



## ***RESEARCH AND DEVELOPMENT CREDIT***

### **STATUS**

Internal Revenue Code (IRC) Section 41 provides for a research tax credit equal to 20 percent of the amount by which a taxpayer's qualified research expenses for a taxable year exceed its base amount for that year. There is also an alternative simplified credit. There was also an alternative incremental credit that has been repealed.

Public Law 112-240, the American Taxpayer Relief Act temporarily extended the credit through December 31, 2013.

In his Fiscal Year 2011 proposed budget, the President recommended that Congress make the credit permanent.

While most business owners and Washington policy makers use the phrase "research and development" or "R&D," Section 41 relies on IRC Section 174 for definitions. IRC Section 174 provides for a deduction for "research and experimentation (R&E)" expenditures.

### **LAW**

The research tax credit applies only to the extent that the taxpayer's qualified research expenses for the current taxable year exceed its base amount. The base amount for the current year generally is computed by multiplying the taxpayer's fixed-base percentage by the average amount of the taxpayer's gross receipts for the four preceding years. If a taxpayer both incurred qualified research expenses and had gross receipts during each of at least three years from 1984 through 1988, then its fixed-base percentage is the ratio that its total qualified research expenses for the 1984-1988 period bears to its total gross receipts for that period (subject to a maximum fixed-base percentage of 16 percent). All other taxpayers (so-called start-up firms) are assigned a fixed-base percentage of 3 percent. In computing the credit, a taxpayer's base amount may not be less than 50 percent of its current year qualified research expenses.

The Tax Relief and Health Care Act of 2006 created an alternative simplified credit effective January 1, 2007 for qualified research expenses. The alternative simplified research is equal to 14 percent of qualified research expenses that exceed 50 percent of the average qualified research expenses for the three preceding taxable years. The rate is reduced to 6 percent if a taxpayer has no qualified research expenses in any one of the three preceding taxable years.

For the purposes of the credits, qualified research expenses eligible for the research tax credit consist of: (1) in-house expenses of the taxpayer for wages and supplies attributable to qualified research; (2) certain time-sharing costs for computer use in qualified research; and (3) 65 percent of amounts paid or incurred by the taxpayer to certain other persons for qualified research conducted on the taxpayer's behalf (so-called contract research expenses). Notwithstanding the limitation for contract research expenses, qualified research expenses include 100 percent of amounts paid or incurred by the taxpayer to an eligible small business, university, or Federal laboratory for qualified energy research.

The research also must be undertaken for the purpose of discovering information that is technological in nature, the application of which is intended to be useful in the development of a new or improved business component of the taxpayer, and substantially all of the activities of which constitute elements of a process of experimentation for functional aspects, performance, reliability, or quality of a business component. Research does not qualify for the credit if substantially all of the activities relate to style, taste, cosmetic, or seasonal design factors. In addition, research does not qualify for the credit if: (1) conducted after the beginning of commercial production of the business component; (2) related to the adaptation of an existing business component to a particular customer's requirements; (3) related to the duplication of an existing business component from a physical examination of the component itself or certain other information; or (4) related to certain efficiency surveys, management function or technique, market research, market testing, or market development, routine data collection or routine quality control.

Under Section 174, taxpayers currently may elect to DEDUCT the amount of certain research or experimental expenditures paid or incurred in connection with a trade or business, notwithstanding the general rule that business expenses to develop or create an asset that has a useful life extending beyond the current year must be capitalized. However, deductions allowed to a taxpayer under Section 174 (or any other section) are reduced by an amount equal to 100 percent of the taxpayer's research tax credit determined for the taxable year. Taxpayers may alternatively elect to claim a reduced research tax credit amount (13 percent) under Section 41 in lieu of reducing deductions otherwise allowed.

## **ANALYSIS**

According to the R&D Credit Coalition, "The R&D Credit Spurs Innovation, Economic Growth and Societal Benefits. The R&D Credit, which was created by Congress in 1981, spurs the creation of U.S.-based innovation and economic activity. It has fostered private sector R&D investment by companies of all sizes in America, helping to bring new, improved products and services to market. The list of these is nearly endless: energy efficient appliances, new vaccines, faster Internet and communications capabilities, safer transportation, and improved national security to name just a few. Innovative ideas become reality when American companies make a strong commitment to invest in our future national prosperity. At a particularly volatile time for U.S. workers, more than 70 percent of R&D Credit dollars go to wages for high-skilled, high-paying jobs in the United States. In some industries, more than 90 percent of credit goes directly to employee wages."

Total expenditures on research and development in the United States by private for-profit enterprises and individuals, non-profit organizations, and the public sector was \$344 billion in 2006, representing 2.6 percent of gross domestic product.

The tax expenditure related to the research and experimentation tax credit was estimated to be \$4.9 billion for 2008. The related tax expenditure for expensing of research and development expenditures was estimated to be \$3.1 billion for 2008.

Over 17,000 corporations (counting both C corporations and S corporations) claimed more than \$7.6 billion of research tax credits in 2006. Corporations whose primary activity is manufacturing account for just more than one half of all corporations claiming a research tax credit. These manufacturers claimed more than 70 percent of all credits.

