Comparing R&D Tax Credits and Incentives in Select States

By: Rute Pinho, Chief Legislative Analyst
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Issue

Compare R&D tax credits and incentives in Connecticut, Maine, Massachusetts, New York, and Rhode Island.

Summary

All five of the selected states offer various tax breaks for in-state R&D spending and investments, including income, sales, and property tax incentives. Each state offers at least one R&D tax credit based on annual or incremental R&D spending that applies against the state's income or business taxes (or both). Although they are similar in terms of credit-eligible expenditures, they vary significantly with respect to their credit amounts, limits, and carryover and refund provisions. In addition to these general R&D credits, Massachusetts and New York also offer R&D credits specifically targeted to life sciences R&D companies. Rhode Island also offers a credit for in-state investments in eligible real and personal property for certain R&D purposes.

All of the states offer 100% sales and use tax exemptions for R&D purposes as well. These exemptions generally cover machinery, equipment, materials, supplies, and in some cases fuel and utilities, used or consumed in R&D. Connecticut's 100% exemptions are limited to the biotechnology, renewable energy, and clean energy technology industries, but a 50% exemption applies to eligible R&D-related purchases by manufacturers in other industries.

We also identified property tax exemptions in four of the five states that apply either to personal property used in R&D, specifically, or business personal property, generally. (New York does not tax

any personal property.) These states may have additional exemptions or abatements that apply to business real or personal property, including businesses engaged in R&D, that are not captured in this report.

Income and Business Taxes

Attachment 1 briefly describes each of the selected states' credits for R&D spending. For each credit program, it indicates the (1) taxes against which the credit applies; (2) eligibility criteria and credit amounts; (3) limitations on the amount of credits that can be claimed each year; and (4) carryforward, carryback, or other provisions for unused credits.

In addition to these credits, Rhode Island also offers a tax credit for eligible real and personal property in Rhode Island that was acquired or built for certain R&D purposes. The credit equals 10% of the R&D property's cost and applies against the state's income tax, business corporation tax, and insurance gross premiums tax (44 R.I. Gen. Laws § 44-32-2).

Eligible R&D Spending

Across the five states, the credits are available for the same R&D expenses defined under federal law for purposes of (1) amortizing research and experimentation (R&E) expenditures (26 U.S.C. 174) or (2) claiming the federal research tax credit (26 U.S.C. § 41). They are generally tied to the federal definitions for "R&E expenditures," "qualified research expenses," and "basic research payments," but modified to include only those expenses incurred in the respective state.

1. "R&E expenditures" include (1) R&D costs in the experimental or laboratory sense, as defined in federal regulations; (2) costs related to developing or improving a pilot model, a plant process, a product, a formula, a technique, an invention, or similar property; and (3) costs of obtaining a patent. They do not include expenditures for (1) quality control testing; (2) advertising or promotions; (3) consumer or efficiency surveys; (4) management studies, (5) research connected with literary, historical, or similar projects; or (6) acquiring another business' patent, model, production, or process (26 CFR § 1.174-2). R&E expenditures generally include salaries and wages, supplies and materials, and certain overhead expenses related to R&E activities, among other things (IRS Notice 2023-63).

2. "Qualified research expenses" cover both in-house research and contract research. In-house research expenses include the wages and salaries of employees and supervisors engaged in "qualified research," as well as the cost of materials, supplies, and leased computer time used in this research. Contract research expenses are 65% of any amount the business pays or incurs to someone else for qualified research (26 U.S.C. § 41(b)). "Qualified research" is research that (1) involves expenses eligible for amortization under section 174 (i.e., "R&E expenditures"); (2) is technological in nature; (3) is intended to gain new technical knowledge useful in developing a new or improved product, process, software technique, formula, or invention to be sold, leased, licensed, or used by the business; and (4) includes

a process of experimentation aimed at developing a new or improved function, performance, or reliability or quality. Qualified research expenses generally exclude the cost of depreciable tangible assets used in qualified research, overhead expenses, and the fringe benefits of research personnel (Congressional Research Report, *Federal Research Tax Credit: Current Law and Policy Issues*, July 27, 2022).

