

## 2024 Legislative and Budget Wins for Quantum

Governor JB Pritzker and the General Assembly took big steps in 2024 to solidify Illinois as the nation's leader in quantum. The state budget, which passed in spring 2024, included \$500 million in investments to create a shared cryogenic facility for research and development and to build infrastructure for a world-class quantum campus. The campus has the potential to attract up to \$11 billion in CHIPS and related federal funding and an estimated \$20 billion in private investment.

In addition to the budget investments, crucial updates were made to state legislation to increase benefits to quantum companies operating, expanding, or locating in Illinois.

### > New Quantum Enterprise Zone (QEZ)

Provides entities locating in Illinois' proposed quantum campus – funded through \$500 million bonded capital in the recently passed budget – with incentives including utility and building

material tax exemptions for all entities and buildings. These funds will help further anchor the future of semiconductor industry and essential innovation on the quantum campus

### > Updated Manufacturing Illinois Chips for Real Opportunity (MICRO) Program

Reaffirms the state's commitment to the diverse array of advanced computing industries and functions that are rapidly emerging with the advent of new technologies by defining semiconductor, quantum computing and microchip companies in their R&D phase as MICRO eligible. The legislation codifies quantum computing as a key industry the state is working to attract. To ensure critical smaller-scale suppliers are eligible for benefits, the minimum job creation and capital investment has been lowered. Finally, new legislative amendments make the MICRO Tier II utility tax exemption last for 30 years, making MICRO more attractive for large investments.



**BUSINESS INCENTIVES**



**ECOSYSTEM**



**FEDERAL INVESTMENTS**

## BUSINESS INCENTIVES

The State of Illinois Department of Commerce and Economic Opportunity has a comprehensive suite of incentives to help quantum businesses locate and grow in Illinois.

### > Manufacturing Illinois Chips for Real Opportunity Act (MICRO)

Companies that manufacture semiconductor or microchips or suppliers and makers of associated component parts that, at a minimum, invest \$2.5 million and create 10% of global employment or 50 jobs, whichever is less, can receive payroll withholding benefits, tax credits covering a percentage of employee training costs, tax exemptions, property tax abatements, site selection support and expedited permitting. Semiconductor, quantum computing and microchip companies in their R&D phase are now MICRO eligible.

### > Economic Development for a Growing Economy Tax Credit Program (EDGE) and EDGE for Start-Ups

The State's bread and butter tax credit program provides corporate income tax credits for new and retained jobs. For recently started companies, the State amended the EDGE program to create EDGE for Start-Ups which provides credits against payroll withholding. In 2024, EDGE benefits were extended from 10 years to 15 years for qualified large-scale (\$50 million+ and 100+ new jobs) job creators.

### > Innovation Vouchers

Grant program providing up to \$75K for Illinois' companies to engage in research projects in partnership with an Illinois institute of higher education.

### > Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Phase I Matching Program

The federal SBIR and STTR programs are highly competitive programs that encourage domestic small businesses to engage in federal R&D with the potential for commercialization. Illinois' matching grant program provides a state match of up to \$50K to Illinois-based companies that have received a Phase I award through a federal SBIR or STTR program.

### > Angel Investment Tax Credit Program

Tax incentive program encouraging investments in innovative, early-stage companies by providing investors in registered businesses with a state tax credit equal to 25% of their investment.

### > Federal Grant Support Program

Supports Illinois-based applicants for federal grants with a match of up to \$2 million, contingent upon receiving the federal award.

### > Illinois Innovation Venture Fund (INVENT)

Venture capital program providing direct equity investments for early and later-stage companies in Illinois, with a focus on key sectors aligned with the Illinois economic development plan (including QIST) and founders and communities that have historically faced barriers to accessing capital.



