

Department of Commerce Announces Letters of Intent With 4 Companies for \$389 Million of R&D Awards to Strengthen America's Energy Semiconductor Supply Chain

The CHIPS Research and Development Office's incentives will advance and accelerate domestic R&D for semiconductors and materials critical to U.S. energy infrastructure and data centers.

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WASHINGTON, D.C. – The Department of Commerce today announced the signing of four letters of intent to provide up to \$389 million in federal R&D awards under the CHIPS and Science Act.

These incentives will accelerate R&D supporting the semiconductors and materials needed for a variety of applications, including the control, conversion, and delivery of power. Power electronics is foundational to modernizing the domestic grid and powering critical energy infrastructure loads.

Improvements in power converter performance can drive significant benefits, including higher power efficiency, enhanced grid stability, and reduced thermal losses. By transforming passive, unidirectional electrical infrastructure into dynamic, controllable physical networks, advanced power electronics serve as an essential platform for U.S. energy security and economic resilience. Developing these capabilities domestically will reduce reliance on overseas manufacturing, strengthen economic and national security, and support the energy pathways that will underpin future U.S. semiconductor leadership.

“The Trump Administration is accelerating American semiconductor innovation to enhance our domestic energy and power resources,” said Secretary of Commerce Howard Lutnick. “These investments expand domestic research, secure critical supply chains, and create high-paying American jobs.”

The companies listed below have entered into letters of intent with the Department of Commerce. Under the final awards, each company will conduct R&D to address critical projects spanning power semiconductor devices, modules, and materials essential to the semiconductor supply chain.

- **Helion** will receive up to \$175 million to develop, scale, and establish domestic capabilities in high-voltage power semiconductors and advanced energy power modules designed for high-peak-current pulsed-power applications in fusion power generation. These semiconductors will power, control, and harvest energy from the magnets driving Helion's fusion generators.
- **Commonwealth Fusion Systems** will receive up to \$85 million for R&D to develop semiconductors for radio-frequency plasma heating, power electronics, embedded electronics for fusion diagnostics, and radiation-hardened electronics.
- **Vertical Semiconductor** will receive up to \$73 million to advance its vertical gallium nitride (GaN) power semiconductors, enabling more efficient and compact power delivery for advanced computing, and to demonstrate the technology for the world's first 2.5 MW super intelligence data center rack.
- **Sibelco** will receive up to \$56 million to develop next-generation purification and finishing technologies for ultra-high-purity quartz used in crystal growth crucibles, processing glassware, and other hardware throughout the semiconductor value chain. This R&D will provide next-generation ultra-high purity quartz materials to advance the domestic semiconductor supply chain.

"These CHIPS R&D awards will support breakthroughs in power semiconductor devices and critical materials," said Bill Frauenhofer, Executive Director of Semiconductor Investment and Innovation at the Department of Commerce. "Accelerating domestic R&D across these technologies will strengthen America's ability to convert and deliver power for the grid, advanced data centers, defense systems, and emerging fusion energy."

The Department will receive a minority, non-controlling and non-voting equity stake in each company as a condition for making the awards, enhancing the return for the U.S. taxpayer.