the CO2 generated by the initial production of aluminum.
- On average, each pound of aluminum replacing two pounds of iron or steel in a passenger vehicle **can save a net 20 pounds of CO2 emissions** over the typical lifecycle of a vehicle.
- For every ton of aluminum added to a commercial vehicle fleet has the **potential to save up to 18 tons of CO2** over the lifetime of the vehicles and 2,000 gallons of diesel fuel per vehicle each year.
- The application of aluminum in cars and light trucks manufactured in 2006 will lead to **potential global savings of approximately 140 million tons of CO2 equivalent GHG emissions** and to energy savings equivalent to nearly 16 billion gallons of crude oil over the lifecycle of these vehicles.
- Use of aluminum in 2006 model year passenger vehicles alone **has saved 14.5 billion gallons of gasoline – or about 350 million barrels of crude oil**. To put this number in perspective, it is nearly equal to the amount of oil that the U.S. imports from Saudi Arabia each year!
- Recycling aluminum saves nearly 95 percent of the green house gas emissions associated with primary aluminum production, and only requires about **5 percent of the energy**.

- Nearly 90 percent of automotive aluminum is recovered and recycled. In fact, aluminum is one of the most recycled materials on the planet and is infinitely recyclable, meaning **automotive aluminum never needs to be landfilled**.
- **A 6 to 7 percent fuel savings** can be realized for every 10 percent weight reduction in a passenger vehicle by substituting high strength, low weight aluminum for heavier steel and considering secondary weight savings.
- Since 1990, the increased use of automotive aluminum has avoided burning **more than 22.2 billion gallons of fuel**.
- As automakers strive to reach CAFE standards, lightweighting has become an important fuel economy improvement strategy, especially when combined with hybrids, clean diesels and other advanced powertrain technologies for cars and light trucks. In fact, experts recently ranked aluminum use as **a top option and “very significant” to meet the federal mandate** of improved fuel economy by 40 percent by 2020.

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PACKAGING & CONSUMER GOODS



- Aluminum can weight has been **reduced by 30 percent** over the past 35 years, while strength and performance have been improved.
- **Lightweight and easily stacked**, aluminum cans boast space and shipping efficiencies relative to competing containers.
- The aluminum can today is **the most recycled** of any beverage container.
- Recycling aluminum cans **conserves energy, saves resources, and minimizes consumer and production waste**.
- The average post-consumer recycled content of the typical aluminum can is approximately **50 percent**—the highest recycled content of any beverage container.
- Because of the efficiency of the used beverage can (UBC) recycling process, a can that is recycled can be back on the store shelf **in as little as 60 days**.
- Aluminum cans, alone among the materials commonly found in the consumer waste stream, **more than pay for the cost of their own collection** and effectively subsidize the recycling of other, less valuable materials.
- The recycling rate for aluminum used beverage cans (UBCs) in the U.S. in 2008 was **54.2 percent**—the highest since 2001.
- The Aluminum Association supports a goal of reaching a **75 percent UBC recycling rate by 2015**.
- The Association encourages voluntary recycling efforts through its support of programs such as the **Curbside Value Partnership and Cans for Causes**.

- The Association advocates **increased economic accountability for solid waste** as a use-based utility as a means to balance the costs of solid waste disposal vs. recycling.
- The Association supports **increased solid waste diversion goals** with incentives for success and penalties for failure.
- The Association supports **Pay As You Throw** solid waste/recycling programs which use economics to encourage increased recycling of all materials.
- The Association supports the opportunity to recycle, which prescribes that all community offer their citizenry the ability to recycle by **making recycling service a mandatory prerequisite** for bidding on solid waste services.

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- 95% of aluminum in buildings is recycled
- Nearly **three-quarters** of all aluminum ever made remains in use today, representing a growing energy and resource bank.
- Recycling 40 aluminum beverage cans saves one gallon of gasoline. If every American recycled just one beverage can this year, we would save the equivalent of **over 7 million gallons of gas**.
- Every year Americans throw away over **\$2 billion worth of energy** by not recycling cans.
- Using recycled material for new aluminum beverage cans uses **95% less energy and produces 95% less greenhouse gas emissions** than making a can from new materials.
- The aluminum industry has **achieved dramatic emissions reductions** over the last 15 years, including fluoride and POM emissions from primary reduction plants, and HAP emissions from secondary recycling facilities.
- An aluminum beverage can can be back on the store shelf in **as little as 60 days**.
- **More than a third** of all the aluminum currently produced globally originates from old, traded and new scrap, a trend which is on the increase.
- Americans earn about **\$1 billion a year** recycling aluminum cans.
- Aluminum produced from scrap, uses **only 5%** of the energy as primary aluminum does.

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