

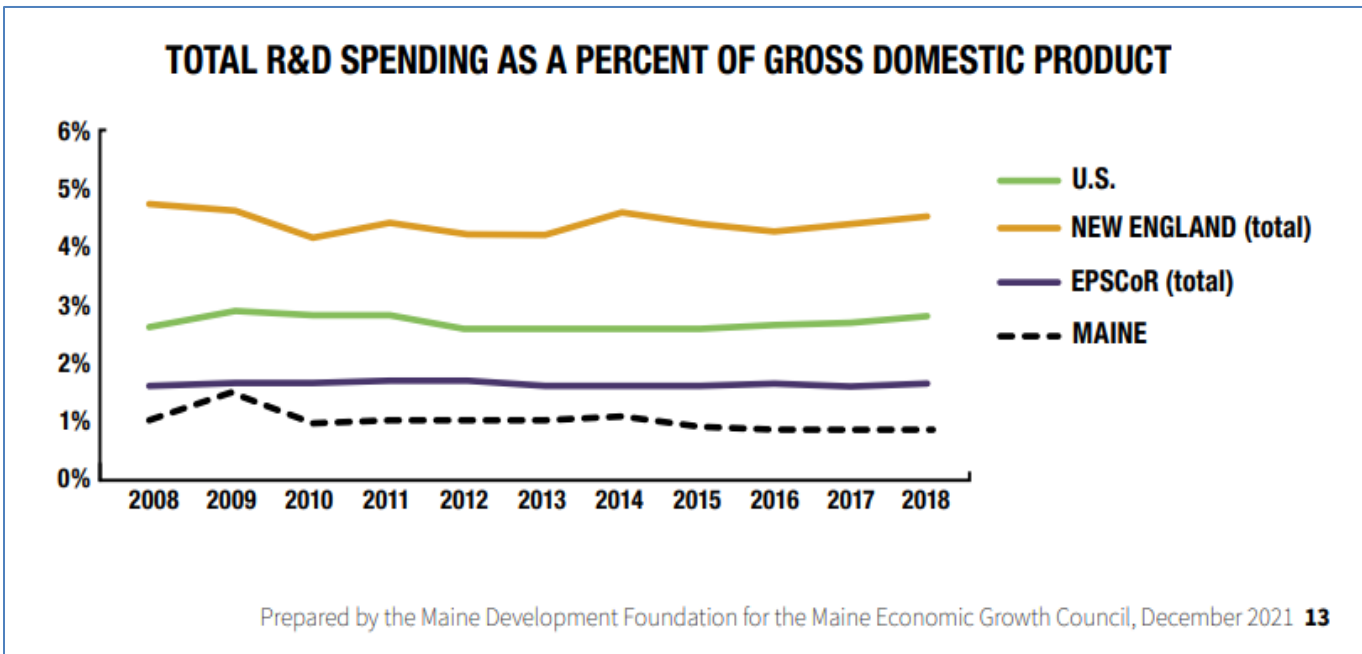
Evaluation of the Research Expense Tax Credit (R&D) Credit
Responses to Requests for Additional Information

Prepared by OPEGA for the GOC 3-25-22

1) Topic: Overall R&D Growth in Maine

Question: What has the absolute progress in Maine been on R&D (rather than relative rank vs other states)?

Response: A chart from the 2021 Measures of Growth report from the Maine Economic Growth Council may be helpful on this point. It is included below. The full Measures of Growth report is available at the following URL: https://www.mdf.org/wp-content/uploads/2021/12/MOG_2021_FullReport_FINAL.pdf.



2) Topic: Other States' R&D Credits

a. Question: Which 35 states have an R&D credit?

Response: Below is an alphabetical list of the 35 states. This list was summarized from a December 2021 report from the Iowa Department of Revenue on the: Research Activities Tax Credit Tax Credits Program Evaluation Study.