3. "Basic research payments" are the amounts a business pays in cash to a qualified organization (e.g., a university or scientific research organization) for basic research performed by the qualified organization under a written agreement between the two entities (26 U.S.C. § 41(e)).

Among the selected states, Connecticut is the only one that offers a broadly available credit based on nonincremental R&D spending. Maine, Massachusetts, and Rhode Island all base their credits on incremental R&D spending, meaning that they cover only eligible R&D spending that exceeds the business's average spending over specified years. New York ties its Excelsior Jobs Program R&D credit directly to the amount the business earned for the federal research tax credit, which is mostly based on incremental R&D spending. Connecticut also offers an incremental credit that qualifying businesses can take instead of the nonincremental credit.

Credit Amounts and Limits

The credit rates vary significantly across the states but are difficult to compare due to differences in program design. Maine's research expense credit, for example, is 5% of eligible R&D expenses plus 7.5% of eligible research payments. Massachusetts' credits are both 10% and 15% of eligible R&D spending and research payments, respectively. New York's is 50% of federal R&D tax credit related to New York R&D spending but is generally capped at 6% of qualified research expenses in New York. Connecticut's nonincremental credit, on the other hand, ranges from 1% to 6% of eligible R&D spending, depending on the total amount spent.

Most of the states limit the amount by which businesses can use the R&D credits to reduce their tax liability. Connecticut, for example, allows corporations to use either of its R&D credits to reduce up to 70% of their corporation business tax liability. Rhode Island imposes a similar limit but caps it at 50% of a business's tax liability. Massachusetts takes a different approach by allowing businesses to use the credits to eliminate 100% of the first $25,000 of tax due plus 75% of any additional tax due.

New York does not limit the amount by which businesses may reduce their tax liability using credits, but it limits the number of years companies may earn the credits. Businesses can claim the Excelsior Jobs Program R&D credit for up to 10 consecutive years and the life sciences R&D credit for up to three.

Unused Credits

New York is the only one of the selected states with fully refundable R&D credits. The other states allow businesses to carry forward their unused credits for a specified number of years (e.g., seven years in Rhode Island and 15 years in Connecticut).

Both Connecticut and Massachusetts allow certain businesses to exchange their credits for a refund equal to a portion of the credits' face value. In Connecticut, qualified small businesses can apply for a refund of both R&D credits equal to 65% of their value. In Massachusetts, life sciences companies can apply for a refund of the general research credit equal to 90% of its value.

Connecticut also allows businesses to exchange their accumulated unused credits (i.e., stranded credits) for taking on certain capital projects or making corporate venture fund investments. The capital projects program allows businesses to exchange stranded credits for a project that (1) expands the business's scale or scope, (2) increases employment at the business, or (3) generates a substantial return to the state's economy. The venture capital investment program allows them to use the credits for making eligible venture capital investments in Connecticut start-up businesses or spin-off companies from the company's R&D department. OLR Report 2020-R-0045 describes these programs in more detail.

Sales and Use Tax

As Table 1 shows, all of the selected states have sales and use tax exemptions that are specifically targeted to R&D spending. The exemptions generally cover (1) machinery and equipment used in R&D; (2) materials, tools, and supplies used or consumed in the R&D process; and in some cases, (3) fuel or other utilities consumed in the R&D process.

Table 1: R&D-Related Sales and Use Tax Exemptions in Select States

Connecticut	Machinery, equipment, tools, materials, supplies, and fuel used directly in the biotechnology industry (CGS § 12-412(89) and Department of Revenue Services (DRS) PS 98(8)) Machinery, equipment, tools, materials, supplies, and fuel used directly in the renewable energy and clean energy technology industries (CGS § 12-412(117) and DRS SN 2010(9.1)) 50% exemption for (1) materials, tools, and fuel used in an industrial plant in any process related to manufacturing tangible personal property, including in R&D and (2) eligible machinery and equipment used for R&D of products to be manufactured for sale (CGS § 12-412i and DRS IP 2009(13))

Table 1 (continued)

