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WASHINGTON, DC 20510–4606

COMMITTEES:
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September 30, 2025

The Honorable Jeffrey Kessler
Under Secretary, Bureau of Industry and Security
U.S. Department of Commerce
1401 Constitution Ave NW
Washington, DC 20230

Dear Under Secretary Kessler:

I write to express concerns with developments in critical open source ecosystems and standards development organizations – in particular, the extent to which U.S. firms may inadvertently be ceding U.S. technology advantages to firms based in, or subject to the influence and control of, the People's Republic of China (PRC), in ways that create durable strategic advantage to the PRC. Open source technology movements have been lynchpins for U.S. innovation and global technology influence, particularly in internet and communications technologies. More broadly, the benefits of open science and global science and technology collaboration redound to the U.S. and to all peoples – and for this reason the Bureau of Industry and Security (BIS) has historically interpreted Export Administration Regulations to be inapplicable to most open source technologies.

At the same time, PRC leadership has made clear that the open source technology ecosystem represent a key avenue for circumventing U.S. and multilateral technology controls – and shaping alternative technology ecosystems.[1] As a means of advancing the PRC's longstanding goal of indigenizing advanced computing technologies, PRC leadership has given particular priority to domestic adoption of RISC-V, an open source instruction set architecture for semiconductors.[2] PRC national champions have heeded their government's guidance, aggressively working to commercialize RISC-V -based chips (without the need for a license for U.S. or British firms' alternative ISAs that could be withheld by BIS).

To be sure, RISC-V holds great promise for U.S. and allied fabless semiconductor firms, lowering barriers to entry and creating opportunities for highly customizable semiconductors. For this very reason, companies in the U.S. and allied countries established the RISC-V Foundation, a governance and quasi-standards development organization to cultivate the RISC-V ecosystem and maintain intellectual property associated with RISC-V contributions. However, in recent years, the RISC-V Foundation has exhibited characteristics that raise concern – including relocating the organization to Switzerland (with RISC-V Foundation renamed RISC-V

[1] Aaron Tan, "The Rise and Rise of Open Source in China," *Computer Weekly* (Aug. 22, 2024), available at https://www.computerweekly.com/news/366608127/The-rise-and-rise-of-open-source-in-China
[2] Che Pan and Brenda Goh, "China to Publish Policy to Boose RISC-V Chip Use Nationwide, Source Say," *Reuters* (March 4, 2025), available at https://www.reuters.com/technology/china-publish-policy-boost-risc-v-chip-use-nationwide-sources-2025-03-04/

International) and a growing membership of PRC technology firms closely affiliated with the PRC government. Today, PRC firms represent nearly half of RISC-V Foundation Board of Directors; more concerningly, this includes PRC firms included on BIS's Entity List for their threat to U.S. national security, including Phytium and Huawei.

While the participation of PRC firms in open source communities or open-membership standards organization may be unavoidable given global information and communications technology supply chains, American policymakers have – on a bipartisan basis and spanning administrations – sought to combat efforts by PRC companies to *shape and control* such organizations in ways that challenge U.S. economic and national security interests. Ironically, American firms have in many ways catalyzed the conditions for PRC breakthroughs by cultivating open source and open standard approaches in order to avoid paying license fees to, or reduce dependence on, other U.S. or allied countries' firms. Worryingly, this dynamic increasingly appears across the technology stack for advanced compute and AI – including AI frameworks such as PyTorch (overseen by the PyTorch Foundation) and the Unified Acceleration Foundation, as well as supercomputing connectivity standard Ultra Ethernet Consortium, all of which have embraced leading PRC firms as members (and in some cases occupying governance roles).

During your confirmation hearings, you underscored the importance of the economic and technology competition between the United States and the People's Republic of China (PRC), noting the Bureau of Industry and Security's mandate to prevent the export and diversion of strategically important technologies to our nation's adversaries. Against the backdrop of technology ecosystems with global reach, this mandate necessarily involves a delicate balance between maintaining (and cultivating) foreign adoption of U.S. technology, while combatting efforts by adversaries and economic competitors to gain unfair market advantage or exploit U.S.-origin technology for strategic advantage.

While maintaining robust open source ecosystems in many ways contributes to the advantage of the United States, I urge you more closely scrutinize these arrangements, particularly in cases where organizations elevate PRC firms to governance roles – and consider using BIS's deemed export authority in contexts that involve U.S firms' contributions to projects in which PRC firms on the Entity List or Denied Persons List hold governance roles. Furthermore, I encourage you undertake an initiative to identify open source and/or open standard organizations across key technology focus areas, as identified in the *CHIPS and Science Act*, and develop guidance for U.S. companies to use when evaluating participating in such organizations and on using technology developed by or under those organizations.

Sincerely,

Mark R. Warner
United States Senator