We have attached Table 1 from that report which provides descriptive information and details on the R&D credits in these 35 states. The full Iowa report and can be accessed at: <https://tax.iowa.gov/sites/default/files/2022-01/Research%20Activities%20Tax%20Credit%20Evaluation%20Study%202021.pdf>

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States with R&D Credits

Alaska	Indiana	New York
Arizona	Iowa	North Dakota
Arkansas	Kansas	Ohio
California	Louisiana	Pennsylvania
Colorado	Maine	Rhode Island
Connecticut	Maryland	South Carolina
Delaware	Massachusetts	Texas
Florida	Minnesota	Utah
Georgia	Nebraska	Vermont
Hawaii	New Hampshire	Virginia
Idaho	New Jersey	Wisconsin
Illinois	New Mexico	

- b. Question: Regarding what was noted in the OPEGA report about the incremental structure of the R&D credit preventing some businesses from taking the credit; are there states that have found a way to also help businesses that conduct R&D but do not have steady increase in R&D year over year?

Response: OPEGA’s discussion of how the incremental structure of the R&D credit excludes some businesses that conduct R&D from accessing the credit stemmed from the fact that, for the purposes of the evaluation, the intended beneficiaries of the credit had been identified as “**businesses conducting R&D**”. If the intended beneficiaries are, however, the narrower set of businesses **increasing** R&D in Maine, the incremental structure of the credit may be appropriate and cost-effective. Consequently, OPEGA has recommended clarification and memorialization of the credit’s goals and intended beneficiaries prior to consideration of whether amendments to the credits’ design might be needed.

If the target beneficiaries of the R&D credit are, in fact, all businesses conducting R&D in Maine (as identified for this evaluation), policymakers could amend the design of Maine’s R&D credit to reach additional businesses. As an alternative, the State could look to other policy tools to decrease the cost of performing R&D within the state for businesses. These tools include other tax incentives that are not linked to the federal R&D credit and can be structured incrementally, or not, depending on whether policymakers intend to reduce the cost of **all** R&D in the state, or to reduce the cost of only **increased, or new**, R&D.

Regarding the 35 states with R&D credits comparable to Maine’s credit, the Iowa Department of Revenue reported in 2021 that: only one state – Utah – has a credit that applies to all qualifying R&D expenses and not just the incremental expenses; that “credits in nine states limit the credit to or offer preferences for small businesses”; and that in “Maryland, Arizona, and Connecticut, the credit is refundable for small businesses.”¹

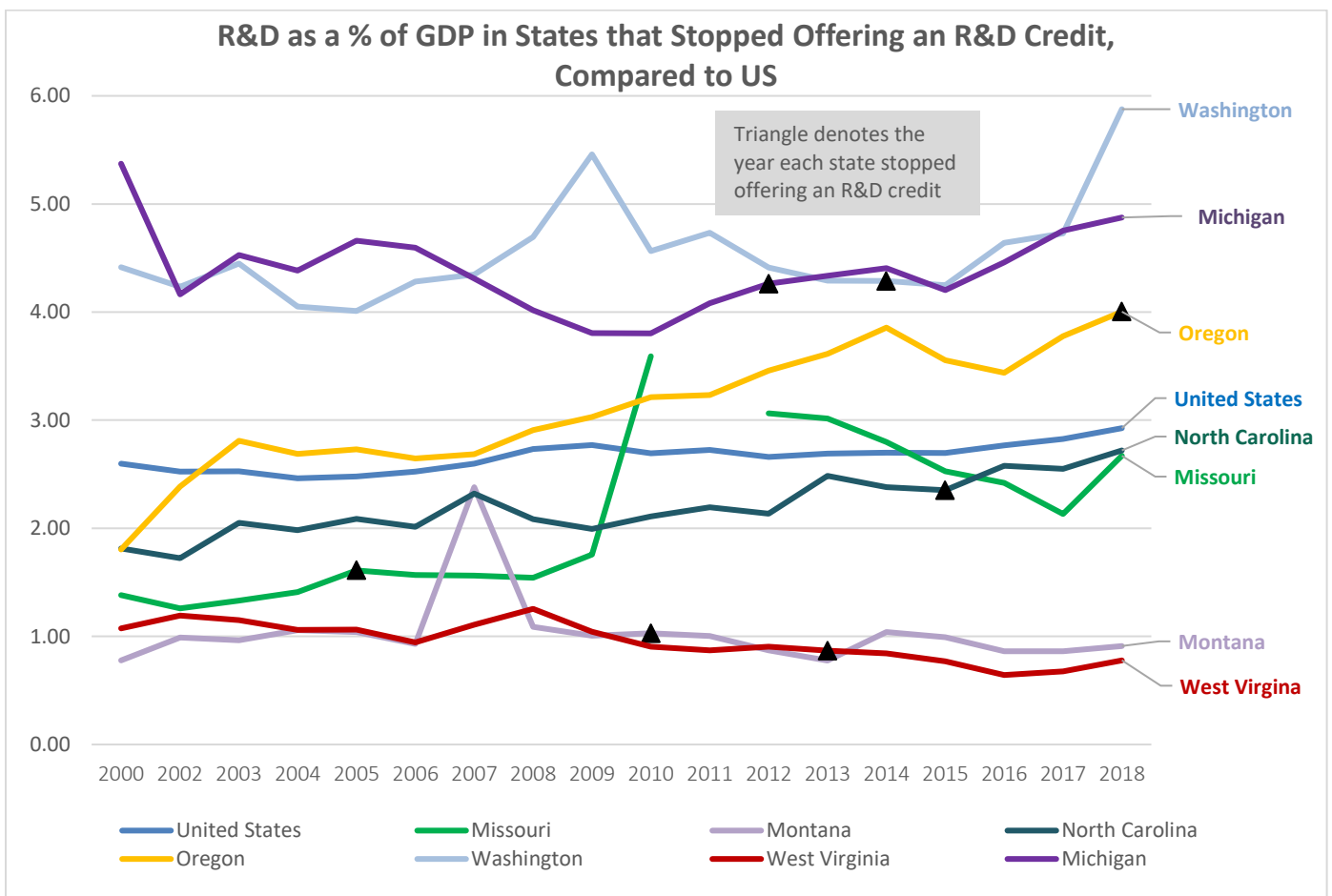
¹ See page 15 of Iowa Department of Revenue. 2021. “Research Activities Tax Credit: Tax Credits Program Evaluation Study.” <https://tax.iowa.gov/sites/default/files/2022-01/Research%20Activities%20Tax%20Credit%20Evaluation%20Study%202021.pdf>

