



Industrial Demonstrations Program – Green Aluminum Smelter

The Industrial Demonstrations Program, managed by the U.S. Department of Energy (DOE) Office of Clean Energy Demonstrations (OCED), aims to accelerate decarbonization projects in energy-intensive industries and provide American manufacturers a competitive advantage in the race to lead the world in low- and net-zero carbon emissions manufacturing. To advance industrial decarbonization, OCED sought applications for up to \$6 billion in funding to support the demonstration of transformational technologies necessary to reduce emissions in the U.S. industrial sector. Following negotiations, in January 2025, OCED awarded the Green Aluminum Smelter project with \$10 million to begin Phase 1 of the project.



Project at a Glance — Phase 1

- » **Total OCED Cost Share:** Up to \$500 million
- » **Phase 1 Total Project Amount:** Up to \$48,799,830*
- » **Phase 1 OCED Award Amount:** \$10,000,000**
- » **Phase 1 Scope of Work:** Planning, permitting, design, community engagement, and other development activities
- » **Phase 1 Timeline:** 9–10 months
- » **Recipient:** Century Aluminum Company is a producer of primary aluminum
- » **Project Locations:** To be determined
- » **Start Date:** January 2025

*Represents the total project cost for Phase 1. Reimbursements are tied to site and electricity supply contract finalization.

**Represents OCED's cost share for Phase 1. Additional funding for this project is subject to future award negotiations at the end of each project phase.

About This Project

The Green Aluminum Smelter project, led by Century Aluminum Company (Century Aluminum), plans to build the first new primary aluminum smelter in the nation in 45 years. Upon completion, the smelter would double the size of the current U.S. primary aluminum industry while avoiding an estimated 75% of emissions when compared to a traditional smelter due to its state-of-the-art, energy efficient design. The smelter would demonstrate the sustained, continuous use of renewable energy and implementation of a virtual battery. The high-purity aluminum produced from this facility would be suitable for national defense, electric vehicles, semiconductors, building and construction, and clean energy applications.

During Phase 1 of the project, Century Aluminum will determine and announce the site, complete initial engineering studies for various aspects of the project, provide documentation and reports necessary to complete the National Environmental Policy Act (NEPA) review, and engage community and labor stakeholders.

OCED will provide oversight of the Green Aluminum Smelter project by evaluating the status and quality of implementation at each phase of the project. Through its phased approach to project management oversight, OCED will review and evaluate the project's progress, including community benefits, which impact OCED's decision to continue to provide federal funding and allow a project to progress to the following phase.

Green Aluminum Smelter

Project Fact Sheet

Project Site

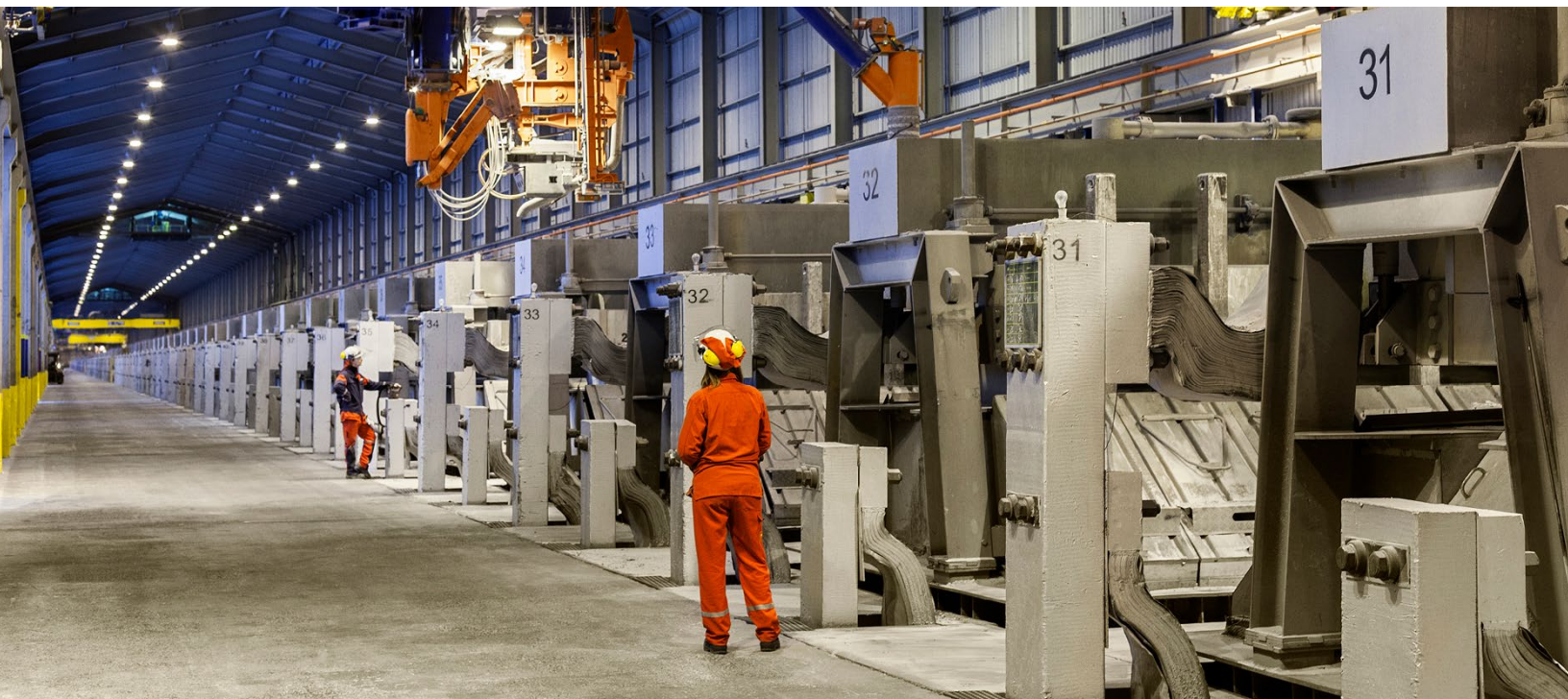
The location of the Green Aluminum Smelter project will be determined and announced during Phase 1.