Maine	Machinery and equipment for use directly and exclusively in R&D in the experimental and laboratory sense and machinery, equipment, instruments, and supplies for use directly and primarily in biotechnology applications (Me. Rev. Stat. tit. 36, § 1760(32))
Massachusetts	Materials, tools, and fuel used directly and exclusively in R&D by a manufacturer or R&D corporation (Mass. Gen. Laws ch. 64H, § 6(r) and 830 Mass. Code Regs. 64H.6.4)
New York	Tangible personal property used directly and predominantly in R&D in the experimental or laboratory sense, including utilities if they are used exclusively in R&D (N.Y. Tax Law § 1115(a)(10); N.Y. Comp. Codes R. & Regs. tit. 20, § 528.11; and Tax Bulletin ST-773)
Rhode Island	Scientific equipment, computers, software, and related items to the extent used for R&D by a business where this equipment is an integral part of its operation (44 R.I. Gen. Laws § 44-18-30(42))

Source: CCH AnswerConnect and state statutes and tax department websites

Property Tax

We identified R&D-related property tax exemptions across four of the five selected states. Three of the states provide a 100% exemption for (1) manufacturing machinery and equipment (MME) used in R&D (Connecticut and Rhode Island) or (2) personal property owned by qualifying R&D companies (Massachusetts). Maine provides a more general property tax exemption for qualifying business equipment that could be used by any eligible companies engaged in R&D. New York does not tax personal property.

As the table notes, Connecticut also offers a partial exemption for eligible R&D facilities that are located in targeted areas.

Table 2: R&D-Related Property Tax Exemptions in Select States

Connecticut	100% exemption for eligible MME used predominantly for a statutorily defined purpose, including R&D (CGS § 12-81(72)&(76)) Five-year, 80% exemption for eligible manufacturing facilities (including R&D facilities directly related to manufacturing) in targeted economic development zones (e.g., enterprise zones; CGS § 12-81(59)) and MME in these facilities (CGS § 12-81(60))
Maine	100% exemption for qualifying business equipment under the Business Equipment Tax Relief Program (certain equipment is instead eligible for a state reimbursement for property taxes paid) (Me. Rev. Stat. tit. 36, § 691 et seq.)

Table 2 (continued)

Massachusetts	100% exemption for personal property owned by qualifying R&D corporations (Mass. Gen. Laws ch. 59, § 5(16)(3))
New York	New York does not tax personal property.
Rhode Island	100% exemption for eligible MME, including machinery, fixtures, and equipment used by a manufacturer for R&D (44 R.I. Gen. Laws § 44-3-3(a)(22))

Source: CCH AnswerConnect; Lincoln Institute of Land Policy and George Washington Institute of Public Policy's *Significant Features of the Property Tax*, Taxable Personal Property, accessed January 22, 2024; state statutes and tax department websites)

Attachment 1: R&D Tax Credits in Select States

State and Credit Program	Eligible R&D Spending	Credit Amount	Limits	Unused Credits
Connecticut: R&D Credit *CGS § 12-217n* Applicable tax: corporation business tax	In-state R&E expenditures and basic research payments for research done in Connecticut Excludes any R&D spending the business claims under the R&E credit program (see below)	Ranges from 1% to 6% of eligible R&D spending, depending on the annual total (e.g., 1% for expenditures of $50 million or less and 6% for expenditures exceeding $200 million), with exceptions for qualified small businesses and businesses in enterprise zones Businesses incurring more than $200 million in R&D spending must reduce their credit if they cut their workforce by more than 2%	Generally, up to one-third of credit can be taken per year Subject to overall credit limit that caps (at 70%) the amount by which a business may reduce its tax liability by applying R&D credits	15 year carryforward; no carryback Eligible small businesses with credits they cannot claim may apply for a refund equal to 65% of the credit's value Businesses may also exchange their accumulated unused credits for taking on certain capital projects or making corporate venture fund investments

Attachment 1 (continued)

