

Repealing the Clean Energy Credits: A Macroeconomic Assessment of the GOP Proposal

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About IMPA The Institute for Macroeconomic & Policy Analysis (IMPA), housed at the Economics Department of American University, is a nonpartisan research institute focused on macroeconomics, inequality, and economic policy. The IMPA model emphasizes the widespread prevalence of market power in goods and labor markets, heterogeneity among sectors and firms in the economy, and income and wealth inequality.

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Key Takeaways

- A “trio of bills” recently proposed by the GOP would enact substantial modifications to the current tax code, **extending the temporary tax breaks for corporations** passed in the 2017 Tax Cuts and Jobs Act (TCJA) and **reversing the clean energy incentives** stipulated in the 2022 Inflation Reduction Act (IRA).
- IMPA’s evaluation of the proposed withdrawal of the IRA clean energy credits suggests that it would **significantly negatively affect GDP, aggregate employment and average wages**.
- The IRA’s clean energy credits have a strong expansionary effect on the economy, and **eliminating them would reduce GDP by approximately 2% in the long run from its projected level under current policy**.
- In contrast, an alternative approach that **retains the clean energy tax credits and raises the corporate tax rate** would increase government revenue, generate economic growth, and **promote income and wealth equality**.

Executive Summary

In June 2023, House Republicans advanced three bills proposing several changes to the tax code. The provisions impact, among other things, the effective tax rate facing corporations by eliminating the clean energy credits legislated in the 2022 Inflation Reduction Act (IRA) and by extending and expanding numerous corporate tax breaks passed in the 2017 Tax Cuts and Jobs Act (TJCA). Using a detailed multisector model of the economy, we evaluate the long-run macroeconomic effects of the proposed repeal of the clean energy credits.

Our most important finding is that the GOP’s proposed withdrawal of the clean energy credits introduced in the IRA would significantly negatively affect the US economy in aggregate. These credits are strongly expansionary, generating higher GDP, higher employment and higher wages. Eliminating them would reduce GDP by approximately 2% in the long run from its anticipated level under current policy, while depressing employment and wages by approximately 0.5% and 1.5%, respectively. These numbers are conservative estimates because our model does not account for the strategic importance of the clean energy credits as part of the country’s broader industrial policy or their role in enhancing the climate readiness of the economy.

A key consideration in the current political context is the status of the government deficit. In this regard, the proposal to eliminate the clean energy credits seeks to reduce the deficit but imposes a significant cost on the economy. We therefore consider and evaluate an alternate policy regime that retains key growth-promoting provisions while also addressing the government deficit. Specifically, we evaluate the effect of retaining the clean energy credits from the IRA and raising the headline corporate tax rate to 28%. We estimate that, under this alternate tax regime, long-run GDP would be approximately 0.14% higher than its anticipated level under current policy and more than 2.3% higher than its projected level under a repeal of the clean energy credits. Government revenues would also be more than 5% higher under the alternative plan than under current policy, addressing concerns surrounding fiscal sustainability.

Importantly, we find that, relative to current policy, the alternative policy regime considered here would alleviate wealth and income inequality without hurting economic growth. This is because current tax code provisions (for example, Section 179) allow many firms to deduct much of their investment from their tax liability. With its effect on investment thereby circumscribed, a higher corporate tax rate would fall primarily on corporate profits derived from market power—a key driver of inequality.¹ Under this alternate regime, the bottom 90% of the population would see its share of total income rise by more than 3 percentage points and its share of wealth by more than 2 percentage points relative to the projected shares under current policy.

Overview of Proposals in the GOP’s “Trio of Bills”

The GOP’s “trio of bills”—titled the Build It in America Act (H.R. 3938), the Small Business Jobs Act (H.R. 3937) and the Tax Cuts and Working Families Act (H.R. 3936)—seeks to change the tax landscape for corporations in notable ways. First, the GOP bills propose repealing, almost in their entirety, the

¹See [De Loecker et al. \(2020\)](#) for a discussion of the role of market power in profits and inequality.

Table 1: IRA clean energy credits (estimated \$ millions over 2023–33) targeted for repeal or modification by the Build It in America bill (H.R. 3938)

Section	Title	CBO Aug. 2022 ¹	JCT Jun. 2023 ²
45Y	Clean electricity production credit	11,204	25,166
48E	Clean electricity investment credit	50,858	90,529
30	Clean vehicle credit	7,541	99,698 ³
45W	Credit for qualified commercial clean vehicles	3,583	
25E	Credit for previously owned clean vehicles	1,347	741
Estimated total over 10 years		74,533	216,134

¹ Based on estimates provided by the [Congressional Budget Office](#) in August 2022.

