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November 1, 2021

VIA ELECTRONIC SUBMISSION

The Honorable Gina Raimondo, Secretary
U.S. Department of Commerce
1401 Constitution Ave, NW
Washington, D.C. 20230

Re: Notice of Request for Public Comments on Risks in the Semiconductor Supply Chain (86 FR 53031; September 24, 2021).

Dear Secretary Raimondo:

SK Siltron CSS submits the following comments in response to the United States Department of Commerce's Notice of Request for Public Comments on Risks in the Semiconductor Supply Chain. Broadly, SK Siltron CSS supports the Department of Commerce's efforts to strengthen and secure semiconductor supply chains and address the ongoing shortages in the semiconductor product supply chain.

SK Siltron CSS is a semiconductor wafer manufacturer based in Michigan. SK Siltron CSS manufactures a specialty wafer made of silicon carbide ("SiC")—specifically, single-crystal N-type SiC wafers and epi wafers in 150mm diameter. SK Siltron, a global maker of semiconductor wafers based in South Korea, acquired the Michigan SiC wafer business in 2019 and established SK Siltron CSS as a U.S. subsidiary. Since then, SK Siltron CSS has doubled its employee base in Michigan, currently employing 130 skilled workers and professional engineers.

In 2021, SK Siltron CSS announced plans to invest an additional $300 million and create up to 150 new high-paying, skilled jobs in Bay County, Michigan, over the next three years. This expansion will double SK Siltron CSS's Michigan employee base as well as add a new site in Bay City, Michigan, to join its existing facility in Auburn, Michigan.

Notably, SK Siltron CSS's SiC wafers can be used in the semiconductor power components of electric vehicles ("EVs"). SiC wafers are more efficient at handling high powers and conducting heat than normal silicon. When used in EV system components, this characteristic can allow a more efficient transfer of electricity from the battery to the motor, increasing the driving range of an EV by 5 percent to 10 percent. In addition to helping increase driving ranges for EVs, the electrical and thermal properties

of silicon carbide can help reduce charging times, relax system cooling requirements, and shrink the power module size and weight.

With the rapid adoption of EVs, the global demand for SiC wafers has quickly increased. Due to the high technical barrier on SiC crystal growth and wafering, there are limited numbers of qualified SiC wafer suppliers, and as one of the leading SiC wafer suppliers, SK Siltron CSS has been supporting multiple customers.
Given the importance of SiC wafers for EVs and the resulting increase in demand, SK Siltron CSS plans to invest over $600 million over the next five years to expand its capacity. SK Siltron CSS's SiC wafers can be set apart from competitors given that SK Siltron CSS is the only SiC wafer supplier with direct access to high-volume manufacturing (HVM) expertise on semiconductor wafers from its parent company, SK Siltron, one of the world's leading 300mm Si wafer suppliers. By collaborating with SK Siltron, CSS plans to scale up HVM operations to benefit its customers.

Although SK Siltron CSS currently does not have an order backlog, there are certain concerns that could potentially limit our capacity or create disruptions in our plans to expand capacity in the future. First, there are long lead times for necessary semiconductor manufacturing equipment, with some manufacturing equipment carrying a lead time as long as two years. Second, with respect to raw materials, the capacity expansion plans and timelines trail far behind downstream customers. Third, we have concerns related to the lack of availability of qualified labor to hire, including skilled engineers and operators. Finally, there are concerns related to the price of building materials, which have increased significantly in price this year, potentially affecting SK Siltron CSS's capacity expansion plans.

While the above concerns are systemic in nature and may be difficult to resolve in the short-term, SK Siltron CSS appreciates the Department of Commerce's efforts toward identifying and addressing such potential vulnerabilities in semiconductor supply chains through this Request for Information. Additionally, SK Siltron CSS supports funding for semiconductor initiatives and programs, such as those authorized in the CHIPS for America Act, which could assist in mitigating some of these concerns in expanding capacity.

SK Siltron CSS is committed to the United States and its investments in Michigan, as well as to supporting its customers and the broader semiconductor industry with a dependable and secure supply of SiC wafers. SK Siltron CSS looks forward to working with the Department of Commerce to support the Administration's efforts to strengthen semiconductor supply chains.

Sincerely,

Jianwei Dong, Ph.D.
Chief Executive Officer
SK Siltron CSS