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Energy Sector Subsidies Associated with Republican Tax Reform Plans

Doug Koplow, November 30, 2017

Discussion Draft, v.2

This review assesses the House and Senate tax reform proposals as they relate to the energy sector. Three main areas are examined: cross-cutting changes to tax rates or baselines and whether some of them will have disproportionate or distortionary impacts on particular fuels; specific energy tax expenditures that are modified or repealed in the proposals; and baseline subsidies that remain untouched. All three factors affect energy market structure and the degree to which political decisions on taxation will affect the direction of energy investment and the pace and form of the transition away from carbon-based fuels in the United States.

A combination of key subsidies to fossil energy remaining untouched while core subsidies to renewables are repealed, along with significant use of tax-favored corporate structures by oil and gas both suggest that were the current proposals become law, they would materially benefit fossil fuel industries relative to other energy market participants. The changes will also benefit Southern Company, the sole private owner of two under-construction nuclear reactors in Georgia. While not actually named in the bill, the firm will be the only beneficiary of the changed rules on the nuclear production tax credit.

I. General provisions and inter-fuel competition in energy markets

1. Reduced top corporate tax rates likely to extend existing tax advantages of fossil fuels

The current corporate tax system has graduated rates reaching as high as 35%. Both the House and Senate bills plan replace this with a flat rate corporate tax of 20%. This shift will not affect every industry equally, though will fuel much larger budget deficits.

A core premise of most tax reform proposals is that eliminating loopholes while applying lower tax rates to all market participants can generate equivalent revenues, but with fewer economic distortions. Economic growth should be stronger, market price signals more accurate, and political interference diminished. There is a powerful logic to this (ignoring the deficit issue) – though for this outcome to be realized, loopholes actually need to be eliminated.

Republican proponents of the bills argue that they are using this very strategy. However, the reality of tax reform is always messier: recipients of tax subsidies are often extraordinarily well organized and politically powerful. Further, many tax breaks that are irrational or inefficient economy-wide are nonetheless supported by elected politicians for boosting local economic activity – which is, after all,

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where their voters reside. On this particular legislation, the scope and complexity of the economic changes being pursued -- in combination with little debate, no hearings, and a push to vote simply to gain a "victory" prior to year-end -- make the risks of really bad outcomes much larger.

In both the House and Senate versions, political interests appear to have retained many corporate subsidies from the current tax system, and some individual ones as well. These surviving corporate tax breaks – which already bring the effective tax rate (i.e., what firms *actually* pay to the IRS) well below 35% -- will ensure that large distortions in tax rates between sectors of the economy continue. Table 1 presents effective tax rate data for the oil, gas, and coal sectors in 2016. The data is based on a large number of public firms, compiled by Aswath Damodaran of the NYU Stern School of Business.

It is notable how much below the industry average the effective tax rates on key oil and gas sectors are. Indeed, they are among the lowest of all sectors evaluated: below 10 percent even when looking only at the firms making money, with effective tax rates of less than 5% for the sector once all firms in the sample are included.

Another data review by the Institute on Taxation and Economic Policy calculated an effective tax rate during the years of 2008-2015 – a longer time period, though with a smaller sample. ITEP found similar patterns: effective rates of only 3.1% for gas and electric utilities and 11.6% for the oil, gas and pipelines sector.[1] These were the lowest and fourth-lowest taxed industries, respectively. The average effective tax rate for the 20 sectors evaluated was 21.2%, nearly double higher oil and gas segment, though still well below the 35% statutory rate that has been alleged to cause so much damage to US industry.

What does this mean for tax reform? Since the largest subsidies to fossil fuels are untouched in both House and Senate versions, the relative tax advantage fossil fuels enjoy will continue going forward. [2] Indeed, the lower top rate for corporate taxes will likely enable these firms to bring their effective tax rates down even further.

[1] Matthew Gardner, Robert S. McIntyre, and Richard Phillips, *The 35 Percent Corporate Tax Myth Corporate Tax Avoidance by Fortune 500 Companies*, (Washington, DC: Institute on Taxation and Economic Policy), March 2017."

