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Technology, Economic Development, &  
Veterans Committee

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HB 1360

**Brief Description:** Concerning advancement of quantum economic development.

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

**Brief Summary of Bill**

- Creates a 10-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.

**Hearing Date:** 1/24/25

**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

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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.

#### **Summary of Bill:**

##### Establishment of a Quantum Technology Advisory Committee.

The Director of the Department of Commerce (Commerce) is required to appoint a 10-member advisory committee made up of: the Lieutenant Governor or his designee, a statewide elected official, the Director 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, 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, and produce two reports to the Legislature with recommendations to competitively promote a quantum technology ecosystem in the state.

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. 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. Commerce may adopt rules.

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.

**Appropriation:** None.

**Fiscal Note:** Requested on January 17, 2025.

**Effective Date:** The bill takes effect 90 days after adjournment of the session in which the bill is passed.