



March 23, 2022

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives

The Honorable Kevin McCarthy
Republican Leader
U.S. House of Representatives

The Honorable Chuck Schumer
Majority Leader
U.S. Senate

The Honorable Mitch McConnell
Republican Leader
U.S. Senate

The Honorable Eddie Bernice Johnson
Chairwoman
House Committee on Science, Space, and
Technology

The Honorable Frank Lucas
Ranking Member
House Committee on Science, Space, and
Technology

The Honorable Frank Pallone
Chairman
House Committee on Energy and Commerce

The Honorable Cathy McMorris Rodgers
Ranking Member
House Committee on Energy and Commerce

The Honorable Maria Cantwell
Chair
Senate Committee on Commerce, Science, and
Transportation

The Honorable Roger Wicker
Ranking Member
Senate Committee on Commerce, Science, and
Transportation

The Honorable Gregory Meeks
Chairman
House Committee on Foreign Affairs

The Honorable Michael McCaul
Ranking Member
House Committee on Foreign Affairs

The Honorable Bob Menendez
Chairman
Senate Committee on Foreign Relations

The Honorable James Risch
Ranking Member
Senate Committee on Foreign Relations

Dear Speaker Pelosi, Leader McCarthy, Leader Schumer, Leader McConnell, Chairwoman Johnson, Ranking Member Lucas, Chairman Pallone, Ranking Member McMorris Rodgers, Chair Cantwell, Ranking Member Wicker, Chairman Meeks, Ranking Member McCaul, Chairman Menendez, and Ranking Member Risch:

The Quantum Industry Coalition (“QIC”) is a group of companies dedicated to maintaining the United States’ leadership in the development and commercialization of quantum technologies. Our members range from start-ups to Fortune 100 companies focusing on a variety of aspects of quantum technology, including hardware, software, and application development.

This Congress has wisely prioritized innovation. QIC applauds the Senate for passing the United States Innovation and Competition Act (“USICA,” S.1260) and the House for passing the America COMPETES Act

of 2022 (H.R. 4521) as the basis for a conference agreement on legislation that can be presented to the President and signed into law. We strongly support provisions in both bills that will help strengthen the nation's position in the global quantum race. We also encourage expediting the bill through conference; in light of global events, time is of the essence in accelerating the practical utility of quantum technologies.

Quantum as a Key Technology

QIC supports the Senate bill's designation of quantum information science and technology as one of ten key technology focus areas (Sec. 205). QIC supports the House bill's addition of quantum cryptography, post-quantum cryptography, and quantum networking and communications technology to the National Quantum Initiative (Sec. 10232).

Quantum Networking and Workforce Development

QIC supports the inclusion in both bills of a quantum network infrastructure program (Sec. 10104 of the House bill and Sec. 2211 of the Senate bill). The Senate bill incorporates the full Quantum Network Infrastructure and Workforce Development Act (Sec. 2211), which will expand the domestic quantum workforce - a key priority of the coalition - by directing the National Science Foundation to work with the National Academies to prepare students to enter the quantum fields, encourage the study of quantum information science and engineering as part of STEM education nationwide, and establish a Next Generation Quantum Leaders pilot program with a focus on tribal and rural schools. These provisions will enable the United States to progress rapidly in quantum networking. QIC is concerned about China's significant advances to accelerate quantum networking as reflected in a comparative assessment of the U.S. and Chinese Quantum Industrial Bases published last month.¹

Access to Quantum Capabilities

QIC supports the House bill's inclusion of the Department of Energy Quantum User Expansion for Science and Technology ("QUEST") Program, which would provide access to quantum computing capabilities for a larger and more diverse group of U.S. researchers and research activities. The program would involve the U.S. quantum industry throughout the process, leveraging U.S. commercial capabilities to achieve better results. We appreciate the authorization of funding through the Department of Energy's Office of Science for this legislation, and note that more funding could be used effectively, if authorized, to advance practical use cases for national security as well as to deliver prototype applications that incentivize commercial adoption and investment. We believe the QUEST program should include a wide variety of quantum hardware and quantum and quantum-hybrid software as well as support research which covers a broad base of topics including near-term and applied research as well as foundational research.

CHIPS Act

More broadly, QIC supports the provisions of the CHIPS Act included in both bills that bolster the U.S. computer chip industry. Many forms of microelectronics are critical to the advancement of quantum technology, and it is important that the CHIPS Act support all aspects of this diverse advanced manufacturing ecosystem. Domestic manufacture of these components is critical to multiple technological areas and will be key to capturing and maintaining quantum supremacy. Quantum chips will enable breakthroughs in advanced energy storage, pharmaceutical development, climate research, and numerous other applications critical to the U.S. leadership priorities identified in USICA and the America COMPETES Act. A stable and sustainable domestic supply chain of U.S.-manufactured quantum

¹ Parker, Edward, Daniel Gonzales, Ajay K. Kochhar, Sydney Litterer, Kathryn O'Connor, Jon Schmid, Keller Scholl, Richard Silberglitt, Joan Chang, Christopher A. Eusebi, and Scott W. Harold, An Assessment of the U.S. and Chinese Industrial Bases in Quantum Technology. Santa Monica, CA: RAND Corporation, 2022. https://www.rand.org/pubs/research_reports/RR869-1.html.

chips and specialty wafers is crucial to the nation's ability to compete and win in the global quantum competition. Funding the development and expansion of this domestic supply chain should be a key component of CHIPS Act investments as well as expansion of the necessary workforce. A well-developed semiconductor workforce will possess many of the necessary skills for work in the growing quantum industry, and so developing and supporting one benefits the other.

Opportunities for Small and Medium-Sized Businesses

Finally, QIC supports expanding opportunities for small and medium-sized businesses to engage with agencies, National Laboratories, and other federal customers in ways that reduce barriers to participation, including through outreach, small awards, and streamlined contracting.

QIC and its members look forward to a timely and successful conference of USICA and the America COMPETES Act. We are confident that the legislation will strengthen the nation's ability to lead in key fields like quantum technology for years to come.

Sincerely,

/s/

Paul Stimers
Executive Director
Quantum Industry Coalition