



# R&D Tax Credit for Engineering Firms



The Research & Development (R&D) Tax Credit is one of the best kept secrets initiated by Congress. Many corporate executives have never heard of it, nor understand it. If you are like most executives, you are likely underestimating, or ignoring entirely, the amount of R&D your firm performs. This means your company is **missing a potentially tremendous cost savings** in the form of R&D tax credits.

According to the Joint Committee on Taxation's (JCT) tax expenditure report, the R&D tax credit had to reduce tax revenue by about \$10,6 billion for corporations in 2020<sup>1</sup>. So why haven't you heard of it? Probably because you might not think that what your company does is eligible for the credit.

When executives think of R&D, they imagine people in white lab coats and clipboards. They do not recognize many of their own firm's R&D efforts, such as improvements in **spec designs, modeling, alternatives, and infrastructure investments**. Executives frequently view these activities simply as normal and ordinary business operations. In doing so you are missing the opportunity to recoup substantial expenditures as R&D Tax Credits.

## What is the R&D Tax Credit?

The R&D Tax Credit was created by Congress in 1981 as an incentive for greater private industry research investments. Recognizing that technological innovation drives economic growth, productivity, and competitiveness, the purpose of the credit was to reverse a decline in U.S. research and development and encourage U.S. companies to expand their research activities. It was meant to be used by businesses of all sizes in a variety of commercial activities, including engineering, manufacturing, processing, customization, and innovation.

**Having a technical understanding of your company's qualifying R&D expenditures** is the first step toward maximizing your savings. Whether or not you qualify is determined by the nature of the activities performed, not by their outcome or the job titles of the personnel performing the activities. Companies can apply for credit for the current year, as well as up to three prior calendar years.

Qualified R&D expenditures mainly consist of wages for employees that work or supervise the development of business projects/activities. Nearly 70% of the R&D tax credit dollars claimed by business are investments in the salaries of researchers, support staff, contract labor, materials, and supply cost.

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<sup>1</sup> Tax Foundation article *Reviewing the Federal Tax Treatment of Research & Development Expenses*, by Alex Muresianu and Garrett Watson (April 13, 2021)

## What qualifies as R&D?

Applicable R&D rules do not require you to discover something so innovative that it must advance the field of engineering. They simply require that a product or process be new to you. Because most engineering projects are unique the design activities qualify for the credit. These activities must meet these requirements:

- **Business component development or improvement**

Business components include the engineering designs that you develop for your clients. Each of these designs is unique with a seemingly infinite number of scientific, engineering & other client specific technical requirements to evaluate and incorporate into the design. The design effort must relate to functional characteristics such as performance, reliability, or quality.

- **Elimination of uncertainty**

The uncertainty elimination standard is met when uncertainty exists as to the optimal or final design that is ultimately validated. Frequently, engineers are confronted with uncertainties pertaining to the application of existing technologies, structural integrity, material optimization, manufacturability, technological feasibility, geometric considerations, thermal capability, or containment issues... Even if certainty exists about the capability and development method of the project the activity will not be disqualified from the R&D credit.

- **Process of experimentation**

During a design project collaboration in developing & assessing a design through modeling or computational analysis satisfies the experimentation requirement of qualified research. If the design evaluations occur before the business component is deemed to meet its functional & economic requirements the activity will qualify for the R&D credit.

- **Technological in nature**

An activity will qualify as research if it relies on engineering, computer, biological or physical sciences. Employing existing and known sciences, engineering knowledge or principles will not disqualify the project from the R&D credit.

## Engineering activities that typically qualify as R&D

- Experimenting with new material and integrating the material to improve products or processes – alternatives;
- Analyzing functional requirements;
- Engineering to evaluate new or improved specifications/modifications in terms of performance, reliability, quality, and durability;
- Conceptual design, testing, and modification of possible product or process alternatives;
- Design, construction, and testing of prototypes and models;
- Design of tools, jigs, molds, etc. involving new technology;
- Activity required to advance the design of a product to the point that it meets specific functional and economic requirements and is ready to be constructed,
- Experimenting with new technologies;
- Searching for applications of new research findings or any other knowledge;
- Designing a process or change to an existing one to achieve either cost reductions or generate revenue;
- In-house development of computer applications, for example, modeling software used to estimate the friction capacity for new steel used in the design of a high-speed train wheel.

An R&D activity does not need to be internally generated. It can come about through having to solve technical problems related to new customer orders or changes in product application. Engineering firms routinely conduct qualifying research under contract with their clients. Neither the contract nor payments received for services under the contract will necessarily disqualify the activity from qualifying for the R&D credit.

If there is the existence of some degree of economic risk and the right to use/apply the knowledge obtained through the activities' research development process is retained, the activity will not be excluded from the credit.

## Case study

Anytown Bridge Co. puts a contract out for bid for a new bridge, and B3T Engineering is in the running. Every bridge has its own unique issues which need to be analyzed. First you need to determine what kind of bridge (suspension, cantilever, etc.) is best suited for the city. From there your team needs to evaluate everything from weather patterns and wind effects to how entry and exit will potentially affect traffic patterns to the flexibility and durability of materials to be used. B3T Engineering pulls its team together to brainstorm how to solve the problems, put together a plan, and estimate what the cost would be. This is the beginning of the R&D process.

Now let's say B3T wins the contract to build the bridge. The engineers now need to determine how to best protect the bridge. How can we ensure that the bridge will survive a sudden, extreme stress, like an earthquake or plane crash? To fully develop the bridge spec the engineers will need to test different scenarios. They might develop a three-dimensional

computer model of the bridge design. This model will inevitably reveal problems with the initial design and lead to necessary modifications. Creating this model is no different than producing a prototype for a new ethanol-powered engine or a cancer treatment. These are all qualifying research activities. Many of the costs associated with this work apply to the potential costs savings from R&D Tax Credit.

## FI Group in few words

FI Group is an international tax consultancy, specialized in the implementation of federal tax incentives, and research and development (R&D) tax credits for corporations. The FI Group team consists of tax, engineers, IT, legal, and business operation specialists. With over 18,000 clients in 14 different countries in North America, South America, Europe, and Asia. Our client's benefits exceed more than \$1.5 B in tax savings annually.

We are the leading provider when it comes to the development, implementation & defense of R&D tax credit methodologies. Our exclusive focus in the R&D credit area has attributed to the fact that no clients have had their credit disallowed. Our engineering/business operations approach to our projects/activities, audit defense, & the fact that we give you the methodology sets us apart. Our process in developing defensible methodologies is streamlined and efficient. We will not be a disruption to your daily business priorities.

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