



Industrial Demonstrations Program – Calcined Clay Production for Limestone Calcined Clay Cement

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 greenhouse gas emissions in the U.S. industrial sector. Following negotiations, in October 2024, OCED awarded the Calcined Clay Production for Limestone Calcined Clay Cement project with more than \$1.1 million to begin Phase 1 of the project, located in Troutville, VA.



Project at a Glance – Phase 1

- » **Total OCED Cost Share:** Up to \$61.7 million
- » **Phase 1 Total Project Amount:** \$2,330,316*
- » **Phase 1 OCED Award Amount:** \$1,154,637**
- » **Phase 1 Scope of Work:** Engineering, permitting, community engagement, and other development activities
- » **Phase 1 Timeline:** 12 months
- » **Recipient:** Roanoke Cement Company, LLC
- » **Project Location:** Troutville, VA
- » **Start Date:** November 2024

*Represents the total project cost for Phase 1.

**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.

About This Project

The Calcined Clay Production for Limestone Calcined Clay Cement project, led by Roanoke Cement Company (RCC), plans to demonstrate the ability to utilize widely available clay types to minimize the use of clinker, the most carbon-intensive component in cement production. This project would also help validate the market for calcined clays in a region with high demand for the material and anticipates reducing the carbon intensity by an approximate 83% compared to products with clinker.

During Phase 1 of the project, RCC will perform preliminary engineering for the project, validate clay reserves and properties, provide documentation and reports necessary for OCED to complete the National Environmental Policy Act review, and continue engagement activities with the community, project partners, and stakeholders.

OCED will provide oversight of the Calcined Clay Production for Limestone Calcined Clay Cement 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.

Calcined Clay Production for Limestone Calcined Clay Cement Project Fact Sheet

Project Site

The Calcined Clay Production for Limestone Calcined Clay Cement project would be located at the RCC cement facility in Troutville, VA, in the western part of the state.

Community Benefits Commitments

Community benefits commitments are a key component of the Calcined Clay Production for Limestone Calcined Clay Cement project. The commitments are informed and developed—in consultation with local communities—to mitigate potential negative impacts of this project and maximize local community benefits. RCC plans to implement these commitments through:

- Creating approximately **25 permanent jobs and up to 115 construction jobs**, continuing to work with the International Brotherhood of Boilermakers, which has an active collective bargaining agreement at the Troutville facility, and implementing plans to negotiate formal workforce and labor agreements for construction and operations, if needed.
- Planning a Training and Education Consortium to **promote workforce development** with a focus on skills development, certification, and education required for jobs at the primary manufacturing site and the selected mining location.
- Developing **Registered Apprenticeship programs** while leveraging existing collective bargaining agreements.
- Utilizing a **Community Advisory Panel** to ensure two-way engagement and community-informed project decisions.
- 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 Calcined Clay Production for Limestone Calcined Clay Cement project's community benefits commitments can be found in the [Community Benefits Commitments Fact Sheet](#).



A group of RCC workers

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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.



An aerial view of RCC's Troutville, VA facility

Contact

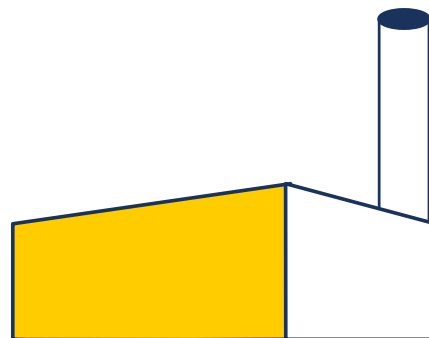
Program Email: engage_industrialdemos@hq.doe.gov

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.