² Based on estimates provided by the [Joint Committee on Taxation](#) in June 2023.

³ Estimates for Sections 30 and 45W provided jointly.

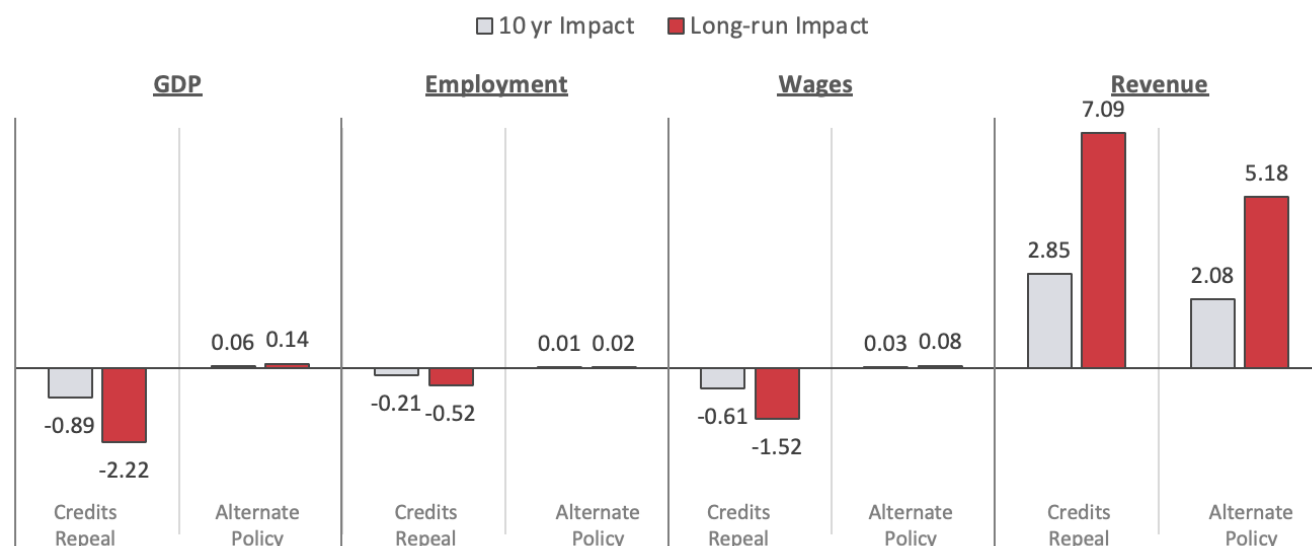
credits introduced through the IRA for companies to invest in and produce clean energy and to buy clean vehicles. Second, the bills propose to extend and expand several tax breaks introduced in the 2017 TCJA. These tax breaks include provisions to extend the 100% “bonus depreciation” for another two years, to expand depreciation deductions under Section 179, to extend interest deduction provisions, and to revive the full deduction for research and experimentation (R&E) expenses (which was withdrawn under the TCJA).

The consequences of the *repeal of the clean energy credits* proposed in the GOP bills remain underdiscussed in the ongoing fiscal debate. These credits represent a core feature of the IRA’s climate change and clean energy initiatives and are focused on addressing the climate crisis, promoting economic growth, and strengthening American industry. While the IRA includes approximately \$400 billion in new spending aimed primarily at clean energy initiatives, a significant portion of the energy and climate funding—estimated by the Joint Committee on Taxation (JCT) to be \$216 billion over 10 years—is in the form of tax credits for corporations.² These incentives are designed to catalyze private investment in clean energy, transportation, and manufacturing; the stimulative effects of these green provisions have been the subject of wide-ranging policy discussions. The IRA also provides tax credits to encourage the adoption of electric vehicles (EVs), energy-efficient appliances, and other green technologies. These are precisely the credits that the Build It in America bill seeks to repeal. Table 1 summarizes the credits by the section of the code targeted for repeal. Below, we discuss our key finding: namely, that the proposed repeal of these clean energy credits would have significant detrimental effects on GDP, employment and wages.

The remaining provisions, which primarily target expensing-related tax breaks for corporations, have received substantial attention from economists. Much of this attention has focused on their effects on government revenue, which are expected to be significantly negative. The TCJA introduced many generous

²JCT Report JCX-29-23, “Estimated Revenue Effects of H.R. 3938, the ‘Build it in America Act’, June 13, 2023”.