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- c. Question: What information is available about the impact felt by states that previously offered an R&D credit but no longer do?

Response: The Iowa Department of Revenue reported in 2021 that seven states had stopped offering R&D credits -- “Missouri in 2005, Montana in 2010, Michigan in 2012, West Virginia in 2013, Washington in 2014, North Carolina in 2015, and Oregon in 2018.”² At this time, we have not identified any specific evaluation studies of the impact when these states stopped offering R&D credits. However, we are able to access time series data for state R&D as a % of GDP (also known as R&D intensity) for 2000-2018 from the National Science Foundation. Below is a chart showing R&D intensity by year for these states and for the US as a whole. This chart suggests that not much can be intuited by the end of the incentives. Other factors have likely influenced the shifts in R&D intensity for these states over time.



Data source for chart: National Science Board. “R&D as a Percentage of Gross Domestic Product.” Science and Engineering Indicators: State Indicators. Alexandria, VA: National Science Foundation. <https://nces.nsf.gov/indicators/states/indicator/rd-performance-to-state-gdp>. Accessed on 3/16/22.

Note: Missouri’s data for 2011 was not available from the NSF, hence the gap in that state’s line.

² Ibid, 7.

Tables and Figures

Table 1. Research and Development Tax Credit Programs by State

State	Credit Description	General Tax Credit Basis and Rate	Initial Tax Year	Sunset Date	Limit on Taxpayer Credit	Statewide Program Cap	Refundable	Credit Carry Forward
Alabama	No credit for research activities	NA	NA	NA	NA	NA	NA	NA
Alaska	18% of the amount of research credit determined for federal income tax purposes. Research must be conducted in the United States but does not need to be conducted in Alaska to qualify.	18% of allocated federal credit	1998	No	No	No	No	20 Years
Arizona	For tax years beginning in 2011 through 2030, the credit is equal to 24% of the first \$2.5 million of incremental research expenditures conducted in the state and 15% of incremental research expenditures over \$2.5 million. Beginning tax year 1999, individuals may also claim the credit. For tax years 2010 and later, if a taxpayer employs fewer than 150 people in the taxpayer's trade or business, the taxpayer may elect to receive a refund of the credit in the amount of 75% of the excess of the credit over tax liability up to \$5 million. However, the remaining 25% is forfeited by the taxpayer. Since 2011, there is also a nonrefundable credit for basic research payments to universities under the jurisdiction of the Arizona Board of Regents up to 10% of the basic research payments over the base amount. Must apply for certification of payments from the Arizona Commerce Authority (ACA)	15%-24% of incremental research expenditures in-state	1993	2030	No	\$5 million for refundable portion	Yes, for qualified small businesses only	15 Years
Arkansas	Prior to 2007, 10% of incremental qualified expenditures. For tax years 2007 or later, credit is equal to 20% of incremental qualified research expenditures (not to exceed \$10,000 per year) for up to five years for in-house research conducted in the state. Businesses can be granted a 33% credit per year for five years (not to exceed \$50,000 per year) for research in a strategic research area or research through the Arkansas Science and Technology Authority. This credit may be carried forward for nine years. Targeted businesses, which are qualified emerging technology companies, may also be eligible for a 33% credit with a nine-year carry forward or credits can be transferred. Eligible businesses can apply for an additional five years of credits at the higher rate.	20%-33% of incremental research expenditures	2003	No	Yes, \$10,000-\$50,000 per year	No	No	9 Years