[2] These large subsidies are key contributors to our finding that nearly half of US oil fields won't hit investment hurdle rates without subsidies – a staggering finding given the need for society to transition away from carbon-based fuels. See Peter Erickson, Adrian Down, Michael Lazarus and Doug Koplow, "Effect of subsidies to fossil fuel companies on United States crude oil production," *Nature Energy* 2, 891–898 (2017).

Table 1

Effective Tax Rates for Selected US Industries, 2016

Industry name	*Number of firms*	*Average across all companies*	*Average across only money-making companies*	*Aggregate effective tax rate*
Air Transport	18	22.99%	28.52%	21.14%
Coal & Related Energy	38	0.48%	0.69%	NA
Computer Services	117	11.18%	15.63%	15.99%
Environmental & Waste Services	89	5.07%	35.55%	36.03%
Farming/Agriculture	37	7.89%	23.82%	24.68%
Financial Svcs. (Non-bank & Insurance)	258	20.80%	31.81%	31.90%
Green & Renewable Energy	25	4.25%	26.42%	NA
Metals & Mining	97	1.16%	33.52%	NA
Oil/Gas (Integrated)	7	1.14%	8.01%	NA
Oil/Gas (Production and Exploration)	330	0.32%	7.08%	NA
Oil/Gas Distribution	78	2.93%	7.78%	3.44%
Oilfield Svcs/Equip.	148	4.11%	28.22%	NA
Paper/Forest Products	23	14.46%	12.58%	6.48%
Power	68	19.27%	29.22%	43.67%
Shipbuilding & Marine	11	7.30%	36.76%	NA
Steel	38	7.94%	27.60%	NA
Transportation (Railroads)	7	22.17%	35.87%	35.87%
Trucking	30	26.74%	37.49%	37.28%
Utility (General)	18	25.62%	30.09%	29.72%
Utility (Water)	22	11.97%	32.04%	34.45%
Total Market	**7,330**	**10.44%**	**26.22%**	**28.49%**
Total Market (without financials)	**6,100**	**8.31%**	**25.37%**	**28.19%**

Source: Aswath Damodaran, Stern School of Business, New York University. January 5, 2017 data update (http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/taxrate.htm).
Accessed 27 November 2017.

2. Reduced top tax rate on pass-through entities will provide significant benefits to oil and gas

The use of pass-through corporate entities has grown steadily in the US economy. From a limited set of corporate forms decades ago (primarily private partnerships and sub-S corporations), a slew of new forms have helped fuel the growth of larger and more diverse entities that all have the common feature of entirely escaping corporate-level income taxes. Income earned by these firms is taxed at the partner level, but the ability to avoid corporate taxes means that the overall tax burden on earnings is reduced.

Publicly-traded partnerships in the natural resource (master limited partnerships), real estate (real estate investment trusts), and investment (publicly-trade partnerships) are a good example. The firms

are large, with billions of dollars in assets and revenues; able to access public capital markets; yet pay no corporate income tax. Other forms including limited liability corporations (LLCs) and limited liability partnerships (LLPs) have also contributed to the growth.

While avoiding significant corporate tax burdens is a given for these structures, under the current system income passed through to shareholders would then be taxed at the individual (or trust) rate of each individual owner, depending on specific circumstances. If owners were wealthy and in a high tax bracket, the individual income tax rate would be at the top marginal tax rate; if owners were poor, the tax would be at the low end.

The House proposal would cap the individual tax on pass-through income at 25% for all partners. Though some other attributes may make the effective rate higher, the rule would still reduce the effective tax rate to individual partners owning interests in these pass-through entities, and those partners are far more likely to be wealthy than poor. This means that the new rate will be much lower than what they would have paid under the current rules.

The Joint Committee on Taxation estimated $448 billion in revenue losses between 2018 and 2027.[3] The Senate bill does not have similar preferential rates, though does allow a deduction of 17.4% of pass-through income, which has a similar effect. The Senate proposal generates somewhat lower – though still very large ($362 billion from 2018-27) revenue losses.[4] The Senate version also caps the ability to claim losses however, which seems to cut revenue losses from the change by more than a third.