Firms with assets of \$50 million or more account for almost 17 percent of all corporations claiming a credit but represent more than 80 percent of the credits claimed. An increasing number of small businesses have claimed a modest credit

<b>Asset Size (\$)</b>	<b>Percent of Firms Claiming Credit</b>	<b>Percent of Credit Claimed</b>
0	2.1	0.9
99,999 and under	5	(1)
100,000 to 249,999	1.6	(1)
250,000 to 499,999	4.5	0.1
500,000 to 999,999	9.1	0.3
1M to Under 10M	39.9	5.4
10M to Under 50M	20.9	12.4
50M and Over	16.9	80.7

Source: Joint Committee on Taxation

Individuals claimed \$388 million in research tax credits on their individual income tax returns in 2006. This \$388 million includes credits that flowed through to individuals from pass-through entities such as partnerships and S corporations, as well those credits generated by sole proprietorships

### **FLAT VERSUS INCREMENTAL**

According to the Joint Committee on Taxation (JCT), incremental credits attempt not to reward projects that would have been undertaken in any event but to target incentives to marginal projects. To the extent this is possible, incremental credits have the potential to be far more effective per dollar of revenue cost than flat credits in inducing taxpayers to increase qualified expenditures.

JCT notes that, unfortunately, it is nearly impossible as a practical matter to determine which particular projects would be undertaken without a credit and to provide credits only to other projects. In practice, almost all incremental credit proposals rely on some measure of the taxpayer's previous experience as a proxy for a taxpayer's total qualified expenditures in the

absence of a credit. This is referred to as the credit's base amount. Tax credits are provided only for amounts above this base amount. Since a taxpayer's calculated base amount is only an approximation of what would have been spent in the absence of a credit, in practice, the credit may be less effective per dollar of revenue cost than it otherwise might be in increasing research expenditures. If the calculated base amount is too low, the credit is awarded to projects that would have been undertaken even in the absence of a credit. If, on the other hand, the calculated base amount is too high, then there is no incentive for projects that actually are on the margin.

Nevertheless, the incentive effects of incremental credits per dollar of revenue loss can be many times larger than those of a flat credit. However, in comparing a flat credit to an incremental credit, there are other factors that also deserve consideration. A flat credit generally has lowered administrative and compliance costs than does an incremental credit. Probably more important, however, is the potential misallocation of resources and unfair competition that could result as firms with qualified expenditures determined to be above their base amount receive credit dollars, while other firms with qualified expenditures considered below their base amount receive no credit.

Small firms also appear to play important roles in industries where technological innovation is a central driving force for growth and change. They employ nearly four out of every 10 scientists, engineers, and computer specialists working in the private sector, and small firms that file claims for patents produce 13 times as many patents per employee as large firms that do likewise. According to the Congressional Research Service (CRS), research and development (R&D) is the lifeblood of technological innovation, which, in turn, serves as an engine of long-term economic growth. Economists generally agree that without government support, private investment in R&D would fall short of the socially optimal amount. Left to their own devices, firms are likely to invest too little in R&D for two reasons. One is that they cannot capture all the returns to R&D investment, mainly because other firms are able to exploit the results of research in spite of available intellectual property protection. A second reason is that some firms lack access to sufficient capital to invest in R&D because they are unwilling or unable to provide investors with the information they require to evaluate the potential returns on planned R&D investments. This tendency to invest too little in R&D represents a market failure in that too few resources are allocated to R&D compared to its potential economic benefits. To remedy this failure, many economists advocate government support to encourage private-sector R&D investment.

The CRS notes critics of small business tax subsidies maintain that it is far from clear that this support should be targeted at small firms. They point to a wealth of evidence suggesting that both small and large firms hatch the innovations that end up driving the processes of economic growth and structural change, and that it is impossible to disentangle the contributions of each group. According to data reported by the National Science Foundation (NSF), larger firms perform the vast share of business R&D: from 1992 to 1997, companies with fewer than 500 employees accounted for 14% of total business R&D spending, whereas companies with 10,000 or more employees were responsible for 59% of this spending.

However, it is this latter point that makes a compelling case for a small business research and development credit. As the CRS also notes, large firms can more easily cover the substantial

sunken costs involved in conducting R&D and are more likely to capture a large share of the returns to R&D investments through marketing campaigns, the protection of intellectual property rights, and the creation of regional, national, and international distribution and service and repair networks.

## **CONCERNS**

Many smaller businesses do not perceive the current credit to be enough of a sufficient incentive to encourage them to engage in research and development. For many smaller businesses, the complexity of the calculation and the rigorous recordkeeping necessary to establish proper cost allocations outweigh the value of the credit. Many do not have the in-house staff to manage the on-going accounting and recordkeeping. In addition, for many small businesses, maintaining a steady commitment to research and development is a challenge. Making a significant incremental commitment is not realistic.

While some suggest that subsidies may raise the wages of scientists, and hence research spending, without increasing actual research, the argument for a simple flat credit is that subsidies are exactly what we should attempt to achieve, to create greater opportunities for engineers. This, in turn, would have a ripple effect on a greater interest in engineering as a profession, and more educational opportunities.

## **OUTLOOK**

Even getting a temporary renewal has been a struggle because of the revenue offset issue. Odds are that if corporate tax reform happens, the credit is history.