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NEWS RELEASE

Sublime Systems Receives Life Cycle Assessment Validating its Electrified Cement Manufacturing Process Enables > 90% Greenhouse Gas Emissions Reduction

A screening life cycle assessment conducted by Climate Earth™, the leading provider of environmental product declarations for the concrete industry, validated Sublime's path to drastically reducing the carbon footprint of cement relative to today's ordinary portland cement

Richmond, CA — [Sublime Systems](#), developers of the only fossil-fuel-free, scalable, drop-in replacement for traditional cement in concrete, announced a screening life cycle assessment (LCA) validating its process can eliminate more than 90% of the global warming potential (GWP) of cement manufacturing, when compared to today's ordinary portland cement (OPC). [Climate Earth](#), the leading provider of environmental product declarations (EPDs) for the concrete industry, conducted this LCA according to a widely accepted industry method, avoiding controversial and unproven offset methodologies frequently used to enable the continued burning of fossil fuels — such as carbon capture, forestry credits, co-product mineralization, and lifetime CO₂ absorption.

The cradle-to-gate screening LCA leverages engineering estimates of Sublime Systems' full scale commercial manufacturing process and was conducted in conformance with ISO 21930, which is used for the development of EPDs for construction products and services. It found Sublime's manufacturing process resulted in a GWP of 72 kg CO₂/tonne for a 100% Sublime Cement™ blend, compared to the 922 kg CO₂/tonne GWP found in the [EPD](#) for industry-wide average OPC in the United States. The remaining emissions were largely related to the mining and transportation of feedstocks and waste and wastewater treatment, processes that are primarily upstream and downstream of Sublime's core manufacturing innovations. Sublime's screening LCA also showed drastically reduced acidification and eutrophication potentials (among others) without increased water consumption, reflecting a lower environmental footprint and permitting timeline compared to today's OPC.

“As our company developed this breakthrough process, we were mindful that the construction industry wouldn't respond well to shining white knights with splashy in-house PowerPoints claiming they're saving the world,” said Sublime Systems CEO and Co-Founder, Leah Ellis, PhD. “Seeing is believing, and we are grateful to be partnering with Climate Earth, the leader in these critical analyses for the concrete industry. Apples-to-apples comparisons using rigorous industry-accepted standards are foundational to driving real climate solutions and giving our stakeholders confidence in Sublime Cement™ as a powerful decarbonization tool in their arsenal.”

Sublime Systems is advancing a fully electrified process for manufacturing cement without requiring the use of fossil fuels or limestone. This carbon-avoidance approach harnesses clean, renewable sources of electricity and a wide range of calcium-containing raw materials to produce the same final hardened phase in concrete that the global construction industry requires today. Sublime Cement™ does not rely on carbon capture and storage infrastructure to reduce CO₂ emissions, enabling cost parity to OPC when produced at scale — without dependence on carbon credits or carbon penalties.

“Sublime has shown incredible rigor in specifying their manufacturing process, enabling our team to confidently quantify the environmental impact of their electrochemical cement manufacturing process,” said Climate Earth President and CEO, Chris Erickson. “We are excited to continue working with the company on future EPDs that will help accelerate industry adoption of Sublime Cement™ as a next-generation, low-carbon building material of the future.”

Sublime Systems is currently engaging its construction industry partners for its first major construction projects this quarter and is actively planning its first commercial facility, which will produce tens of thousands of metric tons of low-carbon cement per year. Sublime Cement™ functions as a fully drop-in replacement for OPC in concrete today and complies with ASTM C1157, a widely adopted fully performance-based industry specification for hydraulic cement. To learn more about integrating Sublime Cement™ into your construction projects, contact partnerships@sublime-systems.com.

About Sublime Systems

Sublime Systems is on a mission to have a swift, massive, and enduring impact on global CO₂ emissions with a breakthrough process that can manufacture cement without fossil fuels or limestone. Sublime replaces the industry's legacy kilns with an electrochemical process that makes cement at ambient temperature, extracting calcium and silicates from an abundance of raw materials to make cement. This novel approach bypasses both CO₂ process emissions and heating emissions, without the need for post-combustion carbon capture, producing ASTM C1157-compliant Sublime Cement™ as a drop-in replacement for ordinary portland cement in concrete. Sublime was founded at MIT by Dr. Leah Ellis and Prof. Yet-Ming Chiang, both respected experts in materials science, electrochemical systems, and sustainability research. The company has raised more than \$50M from a leading consortium of climate tech investors, ARPA-E funding, and strategic investor Siam Cement Group, the largest cement producer in Southeast Asia. It currently operates a pilot plant with a >100-tonnes-per-year production capacity. Learn more at sublime-systems.com.

About Climate Earth

Climate Earth is the first and only global provider of on-demand, digital EPDs and business intelligence tools for the concrete industry. Climate Earth's mission is to increase transparency and help concrete producers accelerate product innovation for low carbon concrete with on demand EPDs and advanced digital tools that measure, analyze, and project environmental impacts. Founded in 2008 and based in Richmond, California, Climate Earth systems have automated EPD creation for over 900 ready mix, block and cement plants worldwide and have generated nearly 60,000 third party verified EPDs. For more information visit: www.climateearth.com.

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