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Opinion: Congress needs to support Connecticut high technology companies

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The CHIPS Act passed last year because legislators on both sides of the aisle worked together when they saw that our share of the world's supply of semiconductors, commonly called chips, had fallen to 12 percent of the world's supply. But even though some Connecticut companies that support domestic chip manufacturers are benefiting from that federal funding, the CHIPS Act missed investment in technologies that every chip needs to function.

Most of the chips that will be made in America will rely on microelectronics made in Asia. This means we will continue to rely on a long and vulnerable supply chain. The COVID pandemic and the current disruptions to shipments in the Red Sea remind us that overreliance on distant nations creates economic and national security risk.

Our ability to make printed circuit boards, or PCBs, is an example of a technology we have almost totally offshored. Even though America invented and led the world in PCB technology, our PCB market has shrunk from 30 percent to 4 percent of the world's supply over the past 30 years. Without PCBs chips have no functionality. From F-150s (Ford's popular pickup) to F-35s (advanced military aircraft), PCBs are everywhere.

PCBs are often mistaken for simple green pieces of plastic, but in reality, are complex and precisely engineered, forming the central nervous system enabling the semiconductor "brain" to control the function of an electronic system.

In Waterbury, Shelton and West Haven, MacDermid Alpha's 215 employees provide specialty chemicals and engineered materials to the semiconductor fabrication and packaging industries, and to the printed circuit board fabrication and assembly industries. These are all vital parts of a vibrant global electronics manufacturing supply chain. In 2022, the legacy organizations of MacDermid and Alpha celebrated 100 and

150 years, respectively, of innovation and commitment to the customers and industries we serve.

The work we do here in Connecticut is an example of what America needs more of to create secure and trusted sources of microelectronics that power critical infrastructure applications like telecommunications, banking, medical, and national security systems.

The CHIPS Act was good first step by creating funding that is driving private investment in chips, but without concurrent support for domestic sources of PCBs and integrated circuit substrate materials, most of those new “Made in America” chips will be shipped across the world for advanced packaging with foreign-made PCBs. We don’t solve the supply chain problem by only addressing chips.

We appreciate what Congress did in the CHIPS Act to provide the initial investment that in turn attracted private investment for the semiconductor industry. It means jobs and prosperity for Connecticut. But, without similar action for PCBs, the country’s continued dependence on other foreign countries puts at risk an uninterrupted supply of trusted and secure PCBs and their associated materials.

To nurture and grow the entire microelectronics ecosystem we call on Congress to pass H.R. 3249, the Protecting Circuit Boards and Substrates (PCBS) Act. The PCBS Act calls for a 25 percent tax credit for companies buying American made PCBs, along with a \$3 billion investment in related research and development, physical plant, and workforce development efforts.

It’s time to finish the work that the CHIPS Act started and level the playing field for American companies. The PCBS Act will help achieve our national goal of a secure, trusted, and resilient national microelectronic supply chain: our national and economic security depend on it.

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