



## Industrial Demonstrations Program – Low-Emissions, Cold-Agglomerated Iron Ore Briquette Production

The Industrial Demonstrations Program, managed by the U.S. Department of Energy's (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 December 2024, OCED awarded the Low-Emissions, Cold-Agglomerated Iron Ore Briquette Production project with more than \$3.8 million to begin Phase 1 of the project, located in the River Parish Region, LA.



### Awardee Fact Sheet Industrial Demonstrations Program: Low-Emissions, Cold- Agglomerated Iron Ore Briquette Production

#### Project at a Glance — Phase 1

- » **Total OCED Cost Share:** Up to \$282.9 million
- » **Total Project Amount:** \$7,678,596\*
- » **OCED Award Amount:** \$3,839,298\*\*
- » **Scope of Work:** Permitting, community engagement, and other development activities
- » **Timeline:** 12 months
- » **Recipient:** Vale USA is a company specializing in sustainable iron solutions
- » **Project Location:** River Parish Region, LA
- » **Start Date:** January 2025

\*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 phase.

### About This Project

The Low-Emissions, Cold-Agglomerated Iron Ore Briquette Production project, led by Vale USA, plans to build a first-of-its-kind iron ore briquette production facility in the U.S. using a low-emissions alternative to traditional iron ore pellets as a feedstock for metallics and steel production. This transformative technology intends to achieve deep emissions reductions by decarbonizing iron ore agglomeration and reducing the need for industrial heat, resulting in a flexible product that can be used at both direct-reduced and blast furnace ironmaking routes. By demonstrating this technology for this project with briquettes that will be customized for use in direct-reduced iron production, Vale USA would reduce CO<sub>2</sub> emissions by an estimated 60% and reduce some criteria air pollutants like sulfur oxides (SO<sub>x</sub>) by roughly 99%, resulting in improved air quality, as well as reducing water usage.

During Phase 1 of the project, Vale USA will conduct preliminary engineering design, 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 Low-Emissions, Cold-Agglomerated Iron Ore Briquette Production 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.

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## Project Site

The Low-Emissions, Cold-Agglomerated Iron Ore Briquette Production project would be located in the River Parish Region, LA.

## Community Benefits Commitments

Community benefits commitments are a key component of the Low-Emissions, Cold-Agglomerated Iron Ore Briquette Production project. The commitments are informed and developed—in consultation with local communities—to maximize local community benefits and mitigate potential negative impacts. Vale USA plans to implement these commitments through:

- Creating up to an estimated **150 quality permanent jobs and several hundred construction jobs** of varying levels of skills and technical expertise.
- Ensuring delivery of community benefits for **equitable access to quality jobs** including negotiating workforce agreements, community agreements, and partnerships, such as, but not limited to: Project Labor Agreements, Collective Bargaining Agreements, Community Benefits Agreements, and/or Good Neighbor Agreements.
- **Establishing dialogues with trade unions and councils**, local universities and technical skills institutes, workforce development groups, and community agencies.
- Co-creating a **Community Advisory Panel (CAP)** with the community comprised of diverse stakeholder groups identified in consultation with the community to support meaningful, two-way community and labor engagement for this project.
- **Developing a strategic plan** for education, training, upskilling, and overall workforce advancement to propel inclusive, sustainable economic growth within surrounding communities.
- 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, and generating air quality benefits (e.g., SOx reductions).
- Sharing project information publicly to **support engagement, accountability, and transparency**.

More details on the Low-Emissions, Cold-Agglomerated Iron Ore Briquette Production project's community benefits commitments can be found in the [Community Benefits Commitments Summary](#).



Cold-agglomerated iron ore briquettes (Photo by Gabriel Lordello)



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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.



Aerial view of a unit of the briquette production plant and stockpiles (Photo by Gabriel Lordello)

## Contact

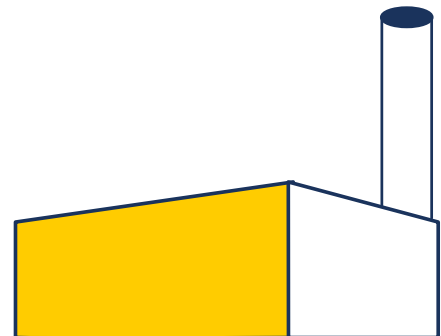
**Program Email:** [engage\\_industrialdemos@hq.doe.gov](mailto:engage_industrialdemos@hq.doe.gov)

**OCED Media Email:** [OCEDNewsroom@hq.doe.gov](mailto:OCEDNewsroom@hq.doe.gov)

## More Resources

**Website:** [energy.gov/oced/IDP](https://energy.gov/oced/IDP)

**Office of Clean Energy Demonstrations:** [energy.gov/oced](https://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.