State and Credit Program	Eligible R&D Spending	Credit Amount	Limits	Unused Credits
Connecticut: R&E Credit *CGS § 12-217j* Applicable tax: corporation business tax	In-state R&E expenditures that exceed the amount spent in the prior income year (i.e., incremental expenditures)	20% of eligible R&D spending	Subject to overall credit limit that caps (at 70%) the amount by which a business may reduce its tax liability by applying R&D credits	15 year carryforward; no carryback Eligible small businesses with credits they cannot claim may apply for a refund equal to 65% of the credits' value
Maine: Research Expense Tax Credit *Me. Rev. Stat. tit. 36 § 5219-K* Applicable tax: corporate income tax	(1) In-state qualified research expenses that exceed the average spent in the prior three years and (2) basic research payments for research done in Maine	5% of eligible research expenses 7.5% of eligible basic research payments	Limited to 100% of a business's first $25,000 of tax due, plus 75% of any additional tax due	15 year carryforward (but unlimited carryforward for credits disallowed under the 75% limitation); no carryback

Attachment 1 (continued)

State and Credit Program	Eligible R&D Spending	Credit Amount	Limits	Unused Credits
Massachusetts: Research Credit *Mass. Gen. Laws ch. 63, § 38M* Applicable tax: corporate excise tax	(1) In-state qualified research expenses over the base amount and (2) incremental basic research payments for research done in Massachusetts Base amount is tied to the business's average annual gross receipts, as calculated under federal tax law Life sciences companies may also qualify for a separate credit (see below) for eligible R&D spending that does not qualify for the standard R&D credit	10% of eligible R&D spending 15% of basic research payments	Limited to 100% of a business's first $25,000 of tax due, plus 75% of any additional tax due	15 year carryforward (but unlimited carryforward for credits disallowed under the 75% limitation); no carryback Life science companies with unused credits may request a refund of up to 90% of the credits' value
Massachusetts: Life Sciences Research Tax Credit *Mass. Gen. Laws ch. 63, § 38W* Applicable tax: corporate excise tax	Same as general research credit, except that expenses for research on legally mandated clinical trial activities both inside and outside the state qualify	10% of incremental eligible R&D spending 15% of incremental basic research payments	Limited to 100% of a business's first $25,000 of tax due, plus 75% of tax due exceeding this amount	15 year carryforward (but unlimited carryforward for credits disallowed under the 75% limitation); no carryback

Attachment 1 (continued)

State and Credit Program	Eligible R&D Spending	Credit Amount	Limits	Unused Credits
New York: Excelsior Jobs Program R&D Tax Credit *N.Y. Econ. Dev. Law § 355* and *N.Y. Tax Law §§ 31*, *210-B(31)*, *606(qq)*, *and 1511(y)* Applicable taxes: Income tax, franchise tax on corporations, and franchise tax on insurance companies	In-state qualified research expenses Open only to businesses participating in the Excelsior Jobs program (i.e., approved New York businesses in certain industries that undertake a regionally significant project or create a minimum number of jobs)	50% of federal R&D tax credit related to New York R&D spending	Capped at 6% of qualified R&D spending (8% for green projects and qualifying semiconductor manufacturers) in the state May be earned for up to 10 consecutive tax years	Unused credits treated as a refund or overpayment to be credited to next year's tax
New York: Life Sciences R&D Tax Credit *N.Y. Tax Law §§ 43*, *210-B(52)*, *and 606(hhh)* Applicable taxes: Income tax and franchise tax on corporations	In-state qualified research expenses, excluding contract research expenses Excludes any R&D spending used in calculating any other credits (To qualify, the business must be certified as a new life sciences company.)	15% of eligible R&D spending for qualified life sciences companies employing 10 or more people; 20% if they employ fewer than 10 people	Capped at $500,000 per year per business and $10 million in the aggregate May be earned for up to three consecutive tax years Sunsets on January 1, 2028	Unused credits treated as a refund or overpayment to be credited to next year's tax

Attachment 1 (continued)

State and Credit Program	Eligible R&D Spending	Credit Amount	Limits	Unused Credits
Rhode Island: Qualified Research Expenses Credit *44 R.I. Gen. Laws § 44-32-3* & *280 R.I. Code R. 20-20-2.1* Applicable taxes: business corporation tax, insurance companies tax, personal income tax	In-state qualified research expenses that exceed the base period research expenses (calculated under federal tax law)	22.5% of the first $111,111 of eligible R&D spending 16.9% for amounts exceeding $111,111	Credit may be used to reduce up to 50% of the business's tax due	Seven year carryforward; no carryback

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