



# R & D Tax Credit

## for Construction Companies

December 2018  
Alternate Tax Solutions

---

## Overview

The Credit for Increasing Research Activities, commonly referred to as the Research and Development (R & D) Tax Credit, is one of the tax code's most beneficial instruments for allowing taxpayers to unleash money hidden within the walls of their own businesses. It works by allowing companies to capture wages, supplies, and contractor expenses associated with qualified research, and then take a dollar-for-dollar reduction in tax liability based off of a percentage of total qualified expenses. The R&D credit is one of the largest business tax expenditures accounted for by the Treasury Department and is designed to foster business growth through incentivizing innovation and risk taking.

Every year, companies claim billions of dollars in credits and carry forwards with multiple sectors cashing on their share of the R&D credit pie. Complexity surrounding the law, however, has led to misconceptions regarding how the credit works and which type of activities qualify. This has led to an underserving of companies within industries that could potentially benefit greatly from the financial windfall produced by the credit.

One of the industries most underserved in this regard is construction contracting. Most construction companies do not realize that many of the activities and wages of engineers, superintendents, draftsman, etc. constitute qualified research and can be taken towards the R&D tax credit. Worse yet, due to ambiguity surrounding the R&D credit, many construction companies know about the credit but think that they do not qualify for it. This paper will attempt to demystify the credit and provide guidance for construction companies on how to access the opportunities offered by it.

## What is the R&D Tax Credit?

One of the biggest misconceptions surrounding the R&D Tax Credit is that it is reserved for companies with white-coated scientists performing experiments in a laboratory or for tech companies seeking to discover the latest piece of technology. This is simply not the case. While trial and error are a requirement, perhaps an explanation of the credit's history and the legislative intent behind it can allow for the air to be cleared.

In the 1980s, technological advancement had become a necessity for survival as Cold War tensions flared. The US found that it had begun to lack other nations in rapid technological development and began looking into policies that could incentivize innovation. The US government found that it had fallen to seventeenth in overall R&D spending and followed other nations such as the UK in enacting a Research and Development Tax Credit. In its early years, the R&D credit was mainly reserved for companies attempting to discover or invent new technologies due to stringent requirements in the tax code. It was also not a permanent part of the tax code, which led to uncertainty each year over whether or not it would be renewed. As a result, the credit was really only used by large corporations with gross receipts in excess of \$250 million.

Congress had intended for the credit to incentivize any activity aimed at taking technological risk to develop or improve products. In the early 2000s, a number of Tax Court rulings and Treasury Regulations removed the high-threshold boundaries requiring a company to "discover" or invent technology to claim the credit.

**In 2009, the Internal Revenue Code (IRC) was updated to require that a company only need to face uncertainty when working on a qualified business component and use a process of trial and error to overcome that uncertainty to claim the R&D credit.** If this sounds like what your construction company does on a project to project basis, please read on.

## **PATH ACT**

In 2015, the R&D Tax Credit was expanded even further as part of the Protecting Americans from Tax Hikes (PATH) Act. For one, this act made the credit a permanent part of the Tax Code, thus, eliminating the perennial uncertainty faced by companies who wondered if the credit would be renewed. The PATH act also made the credit more accessible to startups without a taxable liability by allowing eligible small businesses to use the credit to offset AMT or a portion of payroll taxes.

## **The Four-Part Test**

As mentioned, there are requirements that companies must meet if they wish to claim expenses associated with work towards the credit. While the regulatory and judicial guidelines are expansive and complex, these requirements have been boiled down into what is known as the four-part test of the IRC, which are outlined as follows:

1. **Business Component:** The expenses claimed towards the credit must be incurred in associated with a qualified business component, which is defined as a product or process intended to be held for sale or used in the trade of the taxpayer. If the taxpayer conducts work to develop new or improve upon existing business components, the work can be considered qualified research.
2. **Technical Uncertainty:** The taxpayer must face uncertainty when attempting to develop a business component. Uncertainty is present when the taxpayer does not know the exact means, methods, techniques, or technologies that will be needed to produce an end result that satisfies specifications.
3. **Experimentation:** The taxpayer must use a process of experimentation to resolve uncertainty and produce a business component. Experimentation is generally defined as a process of trial and error used to evaluate one or more alternatives when attempting to solve a problem.
4. **Technical in Nature:** All of this work must revolve around principles that are scientific or technical in nature, including the disciplines of engineering, mathematics, computer science, etc.

