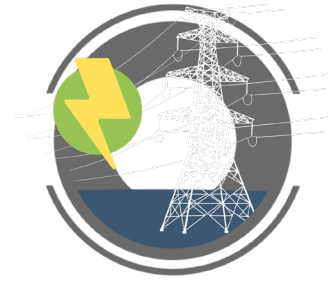


Presidential Policy Brief:

Energy



Aluminum is a unique and foundational element of American manufacturing, with growing demand driven by innovative applications that support aerospace, transportation, construction, defense, packaging, infrastructure and many other segments of the U.S. economy.

The Aluminum Association represents the U.S. aluminum industry across the entire value chain. The U.S. aluminum industry generates more than \$70 billion in direct economic output, directly employs more than 166,000 workers across the country and indirectly supports an additional 494,000 workers.

As a lightweight, infinitely recyclable and durable material with a remarkable variety of industrial and consumer applications, aluminum provides an innovative solution to many 21st century challenges. The industry has been recognized by the EPA as a leader in addressing climate change, due to the material's energy efficient properties and the ability – and existing capacity – to recycle it over and over again without losing any performance characteristics.

Global demand for aluminum is expected to grow by more than 50 percent by 2050. The U.S. aluminum industry needs federal energy policies that promote energy efficiency and recycling; provide for a stable, predictably priced electricity supply and natural gas access; and enable growth of our nation's vibrant manufacturing base. The Biden Administration can promote high-paying and sustainable domestic manufacturing jobs in the aluminum industry with strategic policy decisions and smart deployment of resources.

Energy Should be Affordable, Predictable & Renewable

Aluminum is an energy-intensive industry, requiring a significant amount of electricity to operate a primary aluminum smelter as well as reliable access to energy to operate the cast houses where aluminum is melted and formed into products. The boom in shale gas supply has been a driving force for the manufacturing renaissance and has helped to keep aluminum jobs in the United States.

U.S. aluminum producers have a long history of investing time and resources to improve energy efficiency and reduce environmental impact. In fact, primary aluminum production in North America has reduced its greenhouse gas emissions by 49 percent since 1991.

The Department of Energy should:

- Accelerate investments that advance research, development and installation of new technologies that improve energy efficiency.
- Facilitate industrial access to affordable and reliable energy and maximize the nation's natural gas benefit for U.S. manufacturers and producers.
- Promote renewable energy sources and the expansion of Electric Vehicles.
- Prioritize implementation of projects related to the modernization of the electric grid, including for distributed system technologies and hybrid microgrid systems.

Recycling is a Green Solution with Real Energy Efficiency Gains

Every effort to increase the recycling rate of aluminum will pay dividends to improve energy efficiency. The production of secondary, or recycled, aluminum can save more than 90 percent of the energy involved in the smelting of primary aluminum. Moreover, aluminum has been designated by the U.S. government as a critical mineral – it’s one of only nine designated critical minerals that are essential to all industrial sectors, including defense – and the United States has no viable commercial mining of the bauxite that is a raw material for aluminum production. Consumer and industrial recycling will be increasingly important to a resilient and thriving U.S. aluminum industry in the years ahead.

More efficient and cost-effective recycling will reduce waste and emissions, reduce energy consumption, and return a significant input material to U.S. manufacturers. Aluminum companies have been glad to partner with DOE on research projects to increase the efficiency of aluminum recycling even further and determine optimal methods of recycling aluminum – particularly for vehicles at end of life.

Federal investment and strategic policy choices could drastically increase recycling rates, expand curbside recycling programs and collection points, and improve recycled material quality through material segregation and sorting technology.

The Department of Energy should:

- Establish a program to promote the efficient production, use and recycling of critical minerals, and to provide grants for capital expenditures or R&D in new recycling technology. New equipment or technology upgrades could help manufacturers:
 - Process low-grade (contaminated) scrap material in existing facilities.
 - Improve quality of scrap by sorting recyclable materials and segregating alloys.
- Promote innovation for casting alloy applications, in collaboration with DOE’s Critical Materials Institute and other public-private partnerships like the REMADE Institute, to maximize the use of recycled aluminum. Provide grants or research partnerships to better utilize scrap material and develop innovative alloys.

State Governments should:

- Expand or improve container deposit programs to reflect best practices. The recycling rate for aluminum cans is about 35 percent in states without container deposit laws, while rates average more than 75 percent in the 10 states with these programs.
- Implement The Recycling Partnership’s “Accelerating Recycling: Policy to Unlock Supply for the Circular Economy” recommendations to further public-private partnerships in support of recycling. Topline recommendations include:
 - A packaging and printed paper fee that supports education and infrastructure investment.
 - A disposal surcharge to support recycling operations.

The United States could save more than \$810 million per year – and save enough energy to power more than 4.1 million homes for a full year – by simply recycling all of the aluminum cans that consumers buy today.