



WEBINAR RECAP

NATURAL RESOURCES AND THE R&D TAX CREDIT: FINANCING INNOVATION IN THE NEW TAX REGIME

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As natural resources companies continue to assess the impact of tax reform and evaluate their tax planning strategies, research and development (R&D) tax credits are an important piece of the equation. In fact, it has never been a better time for energy companies to consider the R&D credit.

In a recent BDO USA [webinar](#), we explain what's changed that's made the credit more relevant and how natural resources companies can claim the benefit.

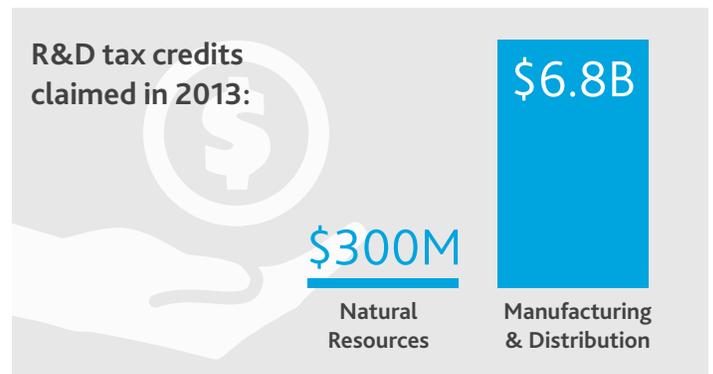
WHAT IS THE R&D TAX CREDIT?

The R&D tax credit provides an incentive to companies that incur expenses trying to develop or improve their products, processes, software, techniques, inventions or formulas. It can be a powerful tool to help offset tax liability, improve cash flow, increase the value of the company and even fund future projects.

R&D credits can enable companies to offset their federal and state tax liabilities by up to 20 percent of their qualified spending on innovative activities. Even in cases where companies are not paying taxes, they can still benefit from R&D credits, as many states will pay the value of the credit. Companies can use the R&D tax credit to offset regular income tax, their effective tax rate and franchise tax. The federal and state credits can also be carried backward or forward to earlier or later tax years.

HISTORY OF THE R&D CREDIT IN NATURAL RESOURCES

While many energy companies already claim R&D credits, the natural resources sector has not leveraged the credit to the same degree that other industries have historically. In 2013, for example, manufacturing & distribution companies claimed \$6.8 billion in R&D tax credits, more than 22 times the value of credits claimed in the natural resources industry.





Debunking common R&D misconceptions

MYTH 1:

R&D credits are awarded only for successful attempts to make improvements.

The R&D benefits were created to reward companies pursuing innovation. They encourage more of the risk-taking inherent in that pursuit and are not designed to only reward those that succeed or make a material technological advancement. Real transformation doesn't occur overnight: Success is often the culmination of many failed attempts. For that reason, the tax law is built to reward that iterative process and foster innovation.

MYTH 2:

My company isn't using any groundbreaking or transformative technology, so we must not be eligible for the credit.

Many companies assume they won't qualify for the credit because their work doesn't leverage flashy technology or result in transformative change—but that is a misconception as well. Any effort to make advancements—even incremental efforts to improve processes—would be eligible for the credit.

WHY HAVEN'T NATURAL RESOURCES COMPANIES CLAIMED THE R&D CREDIT HEAVILY IN THE PAST?

In the previous tax regime, many natural resources companies paid the corporate alternative minimum tax (AMT) instead of the corporate income tax. The R&D tax credit cannot be used to offset AMT, so companies paying AMT had little to no incentive to pursue the research credit.

WHY IS THE CREDIT RELEVANT TO NATURAL RESOURCES NOW?

Tax reform changed the game for the R&D tax credit in the natural resources sector. The law repealed the corporate AMT, which is the most significant change that frees natural resources to use the R&D credit again. The key tax reform changes that impact natural resources companies' ability to leverage the R&D tax credit include:

Tax reform provision	Implications for natural resources and R&D
Repeal of the corporate alternative minimum tax (AMT)	Now that AMT has been repealed, U.S. mining, oil & gas and other natural resources companies that paid AMT may now be paying regular income tax. The R&D credit can be used against income tax.
Limitation to the net operating losses (NOLs) deduction: NOLs generated after tax years beginning after December 31, 2017, can only be used to offset up to 80 percent of taxable income generated in a given year. Companies are also no longer able to carry back NOLs.	Companies that used NOLs to offset their past income tax may now find themselves owing income tax. This could increase their total tax liability, which the R&D credit can help offset.
Reduction of the corporate tax rate from 35 percent to 21 percent	Effectively increases the net benefit of the R&D tax credit by more than 21 percent, from 65 percent to 79 percent.

QUALIFYING RESEARCH ACTIVITIES

Many natural resources companies are already conducting activities that would qualify for the tax incentive. To determine whether an activity is eligible for the credit, you can conduct a quick four-part test. Qualifying activities meet the following conditions:

1. **Qualified purpose:** The purpose of the activity is to improve the functionality, performance, reliability, or quality of a product, process, software, technique, invention or formula that is intended to be used in the taxpayer's business or held for sale, lease or license.
2. **Technological uncertainty:** In order to qualify, the activity should involve an element of uncertainty. At the onset of a project or activity, the taxpayer should encounter uncertainty regarding how it should develop or design the component.
3. **Process of experimentation:** To eliminate the technological uncertainty, the activities include evaluating alternatives through modeling, simulation, systematic trial and error or other methods.
4. **Technological in nature:** The success or failure of the evaluative process is determined by the principles of engineering, physics, chemistry, biology, computer science, or similar natural or "hard" science, as opposed to principles of "soft" science like economics or consumer preferences.