In general, a company must be working to produce a product, process, or end result in a manner that requires it to confront and eliminate uncertainty through use of a process of experimentation while relying on principles that are technical in nature. Initial analysis of these four gates reveals that activities undertaken by construction contractors on projects often meet these requirements. Further explanation as to how construction companies fall into these gates is provided in the next section.

## Construction Companies and the Four-Gate Test

This section is intended to allow the reader to determine whether or not a first-glance look into their construction activities could warrant pursuit of the R&D credit.

### Business Component

For many contractors, this gate can produce the most hurdles. While it is clear that construction contractors must use their internal experimentation to produce construction processes, designs, or methods that meet the contract's specifications, the nature of the terms of payment within the contract could prevent the company from eligibility.

A company claiming the R&D credit cannot be conducting "funded research," which generally describes a relationship where a client will pay the contractor for its work regardless of the outcome of the research and development. The credit requires that the taxpayer endure financial risk should the research or project produce negative results.

In the construction industry, funded research is present when the contractor will be paid regardless of the outcome on the project. The Tax Courts have given numerous rulings surrounding contract structure that it considers funded research and disallowable under the rules of the credit. This funded stipulation is present in all time and material or cost plus fixed fee contracts. If a construction company is simply paid for all the work it bills a client or will be paid regardless of whether or not the work produced satisfies certain requirements, it cannot claim the R&D credit for this work.

Most construction companies, however, operate under fixed-price or lump-sum contract structures. These contracts are considered unfunded if the taxpayer incurs costs in excess of the fixed fee it quoted and will not be reimbursed. Additionally, the work done by many construction companies on a project is subject to testing or inspection before the client accepts the work and signs off on final payments.

Other determinants as to whether or not a construction company is conducting unfunded qualified research are warranty clauses, in which the taxpayer agrees to fix all faulty work at its own cost, and contract payment and performance bonding requirements. This latter contract device shows that a construction company is undertaking risk on a project since it must put up a bond. If the client finds that the work to be unsatisfactory, it can collect payment from the bond. The bonding company, in-turn, will go after assets put up by the taxpayer.

### Technical Uncertainty

Uncertainty exists for construction companies in both the pre-bid process and during the project execution. During the pre-bid process, estimators or engineers are often required to analyze alternative construction process hypotheses and designs before developing a solution that allows the company to win the bid. Any CAD modeling, construction sequencing, Ag-tech modeling or other activities undertaken to attempt to eliminate unknowns and produce a constructible solution can be considered qualified resource. All efforts to analyze or attempt to develop a value-engineered alternative will also qualify. Most construction companies only win a handful of the bids they work on, meaning that the work done by the estimating team is mostly never rewarded with a contract, thus, demonstrating risk and uncertainty.

The post-bid or project execution stage is where construction companies will face a majority of their uncertainties. Every contractor knows that a hypothesis designed during the pre-bid stage will never go as planned in the field. Uncertainties relating to drawing or design inaccuracies, unaccounted for geotechnical conditions, logistical problems, structural deficiencies, etc. can cause a construction company to have to reconsider its construction process hypothesis.

These field uncertainties often require the development of new construction techniques, processes, or designs to ensure that the company can still meet the contract requirements. Each time a new process is developed, it is considered an alternative hypothesis.

The process of developing and analyzing these alternatives is usually team-based. Management and engineering staff often rely on the expertise of superintendents and foremen to help identify field uncertainties and come up with new solutions. These solutions are designed and tested to ensure that they are constructible and meet functional requirements.

Because the construction company will use a team-based approach to solve uncertainty, a percentage of the wages of superintendents, project managers, field engineers, and foremen can be claimed in association with a percentage of each individual's time spent in the problem-solving process. It is important to quantify how much time these personnel spend in the problem-solving process of experimentation as opposed to oversight of regular labor activities.

## **Experimentation**

It may be apparent that a construction company will rely on trial and error to find the most constructible solution that allows for contract specifications to be met at the lowest cost possible. This can essentially constitute a company's process of experimentation. It is important to remember that experimentation does not have to be limited to a laboratory setting. As long as the project team is engaging in activities that allow it to evaluate one or more alternatives on each project, this gate is satisfied.

It is important, however, to establish that the problem-solving/project-development process of experimentation consists of repeatable activities. The taxpayer must prove that this process can be applied pro-forma to any project and does not consist of activities that take place on an ad-hoc basis. For most construction companies this is attainable, as meetings will often be held every week, where uncertainties and alternatives are discussed.

If your company engages in a project management process, it is most likely performing a repeatable set of activities. In fact, if you undertake efforts to redesign your project management process, you may be able to claim associated expenses (i.e. the wages of management performing process redesign analysis) towards the credit. More on that later.

