



Tax Reform

Pro-growth Tax Policies Will Accelerate Innovation, Unleash Competition

SMART TAX REFORM WILL HELP THE ECONOMY AND THE ENVIRONMENT

Key Takeaways:

- Pro-growth tax reform will incentivize more investment and innovation, creating American jobs and strengthening the U.S. economy. Competitive tax policies will empower companies to supply affordable, dependable, and cleaner-sourced power.
- Removing biases against investment and lowering rates broadly would drive investments in newer, more efficient technologies. Targeted tax subsidies for various energy sources have often been costly and inefficient. Congress should phase out tax credits for all forms of mature energy technologies. At the very least, simplifying the energy tax provisions would improve competition among technologies.

The tax code has been a popular mechanism to bolster support for specific energy sources. Different tax treatments provide specific benefits to coal, oil, natural gas, renewables, biofuels, energy efficiency, and nuclear power. Decades of laws have entrenched specific tax credits and exemptions. Some credits, initially designed to be temporary provisions to jumpstart nascent technologies, have become near permanent fixtures in the tax code. Some rules, including the percentage depletion allowance for oil and gas producers, have been around for nearly a century.¹ The result is a complicated web of preferential tax provisions including production tax credits, investment tax credits, deductions for passive trade or business activities, and many other tax advantages.

CONCERNS WITH USING THE TAX CODE TO PICK WINNERS AND LOSERS

There are many problems with using the tax code to boost specific technologies. One problem is that subsidies enable cronyism and increase dependence. Mature, cost-competitive energy sources do not need help from the taxpayer. Yet, even if a technology is financially viable, businesses that benefit will lobby to extend their preferential treatment. Politicians, who assume that their districts benefit from this treatment, will work to make it happen. In the instances that targeted tax credits incentivize more fossil fuel extraction and generation, such preferences have increased pollution and greenhouse gas emissions.

In many cases, energy subsidies have been an expensive, inefficient policy when it comes to reducing emissions. For instance, several programs and targeted tax credits have had high per-dollar costs per amount of carbon dioxide reduced. Economic analysis shows that subsidies routinely have abatement costs reaching several hundred dollars per ton. In some instances, including solar PV subsidies, the costs were projected to be as high as \$2,100 per ton of CO2 (in 2017 dollars).² Other tax credits, like the electric vehicle tax credit, have gone to wealthy consumers who did not need the tax credit in the first place.³

Another problem with targeted tax credits and subsidies is that they could have the perverse effect of impeding energy innovation by disadvantaging those emerging technologies that do not receive government support. Because private capital is limited, when tax credits steer investment toward specific resources and technologies, other promising There are many problems with using the tax code to boost specific technologies. One problem is that subsidies enable cronyism and increase dependence.



entrepreneurs and innovators that do not enjoy tax credits may miss out. For instance, targeted tax credits that result in more tax equity financing for mature technologies may create another barrier for nascent or newer technologies. Tim Latimer, CEO of geothermal startup Fervo Energy, remarked: "To the extent that your goal is to incentivize new technologies onto the grid, [tax equity financing] has a pretty counterproductive impact because the big financiers of tax equity have a rinse and repeat model and they like to go with big companies, big transactions and proven technologies."⁴ Not only do these programs create substantial opportunity costs, companies that do not receive support will spend resources lobbying to expand the subsidy pool.

PRO-GROWTH TAX POLICY WILL BENEFIT THE ECONOMY AND THE ENVIRONMENT

Congress can, in fact, provide certainty to businesses and investors and should do so through pro-growth, technology-neutral tax reform. Simplifying the energy tax provisions would improve competition among technologies. Removing biases against investment and lowering rates broadly would drive investments in newer, more efficient technologies, which could supply affordable power, grow the economy, and reduce emissions. To spur energy innovation and drive decarbonization, Congress should phase out the costly, ineffective tax subsidies and equalize the beneficial ones.

POLICY RECOMMENDATIONS FOR SMART TAX REFORM

To move toward a pro-growth, simplified, and technologyneutral tax code, Congress and the administration should:

Make immediate expensing permanent and apply it to longer asset class lives and research and development (R&D). Immediate expensing allows companies to deduct the cost of capital purchases at the time they occur rather than deducting that cost over many years based on cumbersome depreciation schedules. Without expensing, the tax code is biased against new investment; however, full and immediate expensing would incentivize investments in cleaner, more efficient technologies. Immediate expensing is a way to incentivize energy efficiency without subsidizing or mandating it.⁵

The Tax Cuts and Jobs Act of 2017 allowed for immediate expensing for assets with lives of 20 years or less, and the expensing began phasing out by 20 percent in 2023

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through 2026. Philip Rossetti, senior research fellow at the R Street Institute, found that the implementation of research and development expensing through the 2017 tax reform bill had significant positive effects on private sector energy and environment research and development (E&E R&D). Rossetti found that: "Prior to the tax reform, private sector E&E R&D was relatively stagnant, only increasing by 2 percent from 2012-2017. After the tax reform, E&E R&D jumped by \$3.3 billion, or 11.8 percent. Private sector E&E R&D is roughly seven times as large as public sector R&D and fulfills a fundamentally different role in the innovation life cycle than public sector R&D, so the increase in private sector innovation may mark a win for investment in technologies that are key in the pursuit of global climate objectives."⁶ In the long run, businesses may adjust R&D expenditures as they adjust to the permanency of immediate expensing. However, the option to deduct costs immediately rather than amortize over five years would likely generate more R&D.⁷ Congress should make immediate expensing available for short-lived and long-lived assets, including for research and development (R&D).