California	24% of basic research costs above a base amount, and 15% of incremental qualified research expenditures conducted in the state.	15% of incremental research expenditures	1988	No	No	No	No	Until Utilized
Colorado	3% of incremental research expenditures over the average of expenditures for the two prior taxable years conducted in an Enterprise Zone. No more than one-fourth of the allowable credit may be taken in any one tax year and the remaining amount is credited in the succeeding three taxable years. Beginning in 2012, must pre-certify to be eligible.	3% of incremental research expenditures	1989	No	25% of credit amount	No	No	Until Utilized
Connecticut	C corporations may claim 20% of the amount spent directly on research expenditures in the state that exceeds the amount spent in the preceding income year. The credit cannot reduce tax liability by more than 70%. A small business with prior year gross receipts less than \$70 million with no tax liability may claim a refund equal to 65% of the value of the credit but must be less than \$1.5 million for any one year. The state also offers a non-incremental credit equal to 6% of current year's R&D expenses. The credit is 5% for companies employing between 251 and 800 employees.	20% of incremental research expenditures	1993	No	70% of liability	No	Yes, up to 65% of credit for qualified small businesses only	15 Years
Delaware	10% of incremental qualified research expenditures conducted in the state over the average of qualified research expenditures over the immediately preceding four taxable years or 50% of Delaware's apportioned share of the taxpayer's federal research tax credit computed under the alternative incremental credit method. For qualifying small businesses, amounts are doubled.	10% of incremental re-search expenditures or 50% of allocated federal research tax credit computed under alternative simplified method	2000	No	No	No	Yes (Effective January 1, 2017)	No
Florida	10% of qualified research expenditures above the average of the four previous years of qualified research conducted in the state. For businesses less than four years old, the credit is reduced by 25% for each taxable year the business did not exist. Limited to 50% of tax liability after all other credits. Limited to C corporations in target industries only: aviation and aerospace, cloud information technology, homeland security and defense, information technology, life sciences, manufacturing, marine sciences, materials science, nontechnology.	10% of incremental research expenditures	2012	No	50% of liability. For businesses less than four years old, limits apply.	\$9 million in 2015. \$23 million in 2016. \$9 million in 2017 and after. (First come, first served.)	No	5 Years
Georgia	10% of qualified research expenditures above the computed base conducted in the state. The computed base amount is determined using Georgia gross receipts. The credit taken in any taxable year cannot exceed 50% of the company's remaining tax liability after all other credits have been applied. Can also be used against state payroll withholding. Limited to manufacturing, warehousing and distribution, processing, telecommunications, tourism, and research and development sectors.	10% of incremental research expenditures	1998	No	50% of liability after all other credits have been applied	No	No	10 Years
Hawaii	20% of incremental qualified research expenditures conducted in the state. The credit may only be claimed by a qualified high technology business as defined by Hawaii statute.	20% of incremental research expenditures	2013	2024	No	No	Yes, up to \$5 million	No

Sources: TaxCreditResearch.com, www.taxcrediresearch.com; C2ER State Business Incentives Database, www.stateincentives.org; updated September, 2021. Note: Table 1 shows state tax credits for research expenditures. Many states offer additional tax incentives for expenses related to research, such as for construction of research facilities, which are not included in the table.