Examples of qualifying activities:

OIL & GAS:

Upstream

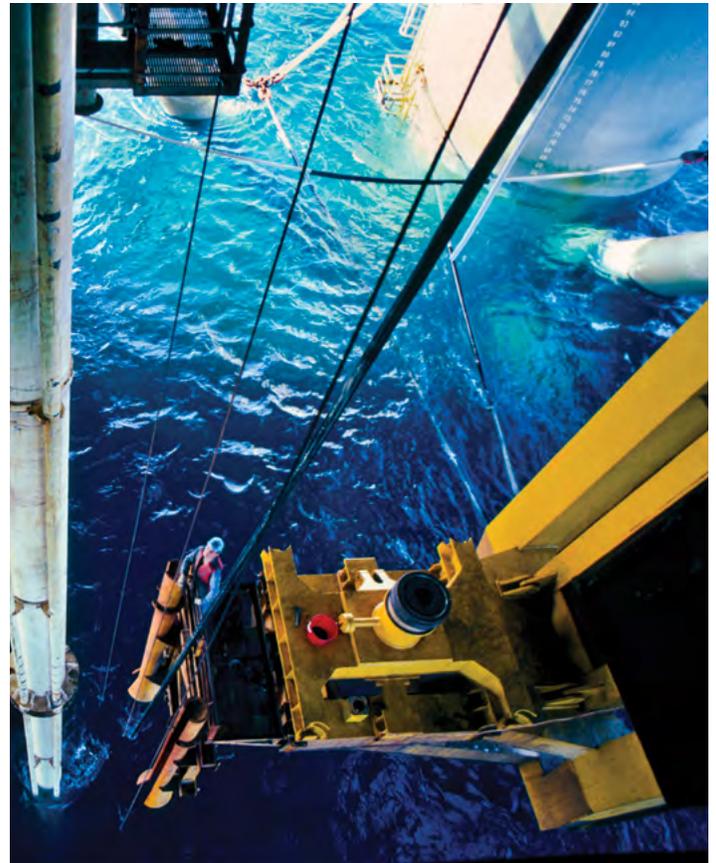
- ▶ Updates to seismic imaging technology and Monte Carlo simulations
- ▶ Actions taken to lessen the environmental impact of exploration and production
- ▶ New or improved drilling techniques including drilling mud systems, directional drilling, refracking wells, disposal methods
- ▶ Expenses incurred to introduce automated drills or increase the connectivity across the exploration and production (E&P) process

Downstream

- ▶ Chemical reaction process development
- ▶ Distillation and separation
- ▶ Improved refining and purifying processes
- ▶ Updates to safety monitoring features

Midstream

- ▶ Structural changes to improve the design of a pipeline
- ▶ Enhancements to oil and gas storage facilities
- ▶ Improved monitoring of oil and gas during transportation
- ▶ Environmental testing and remediation



MINING

- ▶ Increasing quality and quantity of production through the metallurgical processes
- ▶ Making improvements to one phase of the metallurgical processes (e.g. smelting) without slowing or shutting down others (e.g. concentrating & refining)
- ▶ Mine-development alternatives
- ▶ Developing new and improved leachates
- ▶ Dewatering alternatives
- ▶ Advancements in new mining techniques (e.g. deep-sea mining)

INVESTING IN THE FUTURE

Natural resources companies are under pressure to "do more with less" and to achieve operational efficiencies. As the natural resources industry invests in the future and companies strive to improve their processes and operations, the R&D tax credit is an important vehicle to accomplish those goals in a cost-effective way.

Energy companies that prioritize operational efficiency, and successfully harness technology's potential to increase productivity, will be better positioned to meet a volatile future. Put succinctly: The future will be powered by lean machines. With

such a large emphasis on operational efficiency and "doing more with less," BDO recently [predicted](#) that the majority of R&D spending in energy through 2020 will be allocated to achieving exploration and production efficiencies.

WHAT ARE EMERGING AREAS OF R&D INVESTMENT IN THE SECTOR?

Autonomous technology

The International Energy Agency (IEA) forecasts that digital technologies like remote operations can reduce oil production costs by 10 to 20 percent. While many companies are embracing automation, there is still significant untapped potential. According to [data](#) published by Schlumberger, more than 30 percent of new U.S. onshore wells in 2017 used remote operations. This is almost double the number from 2016, but it also illustrates a gap. Seventy percent of new wells don't leverage autonomous technology and as a result, companies are missing out on cost savings.

Data processing and analytics

A lot of innovation in the last few years has focused on equipping rigs and drills with smart sensors to collect data, and there has been staggering progress. The average offshore rig has 30,000 data-generating sensors, according to [Baker Hughes](#). However, just one percent of all data collected is analyzed and used to make decisions. The data has the potential to increase the accuracy of future exploration efforts and create a more in-depth understanding of reserves, but it is severely underutilized. Finding a way to process and analyze that data to extract its true value will likely be a goal of R&D projects in the near future.

As natural resources companies increase investments in R&D, the research credit will become even more relevant. Natural resources companies leveraging the credit will be engaged in activities to foster innovation and achieve efficiencies in the long run, all while recouping tax payments and increasing their bottom line.



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