



June 22, 2018

The Honorable Lamar Smith  
Chairman  
House Committee on Science, Space,  
& Technology  
2321 Rayburn House Office Building  
Washington, D.C. 20515

The Honorable Eddie Bernice Johnson  
Ranking Member  
House Committee on Science, Space,  
& Technology  
394 Ford House Office Building  
Washington, D.C. 20002

Dear Chairman Smith and Ranking Member Johnson,

The National Photonics Initiative (NPI) and its co-signed industry and university stakeholders commend the House Committee on Science, Space, & Technology for introducing the National Quantum Initiative Act of 2018. This legislation represents an important first step in the establishment of a comprehensive federal policy to foster quantum research and technology development and build the needed workforce.

We believe this commitment to quantum research and technology is critical to our nation's position as a global economic leader as well as our national security. We applaud the bill's emphasis on coordinated research at the National Science Foundation, the National Institute of Standards and Technology, and the Department of Energy, overseen by National Quantum Coordination Office within the White House Office of Science and Technology Policy. This research will lead to applications that will be used to solve real world problems. The NPI also appreciates that industry stakeholders are encouraged to contribute to this national effort—a necessary element to propel quantum research into technological applications.

Additionally, we believe the level of funding commitment established in the bill is not only necessary but essential to fully realize the potential benefits and applications of quantum technology.

We do believe the legislation can be improved with the inclusion of a Quantum Computing Access Program (QCAP) as recommended in the NPI's National Quantum Initiative Action Plan shared with the Committee in April 2018. A QCAP would support the activities of NQI research and laboratory programs by providing access to new quantum computing systems and simulations. This would be possible by making the most advanced commercially available American-made quantum computing systems accessible via secure cloud access for all NQI projects and performers, applicable advanced scientific computing projects, and U.S. government researchers. Additionally, the QCAP could leverage high-performance computing resources to allow application developers to simulate aspects of quantum algorithms and hardware in NQI programs. The addition of a QCAP would greatly enhance the impact of the legislation and leverage public and private investments in quantum research and technology.

Again, we thank the Committee for its bipartisan commitment to furthering the development of quantum technology in the U.S. and we look forward to continuing to work with the Committee to advance this important legislation.

Sincerely,

California Institute of Technology  
David Awschalom, University of Chicago  
Duke University  
Edward White, Chair, National Photonics Initiative Steering Committee  
Harvard University  
Google Inc.  
Harris Corporation  
IBM  
IEEE Photonics  
Intel Corporation  
IonQ Inc.  
OSA, The Optical Society  
Quantum Circuits Inc.  
Rigetti Computing  
SPIE, the international society for optics and photonics  
University of Maryland  
University of Oregon  
Yale University