Written Testimony
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Subcommittee on Research and Technology
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Chairman Buchson, Ranking Member Lipinski, and members of the committee, thank you for allowing me to testify before you today on the need for public-private partnerships to strengthen advanced manufacturing in the United States, like the ones authorized by H.R. 2996, the Revitalize American Manufacturing and Innovation Act.

My name is Jonathan Davis, and I am a Global Vice President for SEMI – a global industry association that serves the semiconductor manufacturing supply chain, with about 500 U.S. member companies. Semiconductors are small integrated circuits or "ICs" – known as "computer chips". They are the enabling technology for all electronics and electronic systems – computers, cell phones, tablets, TVs, automobiles, medical devices, and components and systems for national defense and security.

SEMI represents a manufacturing supply chain which is heavily dependent on innovation and commercialization to perpetuate what is an incredible pace of technological advancement. On average SEMI North American members reinvests 10-15% of revenues into R&D and every year. The cost to commercialize technology continues to increase as we compete with global competitors supported by foreign government investment.

SEMI Members' Business Challenges

Governments around the world understand the strategic value of complete manufacturing supply chains. Many are supporting efforts to assist home grown manufacturing to compete with U.S. companies while also providing incentives to U.S. manufacturers to move offshore. In the case of the semiconductor equipment manufacturing, we see intense efforts by foreign government to commercialize next generation technology outside of the United States.

In Europe, they have launched the '10/100/20' strategy that will supply €10 billion from the EU to leverage €100 billion investment by industry, with the goal of 20 percent of global chip manufacturing by 2020.

In China, the 12th 5-year plan (2011-2015) from the central government calls for $600 Billion for 7 priority technology areas, 2 of which include semiconductor related equipment.

Taiwan and Korea also have robust funding support in efforts to strengthen the local supply chain for their important national industries. This localization effort often results in direct pressure on US technology providers to relocate to their regions. Often, for both financial reasons and customer relations – the pressure to relocate some operations overseas is formidable.

We understand that the U.S. government faces its own budgetary fiscal challenges related to discretionary and non-discretionary funding. Mandatory funding continues to grow while non-discretionary funding becomes smaller. This model isn't sustainable. It's our hope that the Congress will find the correct balance for discretionary and non-discretionary programs so worthy public policy objectives such as H.R. 2996 can be debated and we hope implemented into policy.

H.R. 2996, the Revitalize American Manufacturing and Innovation Act

We believe H.R. 2996, the Revitalize American Manufacturing & Innovation Act provides the needed leadership by the United States government to compete with foreign government efforts and strengthen and grow strategically important manufacturing industries.

This legislation provides a public private partnership model that we believe can strengthen the manufacturing supply chains of numerous strategic manufacturing industries. The legislation won't help one particular company or university. It will enable an entire vertical supply chain for a specific manufacturing industry. We believe this is the proper role for the federal government to take – assist an entire industry, with everyone, including industry, academia, and state and local governments putting skin in the game.

H.R. 2996 authorizes the creation of Centers for Manufacturing Innovation (CMI). Each CMI will focus on a specific technology for commercialization of manufactured goods. Such a model allows for precompetitive research and or pilot scale manufacturing product development. As I mentioned earlier, SEMI member companies cost to commercialize next generation technology into a manufactured product is extremely expensive. Having a shared manufacturing pilot line for all companies, large and small, that are part of the supply chain to share saves resources for everyone. This is especially important for small and medium suppliers who cannot afford the high cost to commercialize technology.

The legislation is technology neutral. The government cannot require specific technologies in the solicitations from the NIST based Network for Manufacturing Innovation (NMI) program office. All industries representing many different technologies can participate in bringing forth solicitation responses for consideration…with competition for the best ideas, and the strongest programs being at the center of the submissions

The legislation has an emphasis on proposals that strengthen U.S. manufacturing industries and return value to the U.S. tax payer in retaining and creating U.S. based manufacturing jobs. Also matching funds are required; most likely a 2 to 1 match from industry, with a requirement that the CMI's being self-sustaining without any federal funding after 7 years. These requirements will bring industries that commercialize technology to the forefront versus industries that are still in research and development.

In closing, SEMI supports H.R. 2996 as a useful and constructive mechanism for the federal government to partner with industry to strengthen advanced manufacturing in the United States. Thank you for your invitation to testify here today, and I look forward to answering any questions you may have.