Table 1 continued. Research and Development Tax Credit Programs by State

State	Credit Description	General Tax Credit Basis and Rate	Initial Tax Year	Sunset Date	Limit on Taxpayer Credit	Statewide Program Cap	Refundable	Credit Carry Forward
Idaho	5% of the incremental qualified research expenditures conducted in the state.	5% of incremental research expenditures	2001	No	No	No	No	14 Years
Illinois	6.5% of the incremental qualified research expenditures conducted in the state. Expenditures include basic research payments defined in IRC section 41(e). The tax credit lapsed in 2011 but was subsequently extended through 2015 and again through 2027.	6.5% of incremental research expenditures	1990	2027	No	No	No	5 Years
Indiana	15% of the first \$1 million of incremental qualified research expenditures in the state. After the first \$1 million, the credit is 10% of incremental qualified research expenditures. 100% sales tax exemption for qualified research and development equipment and property. May be calculated using the alternative method since Dec 31, 2009.	10%-15% of incremental research expenditures	1984	No	No	No	No	10 Years
Iowa	6.5% of the incremental qualified research expenditures conducted in the state or 4.55% under the alternative simplified method. Limited to businesses conducting research in manufacturing, life sciences, software engineering, aviation and aerospace, and agriculture industry. Also offers a supplemental credit awarded by Economic Development Authority.	4.55% - 6.5% of incremental research expenditures	1985	No	No	No	Yes	No
Kansas	6.5% of the excess of research expenditures in the state over the average of the current and past two years. In a tax year, the credit claimed may not exceed 25% of the credit generated in a given year, forcing the credit claim to be spread over at least four years. Beginning in tax year 2013, this credit is only available to C corporations.	6.5% of incremental research expenditures	2001	No	25% of credit	No	No	Until Utilized
Kentucky	No credit for research activities, but has a credit for research facilities	NA	NA	NA	NA	NA	NA	NA
Louisiana	5% of incremental qualified research expenditures conducted in the state if the taxpayer employs 100 or more Louisiana residents, 10% if the taxpayer employs 50 to 99 residents, or 30% for businesses with less than 50 residents. Taxpayers must pay a \$250 fee as part of the pre-application to claim the credit.	5% of incremental research expenditures	2003	No	No	No	Yes	10 Years
Maine	5% of the qualified research expenditures conducted in the state over the average qualified research expenditures for the three prior taxable years, along with 7.5% of basic research payments. The credit may be used against 100% of the first \$25,000 in tax liability, plus 75% of any tax in excess of \$25,000. All companies receiving \$10,000 or more in credits must file an annual report on employment levels and changes. Also includes sales tax exemption for manufacturing, R&D, custom computer programming, fuel and electricity, and biotech.	5% of incremental research expenditures	1996	No	75% of liability beyond \$25,000	No	No	15 Years
Maryland	10% of qualified research expenditures conducted in the state that exceed the Maryland base amount where the base amount equals average annual gross receipts of the business for the four preceding tax years multiplied by the Maryland base percentage (usually the ratio of Maryland research expenditures for the preceding four tax years to total gross receipts for those years).	10% of incremental research expenditures	2000	2027	Yes, up to \$250,000	\$12 million statewide cap (Prorated); \$3.5 million for small businesses	Yes, (effective December 15, 2012) for small businesses	7 Years
Massachusetts	10% of incremental qualified research expenditures conducted in the state, plus 15% of incremental qualified basic research payments. The credit may be used against the first \$25,000 in tax liability and 75% of any liability over \$25,000. Credits that exceed this limitation, but do not exceed 100% of the tax, are converted to unlimited carry forward status. Cannot reduce the tax below the minimum tax of \$456. S corporations may claim the credit but cannot pass the credit onto shareholders.	10% of incremental research expenditures	1991	No	75% of liability beyond \$25,000	No	Yes, partially refundable	15 Years
Michigan	Expired on Jan 1, 2012. As of June 2021 a bill has been introduced in state legislature to reinstate the credit.	1.9% of in-state research expenditures	2008	2011	65% of liability	NA	NA	NA
Minnesota	10% of qualifying expenses for research conducted in the state up to \$2 million, and 4% for expenses above that level. The credit applies against regular corporate franchise tax and the individual income tax, but not the alternative minimum tax.	4% - 10% of incremental research expenditures	1981	No	No	No	No	15 Years
Mississippi	No credit for research activities. Research and development skills tax credit allows a credit of \$1,000 for each new full time employee in any new job requiring research and development skills. Academic research investor rebate also exists.	NA	NA	NA	NA	NA	NA	NA
Missouri	Expired in 2005	6.5% of incremental research expenditures	1994	2004	NA	NA	NA	NA
Montana	Expired on December 31, 2010	5% of incremental research expenditures	1987	2010	NA	NA	NA	NA
Nebraska	15% of the allocated federal credit for research done within the state. The credit can also be used to obtain a refund of state sales and use taxes paid. Credit is equal to 35% if research is conducted on campus of a college or university in Nebraska.	15%-35% of allocated federal credit	2006	2022	No	No	Yes	No

