



CONCRETE AND ASPHALT INNOVATION ACT (S. 1067)

The Concrete and Asphalt Innovation Act (CAIA) strengthens the competitiveness of American manufacturing by developing technologies to reduce emissions of cement, concrete, and asphalt production.

SUMMARY

Technological innovation is key to strengthening America's domestic manufacturing competitiveness for cement, concrete, and asphalt since the U.S. has a significant import reliance on these materials. The CAIA establishes DOE's first research, development, and demonstration (RD&D) program focused on low-emission cement, concrete, and asphalt production to strengthen American manufacturing, increase supply chain resilience, lower dependence on foreign countries, and position America to export low-emissions technologies to capitalize on the rising global demand for cleaner industrial materials. These efforts include applying RD&D to new production methods and public-private partnerships to commercialize new low-emissions technologies and to provide certainty for innovative products to enter the market and scale up.

The U.S. needs continued innovation to keep pace and ensure we are researching and deploying cutting-edge, innovative technologies to maintain a competitive advantage. Furthermore, multiple private companies are committing to modernize their production, and buyers are interested in purchasing lower-emissions cement, concrete, and asphalt. Targeted public and private sector support for emerging technologies will be necessary to help these companies achieve these ambitious goals.

HISTORY:

The reintroduction of this legislation builds on bipartisan, bicameral introduction in the 118th Congress – CAIA, IMPACT, and IMPACT 2.0. In September 2024, the House passed IMPACT on suspension after a unanimous vote in the House Science, Space & Technology Committee.

In the 117th Congress, the Infrastructure Investment and Jobs Act (IIJA) of 2021 and the CHIPS and Science Act of 2022 provided resources to the Department of Energy (DOE) for industrial demonstration programs within the Office of Clean Energy Demonstration and direction for steel innovation (RD&D). However, direction for cement, concrete, and asphalt was not included, and additional RD&D at the DOE and coordination with other government entities is needed. Supporting industry by providing policy incentives for innovators working on these groundbreaking technologies will allow America to continue to lead in the cement, concrete, and asphalt industrial subsector.

SPECIFICS:

The Concrete and Asphalt Innovation Act establishes new programs at DOE and the U.S. Department of Transportation (DOT), including:

- **Dedicated RD&D Program:** Establishes DOE's first crosscutting RD&D program for advanced, low-emission cement, concrete, and asphalt technologies. DOE must establish long-term cost, performance, and demonstration targets for low-emission cement, concrete, and asphalt manufacturing.
- **Strategic Plan:** Directs DOE to develop a five-year strategic plan to support RD&D activities, establish technological and programmatic goals, and set timelines for accomplishing the goals developed under the plan.
- **Low-Carbon Manufacturing Institutes:** Authorizes DOE to leverage existing Manufacturing USA Institutes or establish two new institutes: one for cement and concrete and one for asphalt. These institutes will develop partnerships with private sector partners to trial later-stage R&D and boost workforce development and job creation in the domestic cement, concrete, and asphalt sectors.
- **Federal Highway Administration (FHWA) Grant Program:** Authorizes FHWA to establish a voluntary grant program for any state DOT that increases its adoption of performance-based specifications to facilitate the purchase of low-emissions cement, concrete, and asphalt. The grant program provides reimbursement for states to purchase low-carbon materials and funds technical assistance needed to modernize specifications to be performance-based.
- **Advanced Purchase Commitment (APC):** Increases state DOT flexibility in using Surface Transportation Block Grant (STBG) funds by expanding the eligible project list to include projects that use innovative materials and advanced multi-year procurement, with commercial guardrails to ensure taxpayer dollars are protected from contract non-performance.
- **Interagency Task Force:** Establishes a task force drawing on officials from DOE, DOT, the Secretary of Defense, and experts from the cement, concrete, and asphalt sectors to evaluate strategies to improve performance, reduce costs, and drive increased innovation and employment in low-carbon cement, concrete, and asphalt production. The Task Force will submit a report every two years to the Committee on Energy and Natural Resources of the Senate and the Committee on Science, Space, and Technology of the House of Representatives.

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