Furno Materials, Inc.

Project Name: Project Oz: Recycled Portland Cement in a Novel, Low-Carbon Gas-Fired Packed Bed Reactor
Applicant: Furno Materials, Inc.
Location: Chicago, IL
Status: Round 2 Selectee
Federal Cost Share: $20,000,000

Project Description:
This project aims to commercialize Furno's novel technology by building the first circular low carbon cement production facility. Furno's kiln technology improves efficiency while utilizing recycled industrial waste materials as feedstock to make low-carbon Ordinary Portland Cement (OPC). By replacing 44% of the virgin raw material with recycled feedstock, Furno's process will reduce the carbon intensity by 47% compared to conventional OPC production. The facility will also demonstrate a >90% reduction in SOx, NOx, CO, VOCs, and fuel-based PM2.5 pollutants.

The selected site is strategically positioned adjacent to an operating concrete facility owned by key partner, Ozinga. Ozinga's site features a fully functioning concrete plant with an intake of recycled materials, cement storage silos, and a distributing barge. The commercialization of Furno's technology at Ozinga's site unlocks the recycling and distribution of cement domestically. This project provides a solution to safely return cement production to America, bringing with it the economic opportunities and environmental relief of an entirely new and sustainable manufacturing process capable of replication across the United States.

Community Benefits Plan:
Detailed in the Community Benefits Plan, the project will create 80 total jobs with above-average wages and benefits and will advance workforce development by partnering with local educational institutions, including University of Illinois Chicago and Illinois Tech, to build a skilled, diverse workforce. The project will engage with community-based organizations to maximize local economic opportunities and enhance workforce capabilities.

Deliver sustained benefits to local communities with permanent jobs creation in the ever-expanding climate tech sector; workshops, site visits, interactive sessions, and internship programs with local schools and Minority Serving Institutions such as the University of Illinois, Chicago to inspire next-generation innovations in and qualified tradespeople to solve climate change; sponsorships of summer camps for groups such as the National Association of Women in Construction.