Sources: TaxCreditResearch.com, www.taxcreditresearch.com; C2ER State Business Incentives Database, www.stateincentives.org; updated September, 2021. Note: Table 1 shows state tax credits for research expenditures. Many states offer additional tax incentives for expenses related to research, such as for construction of research facilities, which are not included in the table.

Table 1 continued. Research and Development Tax Credit Programs by State

State	Credit Description	General Tax Credit Basis and Rate	Initial Tax Year	Sunset Date	Limit on Taxpayer Credit	Statewide Program Cap	Refundable	Credit Carry Forward
Nevada	None	NA	NA	NA	NA	NA	NA	NA
New Hampshire	10% of manufacturing research expenditures in the state over a base amount, up to a maximum credit of \$50,000. Eligible expenditures include only wages paid in New Hampshire for research activities.	10% of incremental research expenditures	2007	No	Yes, up to \$50,000	\$7 million statewide cap (Prorated)	No	5 Years
New Jersey	10% on incremental qualified research expenditures conducted in the state, plus 10% of basic research payments. The amount of the credits applied cannot reduce tax liability to an amount less than the statutory minimum tax. Limited to C and S corporations. Cannot pass credit onto shareholders	10% of incremental research expenditures	1994	No	No	No	No	7 Years. 25 Years for certain types of research
New Mexico	5% of expenditures for qualified research of up to \$5 million conducted at a facility in New Mexico. The taxpayer must employ no more than 50 employees. The tax credit is doubled to 10% for expenditures in facilities located in rural New Mexico. An additional 5% credit is allowed for increasing in-state payroll by \$75,000 for every \$1 million in qualified expenditures.	5% of incremental research expenditures	2000	No	No	No	No	99 Years
New York	50% of the federal research credit, up to 6% of expenditures, attributed to research expenditures conducted in the state for companies that participate in the Excelsior Jobs Program and operate in New York. The tax credit is available to businesses in specified strategic industries. The program's credits are subject to a state-wide cap. Projects may qualify for 8% rate. There is also a life sciences research and development tax credit for 15% of qualified life sciences company's research and development that employs 10 or more persons. The rate increases to 20% that employs fewer than 10 persons. Up to three consecutive years, but limited to \$500,000.	50% of allocated federal credit or 6% of expenditures (8% for qualified projects)	2005	No	No	\$250 million statewide (First come, first served.)	Yes	No
North Carolina	Expired on December 31, 2015	1.25% to 20% of incremental research expenditures	1996	2015	NA	NA	NA	NA
North Dakota	25% for the first \$100,000 of incremental qualified research expenditures conducted in the state. For expenditures over \$100,000, the applicable percentage for tax years 2007 through 2016 differs based on the start date for research. For tax years after 2016, the credit is 8% for all taxpayers on incremental research expenditures over \$100,000. Small businesses with gross receipts less than \$750,000 may transfer up to \$100,000 in credits if they fall in a "primary sector" industry classification and had claimed the credit prior to 2007. As of 2019, can use alternative method equal to 17.5% for first \$100,000 plus 5.6 percent in excess of incremental qualified research expenditures.	25% of incremental research up to \$100,000. 8% of incremental research beyond \$100,000.	1988	No	No	No	No	15 Years or 3 Year Carry Back
Ohio	7% of research expenditures conducted in the state over the average of qualified research expenditures for the three prior tax years.	7% of incremental research expenditures	2001	No	No	No	No	7 Years
Oklahoma	None	NA	NA	NA	NA	NA	NA	NA
Oregon	Expired January 1, 2018	5% of incremental research expenditures	1989	2017	NA	NA	NA	NA
Pennsylvania	10% of the excess of qualified research expenditures conducted in the state over the ratio of the four prior year's research expenditures to gross receipts; 20% for small businesses. The credit is transferable, but purchasers can offset only 75% of liability and cannot carry forward unused credits.	10% of incremental research expenditures	1997	No	75% of liability	Statewide \$55 million cap, \$11 million for small businesses (Prorated)	No	15 Years
Rhode Island	22.5% of the first \$111,111 in incremental qualified research expenditures conducted in the state and 16.9% for any remainder. The credit is applied to 50% of the tax due after all other credits available have been used.	16.9% - 22.5% of incremental research expenditures	1994	No	50% of liability	No	No	7 Years
South Carolina	5% of qualified research expenditures conducted in the state. The annual credit is capped at 50% of a taxpayer's state tax liability net of all other applied credits.	5% of incremental research expenditures	2001	No	50% of liability	No	No	10 Years