Reform the research and development tax credit. The United States is one of the most innovative countries in the world.⁸ The private sector is a clear leader on R&D investment. According to the National Science Foundation's 2022 report on research and development trends, R&D conducted in the U.S. reached \$667 billion in 2019 and an estimated \$708 billion in 2020. The report notes that businesses: "are the predominant performers (75% in 2019) and funders (72%) of U.S. R&D. This sector performs most of U.S. R&D classified as experimental development, more than half



of applied research, and a sizable (and increasing) share of basic research (32% in 2019)."⁹ Recognizing the positive economic and knowledge spillovers of R&D (as well as the private sector's leadership role), Congress passed an R&D tax credit in 1981. After expiring in 1985, Congress reinstated an R&D tax credit that included four different types of credits: regular research, alternative simplified research, basic research, and energy research.¹⁰ Section 174 of the tax code also allows immediate expensing of qualified research activities.¹¹ Businesses can expense R&D costs or use the tax credit but not both.

Economic research has generally shown that the tax

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credit increased R&D spending, though to varying degrees.¹² Several documented problems have reduced the efficacy of the R&D tax credit, most notably the high compliance costs, which disproportionately affects smaller companies.¹³ The bipartisan American Innovation and Jobs Act, introduced by Sens. Todd Young (R-IN) and Maggie Hassan (D-NH) would look to make it easier for small businesses to qualify for the R&D tax credit by updating the definition of a "qualified small business" to include an entity that is eight years old or younger with \$15 million in revenue (up from the current five year, \$5 million threshold). The bill would also increase the credit that businesses qualify for to \$500,000, before increasing incrementally to \$750,000 in 2033. Today, this credit is capped at \$250,000. The bill would also make immediate expensing a permanent fixture in the tax code.

Phase out targeted energy tax credits for mature technologies. Targeted tax credits distort the market and often result in costly, inefficient ways to reduce emissions.¹⁴ In addition, there are opportunity costs if the subsidies allocate public and private money to less cost-effective clean technologies and crowd out investment in technologies that do not receive federal or state support. Furthermore, if the subsidies displace other clean energy sources (such as wind or solar replacing nuclear or hydro), there is little change in the emissions portfolio. Consequently, the value of a subsidy measured by carbon dioxide and other greenhouse gas emissions avoided can vary greatly. The best policy outcome would be to eliminate all preferential tax treatment, broadly lower corporate rates, and make immediate cost recovery available to all firms.

Short of that, however, Congress should replace specific energy provisions with a technology-neutral, emissionsbased credit that focuses on the most efficient One fundamental way for policymakers to maintain American economic competitiveness and spur innovation is to ensure that U.S. corporate tax rates are among the lowest in the world.

abatement cost. The Inflation Reduction Act (IRA) included two technology-neutral tax credits (45Y and 48E) that will replace the existing, more technology-specific production and investment tax credits in 2025 (Section 45 and 48, respectively). While these provisions are a step in the right direction, the IRA also includes several technology-specific tax credits that further subsidize mature technologies and ostensibly lead to the government picking winners and losers. While it is important not to pull the rug out from companies that benefit from these tax credits, a more prudent policy moving forward would be to eliminate technology specificity to the greatest extent possible and lower rates more broadly.

• Maintain competitive corporate tax rates. Tax rates matter for innovation. A May 2021 research paper from a team of Harvard economists examined how corporate taxes and personal income taxes affected the quantity, the quality, and the location of innovation. The researchers found that: "At the macro state level, personal and



corporate income taxes have significant negative effects on the quantity of innovation, as captured by the number of patents, and on the number of inventors residing in the state."¹⁵ The paper also found that higher corporate taxes adversely affect corporate inventors' innovation production and cross-state mobility while personal income taxes "significantly affect the quantity of innovation overall and the mobility of inventors."¹⁶ Similarly, a 2020 article in the *Journal of Financial and Quantitative Analysis* found that large corporate income tax cuts increase corporate innovation, particularly among financially constrained companies with fewer tangible assets.¹⁷

One fundamental way for policymakers to maintain American economic competitiveness and spur innovation is to ensure that U.S. corporate tax rates are among the lowest in the world. Before the 2017 Tax Cuts and Jobs Act, the U.S. had the fourth-highest corporate tax rate in the world; it now ranks in the middle of the pack globally (85th with a combined federal and state statutory rate of 25.77 percent).¹⁸ Including federal and state (national and subnational) corporate tax rates, the U.S. has the 13th highest out of the 38 OECD countries.¹⁹ At the very least, Congress and the administration should maintain the 21 percent corporate tax rate at the federal level.



ENDNOTES

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