Three factors suggest that fossil fuels would receive a disproportionate share of benefits from lower taxes on partners in pass-through entities. The first are the special rules allowing oil, gas, and coal firms to form tax-exempt Master Limited Partnerships.[5] Being able to access the depth and liquidity of public capital markets has allowed MLPs to grow quickly; and for major firms to hive off portions of their assets into separate MLPs while earning general partner fees and avoiding corporate income taxes. The market capitalization of MLPs exceeded a half trillion dollars as of July 2017, based on Earth Track analysis; the vast majority was related to oil and gas. A second factor is that publicly-traded investment firms such as Blackstone and KKR have made, and continue to make, very large investments into the energy sector, and primarily oil and gas. This comes in the form of private equity, financing of mergers and buyouts, and hedge funds.[6] Finally, even standard private partnerships have been widely used to finance oil and gas development for many decades.

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[3] JCX-47-17, p. 1.
[4] JCX-59-17, p. 1.
[5] Robert Tichio, a partner and managing director at Riverstone Holdings, the energy investment branch of the Carlyle Group and "one of the world's largest private equity firms focused on the energy sector" is a good example. He noted recently that upstream oil and gas represented roughly 40% of "committed and invested capital." He expects the demand for hydrocarbons to continue to grow, and any shift away from carbon-based fuels to require "either incredible sacrifice or economic incentive/transfer payments provided by governments…"
[6] Earnings from these investments also benefit from carried interest rules, which tax the income to the firm partners at lower capital gains rates rather than that of ordinary income.

Table 2, based on data from the Statistics of Income Division (SOI) at the US Treasury, provides important insights on the use and scale of pass-through vehicles across industrial sectors. The Table is an extract focusing on sectors related to fossil fuels, though the full SOI dataset includes a broad range of sectors. Table 2 also includes finance and real estate for comparative purposes, as these sectors hold more than three-quarters of the assets organized as tax-exempt pass-through entities. While the focus of this paper is on the energy sector, the concentration of holdings in finance and real estate is notable when thinking about how tax reform will affect wealthy versus poorer citizens. Investors in real estate and investment partnerships tend to skew strongly towards the wealthiest income quintile. Analysis of household surveys by economist Edward Wolff found that in 2013 the top 10% of wealthiest households in the US (classified by net worth) held 91.9% of stocks and mutual funds, 94.3% of financial securities such as bonds, and 93.8% of business equity. [7] This last category is the one into which many of the holdings of private pass-through entities would fall. The overall pattern is indicative of what one sees, for example, in the holdings of President Trump.

These upper-income groups *already* benefit from the ability of pass-throughs to avoid corporate-level income taxes. Under tax reform, they will see incremental savings on the individual taxes they pay as well, since earnings from pass-throughs distributed to partners would face a maximum tax rate well below their marginal rate for other income. However, little of the tax benefits received by pass-through entities will flow to the lower income quintiles. Those groups own very little of tax-advantaged asset classes, and under our graduated personal income tax system, they were paying fairly low rates on income of any type to begin with.

In the energy sector, nearly $1.2 trillion in assets related to oil and gas extraction, manufacturing and pipelines were held in pass-through formats as of 2014. An additional $90 billion in assets related to other mining activities (including coal) and mining support industries. Roughly $400 billion in utility-related assets also escaped corporate-level taxation; fossil-fuel generation capacity remains a large player in the utility space.[8]

Although fossil-fuel related partnerships comprise less than 2% of all pass-throughs, they tend to have far more partners on average (roughly 20% of all partners tracked by SOI). They also tend to be much larger partnerships: while the average assets held by a pass-through was about $7.2m, pipelines were roughly 100 times as large, averaging $770m per partnership. This is probably driven by the ability of pipelines to be tap into public capital markets as MLPs. Caps on income taxes due from partners under the tax reform proposals would provide a differential advantage to oil and gas (and to a less extent coal) relative to other energy resources.

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[7] Edward N. Wolff, "Household Wealth Trends in the United States, 1962-2013: What Happened Over the Great Recession?" (Cambridge, MA: National Bureau of Economic Research), Working Paper 20733, December 2014.