Sources: TaxCreditResearch.com, www.taxcreditresearch.com; C2ER State Business Incentives Database, www.stateincentives.org; updated September, 2021. Note: Table 1 shows state tax credits for research expenditures. Many states offer additional tax incentives for expenses related to research, such as for construction of research facilities, which are not included in the table.

Table 1 continued. Research and Development Tax Credit Programs by State

State	Credit Description	General Tax Credit Basis and Rate	Initial Tax Year	Sunset Date	Limit on Taxpayer Credit	Statewide Program Cap	Refundable	Credit Carry Forward
South Dakota	None	NA	NA	NA	NA	NA	NA	NA
Tennessee	None	NA	NA	NA	NA	NA	NA	NA
Texas	Either a franchise tax credit based on qualified research expenses or a sales and use tax exemption on the purchase, lease, rental, storage or use of depreciable tangible personal property directly used in qualified research. 5% of incremental research expenses; 6.25% if the taxpayer contracts with an institution of higher education in the state for the performance of qualified research.	5% of incremental research expenditures	2014	2026	No	No	No	20 Years
Utah	5% of incremental expenditures for research and 7.5% total research expenditures conducted in the state during the tax year.	5% of incremental qualified research expenditures and 7.5% of total qualified research expenditures	2008	No	No	No	No	14 Years for incremental based credits
Vermont	27% of the federal credit for qualified research expenditures conducted in the state.	27% of allocated federal credit	2011	No	No	No	No	10 Years
Virginia	<i>Standard R&D Expense Credit.</i> 15% of the first \$300,000 in incremental qualified research expenditures conducted in the state or 20% of the first \$300,000 in incremental qualified research expenditures if the research was conducted with a Virginia public or private college or university.	15%-20% of first \$300,000 of incremental research expenses	2011	2021	No	\$7 million statewide cap (Prorated)	Yes	No
Virginia	<i>Major R&D Expense Credit.</i> For companies with R&D expenses greater than \$5 million. In general, equal to 10% of incremental R&D expenses, or 5% of qualifying expenses for taxpayers that did not incur Virginia R&D expenses in any of the three prior years.	10% of incremental research expenses	2016	2021	75% of liability	\$20 million statewide cap (Prorated)	No	10 Years
Washington	Expired December 31, 2014	1.5% of incremental research expenses	1995	2014	NA	NA	NA	NA
West Virginia	Expired 2013	10% of incremental research expenses	2003	2012	NA	NA	NA	NA
Wisconsin	5.75% of incremental qualified research expenditures conducted in the state. 11.5% for research expenditures incurred in qualified research related to internal combustion engines and certain energy efficient products. Credits are only available to corporations. (If the claimant had no qualified research expenses in any of the 3 taxable years immediately preceding the taxable year for which the claimant claims the credit, the claimant may claim an amount equal to 2.875% of the qualified research expenses for the taxable year for which the credit is claimed or 5.75 % for research related to internal combustion engines or certain energy efficient products.)	5.75% - 11.5% of incremental research expenditures	1986	No	No	No	Yes, (effective 2018) up to 10%	15 Years
Wyoming	None	NA	NA	NA	NA	NA	NA	NA

Sources: TaxCreditResearch.com, www.taxcreditresearch.com; C2ER State Business Incentives Database, www.stateincentives.org; updated September, 2021. Note: Table 1 shows state tax credits for research expenditures. Many states offer additional tax incentives for expenses related to research, such as for construction of research facilities, which are not included in the table.