Figure 1: 10-year and long-run economic impacts of clean energy credits repeal and alternate policy



Note: For each macroeconomic indicator, the plots show the percent change in outcomes relative to those under current policy. Negative (positive) values represent decreases (increases) in outcomes. The policy regimes are as follows: *Credits Repeal*—Repeal of clean energy credits, as proposed in H.R. 3938; *Alternate Policy*—Alternate policy with clean energy credits retained and corporate tax rate increased to 28%. Source: IMPA.

temporary and permanent tax provisions for corporations, so extending and expanding them will very likely increase the deficit significantly over the next several years. The JCT, for example, expects the respective provisions in the Build It in America bill to reduce revenues by approximately \$47 billion and the depreciation deduction provisions in the Small Business Jobs Act to reduce revenues by another \$44 billion over the policies' first 10 years in effect.³ Similarly, an analysis by the Institute on Tax and Economic Policy (ITEP) suggests that the revenue impact of these provisions in 2024 alone would be close to \$73 billion.⁴ Given that deficit reduction is a focus of the current fiscal debate, the revenue-diminishing effects of these provisions have received significant scrutiny. To complement this discussion around the GOP's trio of bills, this brief focuses on the effects of the provisions to *repeal the IRA clean energy credits*.

Evaluating the Repeal of the Clean Energy Credits

Our main argument is that a *repeal of the clean energy credits* would have a large negative effect on the economy. We illustrate this point by first evaluating the long-run effects of the repeal of the credits as a whole across key macroeconomic indicators. The "long run" here describes the state of the economy once it has fully adjusted to the new tax policies. For concreteness, we also evaluate the economic effects of the

³*Ibid.* and JCT Report JCX-27-23, "Estimated Revenue Effects of H.R. 3937, the 'Small Business Jobs Act', June 13, 2023".

⁴ITEP, "Trio of GOP Tax Bills Would Expand Corporate Tax Breaks While Doing Little for Americans Who Most Need Help". June 11, 2023. <https://itep.org/gop-tax-bills-expand-corporate-tax-breaks/>.

policy 10 years after implementation.⁵ We then present results related to an alternate policy regime that we detail below. Our results are presented in Figure 1, which shows the percent change in key macroeconomic indicators relative to the outcomes under a continuation of current policy.

The first set of columns under each economic indicator shows the effects of a repeal of the credits on GDP as a whole. Long-run GDP falls by more than 2.2% from its projected level under current policy, and this lower GDP is accompanied by lower wages and significantly lower employment. The effects in the first 10 years are similarly negative across these policy indicators. Long-run government revenue, in contrast, rises by approximately 7% from its level under current policy, driven by the repeal of the clean energy credits.

Why is the repeal of the *clean energy credits* so contractionary? The targeted IRA credits play an important role in directly encouraging investment by reducing the cost of capital for firms, particularly in the clean energy sectors. While the Congressional Budget Office (CBO) originally estimated uptake of the credits to be approximately \$74 billion, recent JCT estimates suggest that firms will claim up to \$216 billion in credits over 10 years (see Table 1 for a full breakdown). These numbers indicate that the credits are a key driver of investment in the economy—and therefore growth. They also illustrate the reason why their repeal may cause government revenues to rise and, more broadly, why it is inadvisable to repeal the credits to address the deficit.

Note that the IMPA’s model does not account for the strategic importance of these credits in other respects. For example, the credits form part of a larger, integrated industrial policy framework. The spillovers and feedback mechanisms within this framework are likely to magnify the effects that we estimate here. Likewise, the credits are explicitly designed to accelerate the US economy’s transition to clean energy and enhance climate change readiness—an aspect that our model does not take into account. Therefore, our numbers should be seen as conservative, lower-bound estimates of repealing the IRA credits; the realized cost to the economy could be higher.

Alternate Policy Evaluation

In this section, we evaluate an alternate tax policy that could promote both economic growth and an equitable distribution of the gains from that growth. The economic reasoning that motivates this alternate policy is the following: Corporate taxes falls on corporate profits, which are composed of two elements. The first component of profits represents returns to investment and the production process. The second component represents the “extra” returns or rents that arise from the exercise of market power in imperfectly competitive markets. Because extra returns are then reflected in the returns and value of stocks—which are highly concentrated among the wealthy—they are also a key driver of income and wealth inequality. Corporate tax provisions that fall mainly on the component of profits derived from market power do not discourage corporate investment and may have desirable distributive effects.⁶

Applying this reasoning, we evaluate a tax policy that incorporates the following policies commonly

⁵We follow Barro and Furman (2018) in assuming an annual 5% rate of convergence to evaluate 10-year effects. We explore alternative rates of convergence in the appendix.

⁶For a detailed analysis of the role of market power in corporate profits and corporate tax revenues, see Brun et al. (2023).