[8] The figure for utility-related tax-exempt assets would likely surge were an expansion of master limited partnerships to pass into law. Legislation to do so has been introduced annually. The current version (S. 2005) opens MLPs to a wide array of clean energy, as well as some not-so-clean practices relating to gasification of carbon fuels and carbon capture from ghg-intensive power plants (which would erode the market benefits of carbon-free energy). It would be much better to scrap MLPs entirely.

Table 2

Partnerships Related to Fossil Fuels Among the Largest in Terms of Assets and Number of Partners

(All figures are estimates based on samples--money amounts are in thousands of dollars)

Item	All industries	Mining				Utilities	Petroleum and coal products manufacturing	Pipeline transportation	Total Finance and insurance	Total Real estate and rental and leasing
		Total	Oil and gas extraction	Other mining	Support activities for mining					
Number of partnerships	3,611,255	31,489	26,734	1,121	3,635	5,046	456	592	334,546	1,816,889
% of total	100.0%	0.9%	0.7%	0.0%	0.1%	0.1%	0.0%	0.0%	9.3%	50.3%
Number of partners	27,714,478	2,526,857	2,085,747	335,595	105,515	163,591	300,156	2,930,957	6,634,114	7,887,184
% of total	100.0%	9.1%	7.5%	1.2%	0.4%	0.6%	1.1%	10.6%	23.9%	28.5%
Avg partners/partnership	7.7	80.2	78.0	299.4	29.0	32.4	658.2	4,950.9	19.8	4.3
Total assets	26,128,933,308	638,581,018	548,316,907	61,332,473	28,931,639	399,251,342	180,596,057	456,812,904	14,736,566,412	5,636,547,190
% of total	100.0%	2.4%	2.1%	0.2%	0.1%	1.5%	0.7%	1.7%	56.4%	21.6%
Avg assets/partnership	7,235	20,279	20,510	54,712	7,959	79,122	396,044	771,643	44,049	3,102
Avg. assets/partner	943	253	263	183	274	2,441	602	156	2,221	715

Source: Extract from "Table 1. All Partnerships: Total Assets, Trade or Business Income and Deductions, Portfolio Income, Rental Income, and Total Net Income, by Selected Industrial Group, Tax Year 2014," IRS, Statistics of Income Division, Partnerships, April 2016.

3. Brief discussion of other cross-cutting changes with potential energy sector impacts

A number of other cross-cutting reforms have the potential to skew energy markets towards particular fuels. All involve significant revenue effects, and would benefit from additional evaluation of the potential sectoral distortions they could cause. Although there was insufficient time to do such an analysis here, it is nonetheless useful to flag these items in Table 3 below. Table 3 also presents the revenue loss estimates for the items discussed above.

Table 3

Summary of Cross-Cutting Tax Changes of Potential Importance to Inter-fuel Competition

Provision and brief description	Revenue Loss (Gain), all sectors, 2018-27, $millions	
	House Proposal	Senate Proposal
Corporate income tax reduced to 20%. Benefits all sectors, though the effective tax rate of fossil energy is already well below statutory levels and well below other sectors. The reduced top rate will likely allow them to reduce their effective rate further.	1,456,000	1,329,200
Pass throughs capped at 25% (House) or get 17.5% deductions (Senate). Significant benefit to all pass-through entities by increasing the after-tax income earned by partners (often wealthy) when they pay their individual taxes. Oil and gas partnerships, including private investment vehicles and the multi-billion dollar MLPs, are common; the sector's share of these new tax benefits will be material.	596,600	362,200
Disallow active pass-through losses in excess of $500k (joint filers) or $250k (single filers). Appears to limit the revenue losses in the Senate bill from the above pass through modifications.		(137,400)
Repeal of Alternative Minimum Tax on corporations. A number of oil and gas tax expenditures are factored into AMT rules, though the share of total benefits from eliminating corporate AMT that would flow to the sector is not clear. The individual AMT is also slated for repeal, and may further contribute to increased after-tax returns to wealthier individuals who own shares of oil and gas related pass-through entities.	40,300	40,300
Temporary 100% bonus depreciation for capital expenditures. Many energy industries are capital intensive, and will benefit relative to energy efficiency and conservation from this proposed change. Labor as a factor of production may also be disadvantaged.		61,300
Section 168(k) expensing for qualified investments. Another expansion of immediate write-off of capital equipment.	25,000	
Require 3 year holding period instead of one on investments to get lower rate on carried interest. Significant private equity and hedge investment is directed to the US oil and gas sector. Congress is pretty much caving to financial interests on this one, as proposed changes gain only $1.2 billion over 10 years.	(1,200)	(1,200)

