

HOUSE BILL REPORT

HB 1360

As Reported by House Committee On:

Technology, Economic Development, & Veterans

Title: An act relating to the advancement of quantum economic development.

Brief Description: Concerning advancement of quantum economic development.

Sponsors: Representatives Ryu, Shavers, Parshley, Entenman, Ortiz-Self and Nance.

Brief History:

Committee Activity:

Technology, Economic Development, & Veterans: 1/24/25, 1/31/25 [DPS].

Brief Summary of Substitute Bill

- Creates a nine-member advisory committee to advance the economic development of quantum technologies.
- The advisory committee is required to provide recommendations to promote a quantum technology ecosystem and produce a workforce development plan.
- Creates a grant program within the Department of Commerce to support applicants for federal grants related to quantum technology.

HOUSE COMMITTEE ON TECHNOLOGY, ECONOMIC DEVELOPMENT, & VETERANS

Majority Report: The substitute bill be substituted therefor and the substitute bill do pass. Signed by 10 members: Representatives Ryu, Chair; Kloba, Vice Chair; Barnard, Ranking Minority Member; Cortes, Donaghy, Keaton, Paul, Shavers, Simmons and Thomas.

Minority Report: Without recommendation. Signed by 2 members: Representatives Penner and Volz.

This analysis was prepared by non-partisan legislative staff for the use of legislative members in their deliberations. This analysis is not part of the legislation nor does it constitute a statement of legislative intent.

Staff: Martha Wehling (786-7067).

Background:

Quantum Technology.

The principles of quantum mechanics are used to develop quantum technologies. Quantum mechanics are the laws of physics that apply to sub-atomic particles. Examples of quantum technologies include quantum computing, communication, and sensing:

- *Quantum computing* uses "qubits," a chip different from conventional semiconductors, which allow faster processing than traditional computers. Possible applications of quantum computing include climate models, medicine development, development of traffic systems, and a resilient energy grid.
- *Quantum communication* uses key distribution for enhanced security. Possible applications of quantum communication include protecting consumers from financial fraud and preventing interception of sensitive information.
- *Quantum sensing* allows high precision measurements at the level of individual atoms. Possible applications of quantum sensing are broad, including: healthcare, medical research, environmental monitoring, construction, energy, navigation, and defense.

Governments began to establish quantum hubs to explore quantum technologies about 15 years ago. In 2018 the federal National Quantum Initiative Act provided \$1 billion annually for quantum research. In the fall of 2024, the United States Commerce Department published a rule controlling quantum computing, semiconductor manufacturing, and other advanced technologies.

Private companies have also formed partnerships and investments to develop quantum technology. The Northwest Quantum Nexus (NQN) is a coalition including the University of Washington, Pacific Northwest National Laboratory, and Microsoft Quantum. It was formed to develop a quantum-fluent workforce and economy in the Pacific Northwest by accelerating research, technology development, education, and training in the quantum information sciences.

The workforce for the quantum ecosystem will rely on a wide variety of skilled workers, including technicians, programmers, engineers, business developers, marketers, and sales. Two universities in Washington currently have programs for quantum research: the University of Washington and Washington State University.

Economic Development.

The Department of Commerce is responsible for promoting community and economic development, assisting businesses in the state to maintain and increase economic competitiveness, and expand the state's role in trade promotion and marketing. It does this through a variety of programs, including technical assistance, grant inventories, and innovation partnership zones.

Existing programs that promote quantum-adjacent technologies include the life sciences discovery fund, which provides research grants; the Washington State Broadband Office, which develops broadband accessibility and economic vitality; the Digital Equity Forum, which develops recommendations to advance digital connectivity; and a workforce innovation sector lead, to develop and retain research and development employers and workforce.

Public Records.

The Public Records Act (PRA) requires state and local agencies to make all public records available for public inspection and copying unless a record falls within an exemption in the PRA or another statute that exempts or prohibits disclosure of specific information or records. There is an exemption under the PRA for certain financial, commercial, and proprietary information. For example, financial and commercial information and records supplied by businesses or individuals during application for certain loans or program services are exempt from disclosure.

Summary of Substitute Bill:

Establishment of a Quantum Technology Advisory Committee.

