

The R&D Tax Credit: Keeping STEM Jobs on American Shores

By Michael Siegel, alliantgroup Managing Director

It's no secret that U.S. businesses are increasingly becoming more reliant on automation and industrial processes to boost the productivity and efficiency of their facilities. Much has been written about this technical revolution, and while it is certainly good news for MCAA members (or other automation and industrial system developers), what is not good news is the shortage of qualified STEM workers that will be needed to keep up with the demand of implementing these new technologies and processes.

At alliantgroup, we hear all the time from executives on the difficulties of finding and attracting top-tier, STEM talent. If you have personally experienced this pain, you are not alone. There is a growing amount of evidence of a serious STEM labor shortage in the American workforce, ranging from one study estimating that 30 percent of new job openings in the average metro area are in STEM related fields, to another finding that China graduates eight times as many engineers as the U.S.

With the demand for technical talent going up, but the supply for such workers going down, many companies have been left with no viable option but to outsource overseas, leading U.S. policymakers to take action to keep high-paying, STEM jobs on American soil. One of the most recent policy fixes occurred just this past December when Congress passed, and the President signed into law, legislation that made permanent and expanded the Research and Development (R&D) Tax Credit—a premiere job-creating incentive that should be of immense interest to all MCAA members.

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While the R&D Tax Credit certainly isn't new (it has been around since the 1980s), the credit has become much more taxpayer-friendly over the years, with new congressional laws, new judicial precedent and Treasury and IRS guidance changes all playing a role in expanding the credit to a broad and diverse range of industries. Combined together, these changes have greatly expanded access to the credit, rewarding companies for making enhancements to their products and processes—as long as those enhancements are based on scientific principles.

Generally, it's this idea of scientific principles that prevents perfectly eligible companies from claiming the R&D Tax Credit. Despite what you may have heard, the credit isn't just for software and tech giants or Silicon Valley startups. It isn't just for scientists, patents, curing cancer or other medical breakthroughs. The R&D Tax Credit is also very much about the *applied sciences*, or the everyday, technical problem-solving companies must go through to improve a product or process.

It is for this reason that companies working in the fields of automation, industrial process controls or system integration are excellent candidates for the credit. For the technical work performed on the factory floor to enhance a production process, for the iterative steps taken by engineers to enhance the efficiency of an automated system, or for the design and programming necessary to implement sophisticated control systems and other industrial processes, companies are being handsomely rewarded with a major tax refund from the U.S. government.

Real-World Application

To understand the true nature of the credit and the value it can provide, let's take a closer look at a real-life example.

In a single year, one process automation solutions company received over \$247,000 in federal and state R&D tax credits. Among this company's many qualifying projects included the enhancement of a controls system facility for a factory that produces baby formula. From the beginning of the project, this company faced challenges in improving the design of the controls system due to the difficulty in locating existing utilities and delivering the appropriate signals that would provide adequate controls for the factory's equipment.

To overcome this problem, this company performed site evaluations in the locations of existing utilities and ran tests by measuring the appropriate controls and sending signals back through the system. These tests were run and incremental improvements were made until a system was created that met functionality standards.

Finding technical solutions to customer problems or enhancing the efficiency of an automation, control or industrial system—these are all key ways that companies can qualify for the R&D Tax Credit.

The PATH Act: Strengthening and Expanding the R&D Tax Credit

As stated before, the passage of a major tax bill from this past December, the Protecting Americans from Tax Hikes (PATH) Act, has made this credit permanent and implemented two modifications designed to expand the credit to small and mid-sized businesses.

The first modification—the AMT turn-off—allows small businesses (defined in this instance as businesses with less than \$50 million in average gross receipts) to be able to claim the credit against their alternative minimum tax (AMT). Without getting too involved in the intricacies of the tax code, the important takeaway for business owners is that the AMT floor has always been the single greatest barrier preventing eligible companies from benefiting from the R&D Tax Credit. Now, this provision will allow small businesses to take advantage of the credit just as large corporations currently do. It will also be especially beneficial to small and mid-sized automation, control system and system integration companies due to the host of qualifying activities these businesses perform on a daily basis.

The second modification—the startup provision—allows businesses with gross receipts of less than \$5 million to claim the credit (capped at \$250,000) against their 2017 payroll taxes. Traditionally, a business must be profitable, and thus paying federal income taxes, to claim the R&D Tax Credit. This has obviously been a huge handicap for companies that have just opened their doors and have yet to turn a profit. This provision, however, effectively solves that issue by allowing smaller and newer companies to take advantage of the credit.

Combined together, these modifications have the ability to put millions of dollars back into the pockets of automation, control system and system integration companies, providing these businesses the cash needed to expand their workforces and to attract the best and brightest in STEM talent.

Keeping high paying jobs on U.S. soil, while investing in some of the most innovative companies around—the new and improved R&D Tax Credit is a tremendous opportunity and I would encourage all MCAA members to find out what this credit can do for their business.

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