Provision and brief description	Revenue Loss (Gain), all sectors, 2018-27, $millions	
	House Proposal	Senate Proposal
In contrast, full elimination of subsidies to carried interest would generate increased revenues of 13 to 150 times as large.[9]		
Amortization of research and experimental expenditures. The change would move from expensing of many research and experimentation expenses to being required to amortize them over five years (or 15 years if the research is done outside of the US). This is a big change, and works counter to the normal goal to incent R&D on the economic grounds that the positive externalities can't be fully captured by the firm or individual investing in the research. Interestingly, abandoned capital projects can frequently be written off in the year of abandonment. The proposed revisions, however, would disallow such write-offs, and require continued amortization over the original 5 year period. Costs to find mineral reserves, including oil and gas, are excluded from this provision both under current law and in the reform proposals.	(108,600)	(62,100)
Short-term expansion of section 179 expensing of capital. Although expanded eligibility adds energy-efficient heating and air conditioning equipment, the revenue loss is dominated by changes to the general rules making it easier to expense capital across all sectors than it is under current laws.	11,400	
Reduced tax rate on repatriated dividends from foreign subsidiaries. Cash "hoards" have built up at the international subsidiaries of a number of large US firms. The earnings are taxed only if brought back to the US, so the firms keep the holdings abroad. The proposals introduce a lower tax rate on these earnings, effectively placing large multi-national firms able to locate in foreign tax havens or with many international divisions at an advantage relative to smaller firms. The goal of the reduced tax rate is to bring home funds for investment and job creation; however a similar scheme done about 15 years ago mostly boosted dividend payouts to shareholders and stock buybacks. There is little indication that firms are constrained on investing in strong new ideas because of the tax on funds held abroad, so the employment impacts of this change are likely to be modest.	205,100	215,500
Sources: JCX-54-17 (estimates for House proposal); JCX-59-17 (estimates for Senate proposal)		

II. Review of Energy-specific tax expenditures

Although the tax reform proposals do adjust or repeal many energy-specific line items, quite a few large subsidies, particularly to conventional energy, appear to escape unscathed. This is an initial review: if you see provisions listed as remaining in place, but that you believe have been repealed, please let me know by email so Tables 4, 5, and 6 can be updated over time.

[9] Merle, Renae (2017). "What is 'carried interest' and why it matters in the new GOP tax bill," The New York Times, November 7.

The review separated subsidies into three main energy categories: conventional, emerging, and mixed. The conventional energy category is dominated by subsidies to fossil fuels, though also includes a couple to nuclear (the primary mechanisms governments use to subsidize nuclear is not the tax code, but rather state-provided services, credit and insurance subsidies, and above-market power purchase agreements). The emerging energy resources category includes renewable energy, efficiency, and a variety of resources such as conventional biofuels that have a murkier environmental profile but are nonetheless frequently grouped in with renewables. The mixed category includes line items that support activities cutting across categories, such as the electrical grid.

Revenue loss estimates for provisions included in the House or Senate proposals generally come from the most recent Joint Tax scoring. In a few circumstances (MLPs and the manufacturing tax deduction), other data sources, including some of my own work, have provided more detailed estimates than what is available from JCT. For tax expenditures not addressed in the reform proposals, JCT's annual list of tax expenditures was used for revenue loss information. Whereas the scoring of tax reform spans 10 years of revenue impacts, the JCT tax expenditure reports cover only five. To provide provide comparable numbers, the five year value in the tax expenditure report was simply doubled. This approach is admittedly simplistic, as many policy and market factors will affect the actual uptake of subsidies over time. However, the scoring itself is a challenging exercise with many areas of potential estimation problems. Despite the estimation challenges, it is nonetheless both important and useful to see the overall pattern of going-forward tax subsidization were tax reform to pass. Indeed, this review illustrates how important it is to include baseline subsidies that will survive in assessing tax-driven winners in energy.