---

## Technical in Nature

This gate is most easily cleared by construction contractors. The IRC requires that activities claimed under the credit revolve around the hard sciences. Construction contracting firms perform a number of services that require the use of engineering principles, including design/build, civil engineering, site development, heavy-highway construction, excavation, and bridge erection. These companies are handed sets of drawings from the architect or engineer (often incomplete, which adds to the uncertainty factor) and told to figure out a way to bring concept to reality. This naturally requires the application of acumen in the engineering sciences, which the Tax Courts have deemed to be technical in nature.

## Process Development

For the most part, this paper has discussed how construction companies can utilize the R&D Tax Credit based on their project-facing activities. As eluded to previously, the credit is also available for activities related to the development of new or improvement of existing internal processes.

At some point in their existence, most construction companies will undertake initiatives aimed at redesigning the way projects are managed or operations are tracked. This can include installation of new tracking technologies, development of new project workflows and documentation processes, implementation of lean construction methodologies, etc. Process development also covers any efforts to redesign or test new construction techniques or methods in the field on a project.

These activities usually require analysis of one or more alternative approaches. Management and stakeholders will form a new process/techniques hypothesis, test it through a small-scale rollout, analyze shortcomings or uncertainties, and reiterate. This process of analysis satisfies the experimentation and uncertainty gates since it requires testing of alternatives. If your company is engaged in or has engaged in these types of activities, you may want to consider the wages of personnel involved in these initiatives as part of your R&D credit calculation.

## Exclusions from the Credit

It is important to note that there are certain expenses or activities that would not be eligible for the credit. If the company does not assume any financial or technical risk on a project, then it generally cannot claim credits on work associated with it. This type of work is outlined in Business Component section above; however, it is important to reiterate the point. If a company performs its work under time and material or cost-plus-fixed-fee contracts and does not face any risk of loss of payment should the work not meet specifications, then most likely the research would be considered funded. A company is also not allowed to include any payments made to foreign entities for research and development activities as part of the credit.

## Claiming the R&D Credit

While the R&D Tax Credit has become more accessible to a wider array of companies and industries, the waters around claiming this credit can still be tricky to navigate. Construction companies need to pay close attention to how they are capturing activities so as not to run afoul of the numerous Tax Court rulings or any IRS or Treasury regulations codifying use of the credit.

If your company falls within the guidelines outlined in this paper and has not yet claimed the R&D credit, it may be time to start thinking about gathering the items necessary to calculate qualified research expenses. Substantiating R&D claims is all about documentation. The more documentation on project-related uncertainties and alternatives tested that a company can gather, the better. This documentation, along with a well-articulated report detailing how your company's construction activities satisfy the R&D requirements and quantifying your R&D expenses, can put you in a good position to take advantage of this biggest of tax incentives.

## Conclusion

In 2009, there were four important court cases settled that provided clarity and established precedent for taxpayers claiming the R&D Tax Credit. These court cases are important because of past restrictive interpretations of governing law by the IRS and being reversed and/or tempered with. This is good news because there have been 14 extensions of the R&D Tax Credit since 1981. The President included the extension in his 2010 and 2011 budgets. On March 9, H.R. 942, was presented to Congress. It requested Congress to increase the Alternative Simplified Method rate from 14% to 20%.

The present trend seems to indicate that both the President and Congress want to make the R&D Tax Credit permanent, easier, and more robust.

The following are brief comments about significant rulings:

- In *TG Missouri v. Commissioner*, the Tax Court ruled that the cost of production of molds designed, modified, and ultimately sold to the customer but retained by TG Missouri for production may be considered a qualified supply expense because they were tangible property used in the research activity and not excluded because they were “property of a character subject to depreciation.”
- In *Union Carbide v. Commissioner*, the Tax Court described the “primary purpose” of experimental trials as an indicator of qualified research activity (*e.g.*, to eliminate uncertainty in developing a new product or process). It also accepted—over IRS objections—various forms of oral testimony and information substantiation.
- In *FedEx Corp. v. US*, a U.S. District Court said that the IRS may not apply two criteria (requiring new knowledge and “unique or novel” product) that the IRS had used to limit Internal Use Software claims. This had been known as the “discovery test” when it was excluded in the 2003 final regulations.
- In *U.S. v. McFerrin*, the U.S. Fifth Circuit Court reversed a federal district court's denial of a credit based on the failing to meet the “discovery test” (noted above) and a lack of contemporaneous evidence of research activities and expenses. Most significantly for the taxpayer, the court allowed reliance on the taxpayer's oral testimony and estimates (under the Cohan rule), that which the IRS had rejected.