The Director of the Department of Commerce (Commerce) is required to appoint a nine-member advisory committee made up of: the Lieutenant Governor or his designee, the Director of Commerce or his designee, at least one institution of higher education, two technology companies with headquarters in Washington, an aerospace company with a factory in the state, a company that builds and sells quantum computers and software with a factory in the state, and the Pacific Northwest National Laboratory (PNNL). Commerce is required to provide staff for the advisory committee, provide direction, and ensure accountability.

The advisory committee is required to select a chair, meet quarterly, produce a workforce development plan by June 30, 2026, and produce two reports to the Legislature with recommendations to competitively promote a quantum technology ecosystem in the state by November 1, 2025, and November 1, 2026.

The advisory committee will expire on June 30, 2027.

Program for Federal Quantum Technology Grants.

Commerce is required to establish a grant program to support applicants for grants related to quantum technology and may adopt rules. Commerce is required to partner with a higher education institution with a research program in quantum technology, award grants at least annually, and determine the grant application process. Any applicant receiving funds through the grant program must raise and contribute an amount from private sources that is at least five times the amount of the state grant. Financial and commercial information

included in a private applicant's grant application will be exempt from public disclosure.

To identify relevant federal grants, Commerce is permitted to consult with technology companies, Northwest Quantum Nexus, companies that build and sell quantum computers and software, or PNNL.

Public Records Exemption.

A public records exemption for the financial and commercial information submitted by a private applicant for a grant related to quantum technology is added to existing exemptions for financial and commercial information.

Substitute Bill Compared to Original Bill:

The substitute bill makes the following changes to the original bill, it:

- reduces the number of members on the advisory committee from 10 to 9 by removing a statewide elected official;
- requires that the company that builds and sells quantum computers and software must have a factory in the state to provide a member of the advisory committee;
- includes dates for the annual report and workforce development plan created by the advisory committee;
- requires that an applicant receiving grant funds from the state must provide private funds in an amount at least five times the amount of the state grant;
- creates a public records exemption for the financial and commercial information submitted by private applicants for the grants; and
- includes a null and void clause.

Appropriation: None.

Fiscal Note: Requested on January 17, 2025.

Effective Date of Substitute Bill: The bill takes effect 90 days after adjournment of the session in which the bill is passed. However, the bill is null and void unless funded in the budget.

Staff Summary of Public Testimony:

(In support) Quantum technology allows multiple dimensional computing and is very important for the future economic development of the state. It has transformative potential for the scientific community and the public. While artificial intelligence is the tip of the iceberg, quantum mechanics is more subtle, in an elementary state, and exploratory. Although it uses a lot of energy and takes a lot of money to develop and maintain, Washington should be a leader in the quantum economy, especially because of the institutions we have in the state. Fundamental research will lay the foundation for many

different types of technologies and develop innovative ideas. Advances in quantum information science promise breakthroughs in communications, simulation, computing, and weather forecasting. Examples of the technology are global positioning system (GPS), magnetic resonance imaging (MRI), and lasers. Quantum technology will fundamentally change the way we live and work, and every sector of the economy will benefit. We will need quantum literate professionals, and we can encourage students to study science, enter the quantum and science workforce, and keep talent in our region.

Governments and industries across the globe are making substantial strategic investments, but no government is better positioned to emerge than the United States, and Washington should be the lead. Regions of the United States are preparing for the quantum opportunities. Companies will not be loyal to a region just because that is where their headquarter offices are. Microsoft has a quantum laboratory in Copenhagen, Denmark, because that's where the great science is. Colorado, Maryland, and the city of Chicago are investing billions in quantum technology and vying at a regional level to attract federal grants and both large and start-up companies. Washington is special because it has industries and universities. Microsoft, Boeing, T-Mobile, Google, Amazon, and tons of start-ups will need a skilled workforce as quantum expands. The University of Washington can grow quantum programs and workforce education, where it has major research efforts, two Nobel prizes, and industry partnerships, including with the Pacific Northwest National Laboratory (PNNL). Now is the time to seize the day and ensure the state of Washington leads the way. Assembling an advisory committee and setting up funding mechanisms places us in the no-brainer position to be in the game.

(Opposed) None.

Persons Testifying: Representative Cindy Ryu, prime sponsor; Nancy Allbritton, Dean, College of Engineering, University of Washington; Michael Forbes, Washington State University; and Charles Marcus, University of Washington.

Persons Signed In To Testify But Not Testifying: None.