Up to three values are presented below for each line item, the third being an average of the other two in order to ensure address missing values or range estimates. The other two either represent scoring estimates from the House and Senate bills; range estimates for external data sources; or JCT revenue losses for existing tax breaks unaffected by tax reforms.

Some important findings are below:

- **Largest subsidies to fossil fuels are not touched by tax reform proposals, and post-reform subsidies to fossil will remain very large.** Although a handful of tax subsidies to oil and gas are eliminated in tax reform, the largest ones remain untouched by either proposal and exceed the reductions by a large margin. As shown in Table 4, net subsidies to conventional energy after tax reform are still at a staggering $52 to $67 billion dollars over the 2018-27 time period. Fossil fuels comprise more than 80% of the total, with nuclear the remainder.
- **Effective tax rates on fossil energy are likely to remain well below those on competing resources as a result.** The residual tax subsidies, in combination with a lower top corporate rate, and lower top rates on income flowing from pass-throughs, will bring down the effective tax rate on key fossil fuel sectors even further.

- **Tax subsidies to nuclear are increased or untouched via tax reform.** Further, the large subsidies flowing to nuclear via other transfer mechanisms in credit, insurance, and government ownership of fuel cycle functions, will also remain in place.
- **In contrast, significant reductions in subsidies to renewable energy are being implemented, particularly under the House proposal.** Although the eligibility period for a handful of these subsidies is being extended, changes to the production tax credit for wind are estimated to be much larger, more than offsetting the gains to other renewable resources. Net subsidies to emerging energy resources will drop significantly under the reform plans. There will be some gains through reduced corporate rates and pass-throughs, though renewables are not likely to benefit to the same degree as fossil energy will due to differences in industry scale and the use of large partnerships.
- **In the "mixed" category, the largest changes are in the area of transportation and parking.** Commuting via bicycle or mass transit will no longer be subsidized, though the largest shift is likely the elimination of employer-subsidized parking – which could shift ridership to less carbon-intensive modes.

Table 4

Overview of Going-Forward Tax Expenditures Benefitting Conventional Energy Resources

Provision and description	Tax Reform Action?	General Energy Category	Energy resource(s) affected	Gain (loss) to sector, 2018-27, $mils		
				Average	House Bill or Baseline Value*	Senate Bill or Baseline Value*
Conventional Energy Resources						
Expensing of exploration and development costs, oil	No	Conventional	Oil	*14,800*	*14,800*	*14,800*
Tax exempt master limited partnerships, oil and gas	No	Conventional	Mostly oil and gas; a tiny bit of coal	*13,300*	*9,800*	*16,800*
Excess of % over cost depletion, oil and gas	No	Conventional	Oil and gas	*8,600*	*8,600*	*8,600*
Rapid amortization of air pollution control facilities	No	Conventional	Mostly coal	*8,400*	*8,400*	*8,400*
Reduced tax rate on nuclear decommissioning trust earnings	No	Conventional	Nuclear	*6,900*	*2,800*	*11,000*
Credits for investments in clean coal facilities	No	Conventional	Coal	*2,000*	*2,000*	*2,000*
Excess of % over cost depletion, other fuels	No	Conventional	Mostly coal	*1,800*	*1,800*	*1,800*
15 year accelerated depreciation for natural gas distribution lines	No	Conventional	Natural gas	*1,600*	*1,600*	*1,600*
Expensing of exploration and development costs, other fuels	No	Conventional	Mostly coal	*1,200*	*1,200*	*1,200*
Amortization of geological and geophysical expenditures associated with oil and gas exploration	No	Conventional	Oil and gas	*1,200*	*1,200*	*1,200*
Tax exempt master limited partnerships, other minerals (primarily coal)	No	Conventional	Mostly coal	*1,000*	*1,000*	*1,000*
CO2 sequestration credit	No	Conventional	Coal, natural gas	*950*	*950*	*950*
Special tax rules for mining reclamation	No	Conventional	Mostly coal	*400*	*400*	*400*