To learn more about DCEO Incentives, scan the QR code or visit us at: [innovate-illinois.com/dceo-incentives](https://innovate-illinois.com/dceo-incentives)

## ECOSYSTEM

Illinois is home to a strongly connected quantum ecosystem that includes:

### > Anchor Collaborative

The Chicago Quantum Exchange, one of the largest quantum collaboratives in the country, along with University of Chicago and University of Illinois Urbana Champaign received \$200 million from Governor Pritzker's Rebuild Illinois Capital Plan to support a joint research building in the City of Chicago.

### > National Labs

Illinois has four National Quantum Labs. Illinois institutions represent 40% of the 2018 National NQI center funds:

- Argonne and Fermi each lead 2 of 5 DOE QIS Research Centers.
  - Fermi National Accelerator Laboratory's SQMS
  - Argonne National Laboratory's Q-NEXT
- UIUC and UChicago each lead 2 of the 5 NSF's Quantum Leap Institutes.

### > Start-Ups, Incubators, and Accelerators

Duality, the first quantum startup accelerator program in the US, is in Chicago and a strong ecosystem partner. Illinois is home to numerous quantum start-ups and incubators and since 2017, Illinois quantum startups have raised \$33.2 million through 27 agreements — the second-highest number of partnerships by quantum startups in the country.

### > Research & Workforce

Illinois has one of the largest quantum-ready talent pipelines with almost 60,000 degrees. The University of Chicago received \$150 million from Google and IBM for advancing quantum computing and the quantum workforce. Northwestern created their Initiative for Quantum Information Research and Engineering (INQUIRE), an interdisciplinary and collaborative effort develop a trans-disciplinary quantum workforce.

### > Statewide Quantum Network

In Illinois, a 124-mile quantum network with six nodes connects the University of Chicago, the Chicago Quantum Exchange, and the U.S. Department of Energy's Argonne and Fermi National Laboratories, representing one of the longest quantum networks in the country.

## Building Beyond Tomorrow

## FEDERAL INVESTMENTS

Illinois has been exceedingly successful in attracting federal dollars to concentrate QIST activities in the state and make Illinois the hub for a collaborative quantum ecosystem.

### National Science Foundation

- > • **NSF Engines (2023):** Chicago Quantum Exchange was an NSF Engines finalist and the only one of the 16 finalists in the quantum category. CQE received a \$1 million Type-1 development award.
- **Expanding Capacity in Quantum Information Science and Engineering (2023):** Researchers at Southern Illinois University at Edwardsville received \$745,000 for the project Investigating biomass pretreatment with nanodiamond quantum sensors.
- **National Science Foundation Quantum Leap Challenge Grant (2021):** University of Illinois, Urbana-Champaign (Institute for Hybrid Quantum Architectures and Networks) and the University of Chicago (QuBBE) each received a \$25 million National Science Foundation Quantum Leap Challenge Grant, making Illinois the only state in the nation to receive two of these awards.

### > Department of Energy

- **National Quantum Information Science Research Centers:** Illinois set a national precedent in quantum information science as the only state to receive two \$115 million grants from the U.S. Department of Energy, recognizing the extraordinary capabilities of both the Argonne National Laboratory and Fermilab. This unprecedented funding not only marks Illinois as the top recipient for federal quantum research grants in the country but further demonstrates the state's status as a powerhouse of quantum innovation.
- **RENEW Initiative:** With funding through a \$4.8 million award from DOE, University of Illinois Chicago is leading a consortium of seven Historically Black Colleges and Universities, Hispanic-Serving Institutions and female-serving institutions to build diverse educational pathways in quantum.

### > U.S. Economic Development Administration

- **Regional Technology and Innovation Hubs (Tech Hubs) (2023):** The Bloch, in the Chicago MSA, has been designated as an official Quantum Technology Hub by the Biden-Harris administration.
- **Local Technical Assistance (2022):** P33, supported by DCEO and CQE, received an EDA Local Technical Assistance grant to build the first regional quantum workforce plan in the nation.



Scan the QR code to learn more about Illinois' unique strengths in the quantum industry.