Table 2: Distributional effects of alternate policy

Population Groups	Income Share			Wealth Share		
	Current Policy ²	Alternate Policy	% Change in Share	Current Policy ³	Alternate Policy	% Change in Share
Top 5%	35.08	34.40	-1.9	47.60	47.57	-0.1
Top 10%	47.62	44.53	-6.5	68.67	66.38	-3.3
Bottom 90%	52.38	55.47	5.9	31.33	33.62	7.3
Bottom 50%	9.25	9.83	6.3	2.53	2.74	8.3

¹ For each income and wealth population group on the left, the columns show the total estimated long-run shares under current policy and those under the alternate policy proposed here, which retains all clean energy credits and raises the corporate tax rate to 28%.

² Calibration for income shares based on [Piketty et al. \(2018\)](#).

³ Calibration for wealth shares based on [Federal Reserve Bank of St. Louis \(2023\)](#) and IMPA calculations.

mentioned in current political discourse:

1. Retention of all clean energy credits (as currently provided for by the IRA), and
2. An increase in the corporate tax rate to 28% from the current 21%.⁷

The second set of columns under each macroeconomic indicator in [Figure 1](#) captures the effect of this alternate policy. GDP, employment, wages *and* government revenue all increase relative to their counterparts under current policy. The increases are particularly large relative to the outcomes under the GOP's proposed repeal of the credits—GDP is more than 2.3% larger in the long run. Critically, the alternate regime also is revenue-raising because of the higher tax rate, increasing revenue by more than 5 percentage points over the baseline level under current policy.

The alternate policy is projected to reduce income and wealth inequality. There are two reasons for this. First, the expansionary effect of the clean energy credits provides more opportunities for employment across all income segments. Second, since the higher corporate tax rate primarily taxes the part of profits that come from firms' market power, taxation plays an equalizing role in wealth and income distribution without adversely affecting economic growth.

We see these outcomes clearly in [Table 2](#), which shows the distributional effects of the alternate policy in two ways. For the population subgroups in the left-most column, the next three columns show the change in the share of income under the alternate policy in the long run. The most encouraging result is that the bottom 90% and 50% of income earners see a significant increase in their shares of total income, indicating that such a policy would strongly benefit lower- and middle-class Americans. For the top 5%

⁷The choice of 28% for the corporate tax rate reflects the proposal in the FY 2024 budget sent to Congress by President Biden on March 9, 2023.

and 10% earners, note that the fall in shares does not imply that their incomes *decline* but rather indicates that their *shares* are lower since their incomes grow more slowly than those of the rest of the population.

The last three columns of Table 2 show the distributional effects of the alternate policy on the shares of *wealth*. Once again, the figures show that the bottom 90% and 50% of the wealth distribution stand to gain in the long run from the alternate policy. As before, the declines for the top 10% reflect that their wealth would grow more slowly than the wealth of middle- and lower-class Americans. The alternate policy would thus reduce both income and wealth inequality.

Our exercise illustrates that an increase in the statutory corporate tax rate, combined with appropriately designed credits, can have desirable distributional effects while also encouraging economic activity.

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Additional Detail

Key Tax Code Provisions Under the GOP Proposals

Table 3: Tax code provisions under GOP-proposed trio of bills

Tax Code	GOP Proposal	Time Horizon
Section 179	Increase phase-out threshold to \$4m and deductibility limit to \$2.5m	Permanent expansion
Section 168(k)	100% bonus depreciation on equipment	Extended till 2025
Clean energy credits	Eliminate tax credits introduced under IRA (S. 45, 48, 25, 30)	Permanent elimination
Section 163(j)	Define adjusted taxable income as during FY 2017–2022	Extended till 2025
Section 174	Return to pre-TCJA option between full expensing vs. capitalizing and amortizing over 5 years	Permanent extension
Tax Rate	Headline corporate tax rate	21% as under TCJA

Alternative Rates of Convergence

In the evaluation above, we assume a 5% rate of convergence to calculate the 10-year effects of the proposals. This assumes, as in Barro and Furman (2018), that the effect of these policy proposals relies importantly on its effect on capital investment. However, other sources (for example, Barro and Sala-i-Martin (1992) and Barro (2015)) assume lower rates of 2%–4%. In Table 4 below, we provide 10-year effects analogous to those reported in Figure 1 but based on 2% and 4% annual convergence rates instead.

Table 4: 10-year macroeconomic effects relative to outcomes under current policy (percentage change), based on different convergence rates

Outcome	(2)		(3)	
	Credits Repeal Only		Alt. Policy	
	@ 2%	@ 4%	@ 2%	@ 4%
GDP	-0.41	-0.75	0.05	0.09
Employment	-0.1	-0.18	0.01	0.01
Wages	-0.28	-0.51	0.03	0.05
Revenue	1.3	2.38	1.79	3.27

Source: IMPA.