Community Benefits Commitments

Community benefits commitments are a key component of the Green Aluminum Smelter project. The commitments are informed and developed—in consultation with local communities—to maximize local community benefits and mitigate potential negative impacts. Century Aluminum plans to implement these commitments through:

- Creating approximately **1,000 quality full-time operations jobs at or above prevailing wages** and entering into a neutrality agreement with the United Steelworkers intended to cover the new smelter.
- Generating approximately **5,500 construction jobs** welcoming union contractors and engaging with Building Trades Unions towards the development of negotiated agreements.
- Working with **local job training organizations and apprenticeship programs** to develop/support apprenticeship and advanced manufacturing training targeting displaced industrial workers programs.
- **Developing training pipelines** in cooperation with local educational institutions.
- Displaying a **real-time, online public dashboard** to include jobs created, environmental impact monitoring, and feedback incorporated from public engagement.
- Supporting the Justice40 initiative by **completing a Justice40 assessment and implementation strategy** during each phase.
- **Quantifying air quality impacts** for any relevant air pollutants emitted, or expected to be emitted, from the project.
- Sharing project information publicly to **support engagement, accountability, and transparency**.

More details on the Green Aluminum Smelter project's community benefits commitments can be found in the [Community Benefits Commitments Summary](#).



Two workers check aluminum pot lines in long building

Green Aluminum Smelter

Project Fact Sheet

Industrial Demonstrations Program Goals

U.S. industry is a backbone of the nation's economy, producing the goods critical to everyday life, employing millions of Americans in high-quality jobs, and providing an economic anchor for thousands of communities. Yet the sector's energy- and carbon-intensity contributes to nearly one third of the nation's carbon dioxide emissions, representing a unique and complex challenge to achieving a carbon-free economy. Decarbonizing the U.S. industrial sector will require equally unique and innovative technological solutions that leverage multiple pathways, including energy efficiency, electrification, and alternative fuels and feedstocks such as clean hydrogen. The Industrial Demonstrations Program includes new, emerging technologies that aim to help produce clean steel, cement, chemicals, and other materials used in our nation's roads, bridges, transmission lines, electric vehicles, solar panels, wind turbines, and everyday lives, which in turn, benefit every American.



Stacks of aluminum ingots marked with Century Aluminum logo

Contact

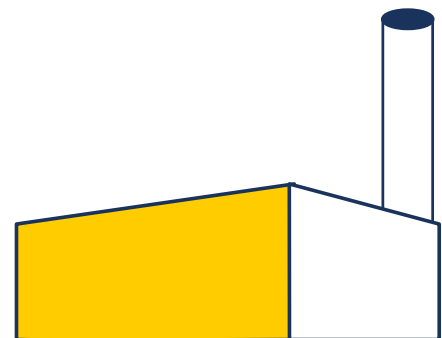
Program Email: engage_industrialdemos@hq.doe.gov

OCED Media Email: OCEDNewsroom@hq.doe.gov

More Resources

Website: energy.gov/oced/IDP

Office of Clean Energy Demonstrations: energy.gov/oced



The U.S. Department of Energy established OCED to help scale the emerging technologies needed to tackle our most pressing climate challenges and achieve net-zero emissions by 2050. OCED's mission is to deliver clean energy demonstration projects at scale in partnership with the private sector to accelerate deployment, market adoption, and the equitable transition to a decarbonized energy system.