Provision and description	Tax Reform Action?	General Energy Category	Energy resource(s) affected	Gain (loss) to sector, 2018-27, $mils		
				Average	House Bill or Baseline Value*	Senate Bill or Baseline Value*
reserves						
Expensing of tertiary injectants	No	Conventional	Oil and gas	*250*	*250*	*250*
Partial expensing of advanced mine safety equipment	No	Conventional	Coal	*250*	*250*	*250*
Refined coal production credits	No	Conventional	Coal	*200*	*200*	*200*
Indian coal production credits	No	Conventional	Coal	*200*	*200*	*200*
Accelerated depreciation of natural gas gathering lines	No	Conventional	Natural gas			
Capital gains treatment of coal royalties	No	Conventional	Coal		*Not estimated*	
Repeal of foreign base company oil related income as subpart F income.	Yes	Conventional	Oil	3,950	3,900	4,000
Extension of Nuclear Production Tax Credit eligibility date; allow credits earned by non-taxable entities to be used to taxpayer project partners. This entire subsidy benefits a single firm: Southern Company.	Yes	Conventional	Nuclear	400	400	
Repeal of enhanced oil recovery credit	Yes	Conventional	Oil and gas	200	200	
Repeal of credit for producing oil and gas from marginal wells	Yes	Conventional	Oil and gas	-	-	
Repeal of deduction for income attributable to domestic production activities. Revenue gain to Treasury of $95.2 billion (House); $80.7 billion Senate for all industries. Estimate shown is for oil and gas only, based on estimate by Oil Change International (2017) and linearly extended for ten years.	Yes	Conventional	Oil and gas	(8,050)	*(8,050)*	(8,050)
Tax expenditures to (revenue gains from) conventional energy						

Provision and description	Tax Reform Action?	General Energy Category	Energy resource(s) affected	Gain (loss) to sector, 2018-27, $mils		
				Average	House Bill or Baseline Value*	Senate Bill or Baseline Value*
Originating from provisions ignored in tax reform				63,050	55,450	70,650
Originating from provisions modified or repealed in tax reform				(3,500)	(3,550)	(4,050)
Total from all sources				59,550	51,900	66,600
% net subsidies supporting fossil fuels				87.7%	93.8%	83.5%
% net subsidies supporting nuclear energy				12.3%	6.2%	16.5%
*House and Senate bill references apply only to line items on which there is tax reform action, and are based on scoring in JCX-54-17 for the House bill and JCX-59-17 for the Senate bill. Data from other sources are italicized. For existing subsidies surviving tax reform, revenue loss estimates rely on analysis done by JCT in January of 2017 based on tax rules in effect at that time, and found in JCX-3-17. Koplow (2011 and 2017) and OCI (2017) were also used for a handful of items where more detailed work on the provision had been done.						

Table 5

Overview of Going-Forward Tax Expenditures Benefitting Emerging Energy Resources

Provision and description	Tax Reform Action?	General Energy Category	Energy resource(s) affected	Gain (loss) to sector, 2018-27, $mils		
				Average	House Bill or Baseline Value*	Senate Bill or Baseline Value*
Emerging Energy Resources						
5 year accelerated depreciation for certain renewable energy property (solar, wind, etc.)	No	Emerging	Renewables	*4,000*	*4,000*	*4,000*
Credit for biodiesel and renewable diesel	No	Emerging	Biofuels	*250*	*250*	*250*
Credit for second generation biofuel production	No	Emerging	Biofuels	*250*	*250*	*250*

