

HB 1578 (Walker) | SB 1832 (Sims)

Modernizing the Research & Development Tax Credit to Incentivize Quantum and Start-Ups

Background

Quantum information science is an increasingly growing area of innovation in advance computing that seeks to wed mathematical and scientific laws of quantum mechanics to the world of digital technology. Quantum computing is the next stage in advancing research and development in nearly every sector of the economy, including bio-pharmaceuticals, energy, finance, and transportation. Whereas classical computers in use today are able to rapidly quantify and run various functions at a given time, quantum computing will be able to solve problems that today's computers are incapable of doing and provide major solutions to areas of drug discovery, battery design, stock pricing, route logistics, fraud prevention, and improving encryption standards.

According to a report compiled by the Boston Consulting Group in 2021, 20% of companies are expected to make investments in quantum computing technology, up from just 1% in 2018. Moreover, BCG estimated that quantum computing could create value of \$450 billion to \$850 billion in the next 15 to 30 years, with value of up to \$10 billion accruing over the next 3-5 years.

Though broad commercial application of quantum is still years away, investments by Chicago's academic institutions, national laboratories, and businesses have created foundational infrastructure to transform Chicago into an international quantum hub. By building upon this framework, Illinois can become a global leader of what will be one of the most consequential technological developments over the next few decades. In addition to upgrading the R&D tax credit to attract new and innovative industries, the state R&D tax credit requires a reconfiguration to be better suited to help new businesses in this state utilize the credit, thereby incentivizing innovation and economic development in Illinois.

Proposal

Propose an expansion and extension of the Illinois R&D tax credit, which currently offers businesses in Illinois that make qualifying research expenditures (QREs) a tax credit worth 6.5% of the business' federal R&D tax credit, to attract companies engaged in quantum computing research and better help start-ups.

Specifically, this proposal would do the following:

- Extend the sunset of the R&D tax credit from January 1, 2027 to January 1, 2037;
- Double (from 6.5% to 13%) the amount of the R&D tax credit specifically for R&D expenditures in quantum information science (QIS) expenditures;
- Make the R&D tax credit refundable (by up to 90% of eligible credit value) specifically for companies that are make qualifying QIS expenditures.
- Modeled off of recent changes to the EDGE Tax Credit program, make the R&D tax credit applicable against a start-up company's withholding taxes instead of their income taxes in the event the start-up has no taxable income.