Provision and description	Tax Reform Action?	General Energy Category	Energy resource(s) affected	Gain (loss) to sector, 2018-27, $mils		
				Average	House Bill or Baseline Value*	Senate Bill or Baseline Value*
Exclusion of energy conservation subsidies provided by public utilities	No	Emerging	Conservation	*200*	*200*	*200*
Modification of section 48 energy credit and ITC. Extend eligibility to a handful of new resources, and establishes a construction start date of Jan 1, 2022 as the final eligibility date for all eligible resources.	Yes	Emerging	Solar, fuel cell, geothermal, small wind, CHP, microturbines	1,200	1,200	
Extension and phaseout of residential energy efficient property. All eligible uses other than solar extended to December 31, 2021, though starts to phase down in CY 2020 .	Yes	Emerging	Fuel cell, geothermal, small wind	1,100	1,100	
Repeal of credit for new qualified plug-in electric vehicles	Yes	Emerging	Electric vehicles	(200)	(200)	
Repeal of tax credit bonds. Bond structure pays investors in tax credits instead of interest.	Yes	Emerging	Allowable uses include clean renewable energy bonds and energy conservation bonds.	(500)	(500)	
Modifications to credit for electricity produced from certain renewable resources. The wind credit is scheduled to phase down already, but under the House proposal, new turbines installed after the date of enactment would receive the original 1.5 c/kWh PTC, and not the inflation-adjusted	Yes	Emerging	Mostly wind	(12,300)	(12,300)	

Provision and description	Tax Reform Action?	General Energy Category	Energy resource(s) affected	Gain (loss) to sector, 2018-27, $mils		
				Average	House Bill or Baseline Value*	Senate Bill or Baseline Value*
value (nearly twice as large).						
Tax expenditures to (revenue gains from) emerging energy resources						
Originating from provisions ignored in tax reform				4,700	4,700	4,700
Originating from provisions modified or repealed in tax reform				(10,700)	(10,700)	-
Total from all sources				(6,000)	(6,000)	4,700

*House and Senate bill references apply only to line items on which there is tax reform action, and are based on scoring in JCX-54-17 for the House bill and JCX-59-17 for the Senate bill. Data from other sources are italicized. For existing subsidies surviving tax reform, revenue loss estimates rely on analysis done by JCT in January of 2017 based on tax rules in effect at that time, and found in JCX-3-17. Koplow (2011 and 2017) and OCI (2017) were also used for a handful of items where more detailed work on the provision had been done.

Table 6

Overview of Going-Forward Tax Expenditures Benefitting Mixed Energy Resources

Provision and description	Tax Reform Action?	General Energy Category	Energy resource(s) affected	Gain (loss) to sector, 2018-27, $mils		
				Average	House Bill or Baseline Value*	Senate Bill or Baseline Value*
Mixed Energy Resources						
10 year accelerated depreciation for smart	No	Mixed	Power - general	1,000	1,000	1,000

Provision and description	Tax Reform Action?	General Energy Category	Energy resource(s) affected	Gain (loss) to sector, 2018-27, $mils		
				Average	House Bill or Baseline Value*	Senate Bill or Baseline Value*
electric transmission property						
15 year accelerated depreciation for certain electric transmission property	No	Mixed		*1,000*	*1,000*	*1,000*
Repeal (in House) or limitation (in Senate) of deduction for employer-provided qualified transportation and parking	Yes	Mixed	Efficiency (mass transit) and oil (autos)	(14,100)	(10,800)	(17,400)
Repeal exclusion for employer-provided bicycle commuter fringe benefit	Yes	Mixed	Oil substitutes	(50)		(50)
Termination of private activity bonds, energy facilities	Yes	Mixed	Allowable uses include some energy facilities.	(1,400)	(1,400)	
Tax expenditures to (revenue gains from) mixed energy resources						
Originating from provisions ignored in tax reform				2,000	2,000	2,000
Originating from provisions modified or repealed in tax reform				(15,550)	(12,200)	(17,450)
Total from all sources				(13,550)	(10,200)	(15,450)

*House and Senate bill references apply only to line items on which there is tax reform action, and are based on scoring in JCX-54-17 for the House bill and JCX-59-17 for the Senate bill. Data from other sources are italicized. For existing subsidies surviving tax reform, revenue loss estimates rely on analysis done by JCT in January of 2017 based on tax rules in effect at that time, and found in JCX-3-17. Koplow (2011 and 2017) and OCI (2017) were also used for a handful of items where more detailed work on the provision had been done.