REFLECTIONS ON THE ENVIRONMENTAL IMPACTS OF FEDERAL TAX SUBSIDIES FOR OIL, GAS, AND TIMBER PRODUCTION

by
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The oil, gas, and timber industries in the United States are favored with tremendous federal tax incentives designed to encourage exploitation of these natural resources. Critics argue that these subsidies promote environmentally harmful practices—by artificially reducing production costs, thereby reducing consumer costs and increasing consumption, and by enhancing after-tax return on investment, thus artificially moving capital into the affected industries. These criticisms imply that repeal of the tax incentives would reduce consumer demand and make investment in production operations less attractive. This Essay considers the benefits bestowed by the tax provisions and assesses their net market impacts. It suggests that repeal of oil and gas subsidies would result in, at best, a marginal reduction in consumption, and that any resulting withdrawal of capital from domestic oil and gas operations would not necessarily result in a flight of investors' funds to activities that are less problematic from an ecological perspective. Additionally, some timber tax subsidies actually promote environmentally responsible practices; repeal of these measures would be counterproductive. In light of these conclusions, the best case for elimination of the tax subsidies on ecological grounds might be that it would create a pool of new revenue from which affirmative environmental programs could be funded.

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I. INTRODUCTION

The federal income tax treatment of oil, gas, and timber operations is highly favorable to those industries—from a tax theoretician's standpoint, embarrassingly so. Wildly lenient rules regarding the recognition, timing, character, and calculation of taxable profits create large subsidies for taxpayers engaged in these activities. In addition to decrying the theoretical impurities, inherent unfairness, and reckless revenue loss brought about by current law,[1] critics suggest that it harms the environment.[2] By encouraging exploitation and abuse of natural resources in production activities, and increasing consumption of oil, gas, and timber products through lowering prices for gasoline, natural gas, lumber, paper, and other goods, the tax subsidies are sometimes portrayed as the antithesis of "green."[3]

The linkage between the tax subsidies and environmental harms relies on several important assumptions: first, that federal income taxes are reflected in the prices of the industries' products; second, that consumer demand for these products is sensitive to price increases; and third, that changes to the tax rules will result in significantly higher corporate tax burdens, which, in turn, will be passed on to consumers. This Essay examines these assumptions and concludes that a significant environmental benefit flowing directly from any repeal of the subsidies is far from assured. Nonetheless, this Essay suggests that an increase in tax revenue engendered by suitable tax reforms could be dedicated to

[1] *See, e.g.*, CENTURY FOUND. WORKING GRP. ON TAX EXPENDITURES, BAD BREAKS ALL AROUND 22–24, 129, 131 (2002); Sima J. Gandhi, *Slay the Sacred Tax Cow: It's Time to Say No to Wasteful Tax Credits*, CENTER FOR AM. PROGRESS (Mar. 8, 2010), http://www.americanprogress.org/issues/2010/03/sacred_cow.html.

[2] *See, e.g.*, Calvin H. Johnson, *Accurate and Honest Tax Accounting for Oil and Gas*, 125 TAX NOTES 573, 577–78 (2009) [hereinafter Johnson, *Tax Accounting*]; William G. Gale, Op-Ed., *The Case for Environmental Taxes*, WASH. EXAMINER, July 21, 2005.

[3] Gale, *supra* note 2.

environmental programs designed to remedy some of the harms caused by the applicable industries.

II. THE MAJOR SUBSIDIES

A. *Oil and Gas*

Oil and gas producers are not like most other taxpayers. Their activities are blessed with many special tax provisions, which provide benefits that most businesses find enviable.

1. *Percentage Depletion*

Oil and gas producers that do not have refining and retailing operations, and are unrelated to those that do, are generally entitled to deduct against their gross receipts a depletion amount equal to 15% of their oil and gas revenue.[4] This subtraction fulfills the cost recovery role normally played by the concept of basis, but it is in fact much more advantageous because it continues throughout the life of an oil well, even after the taxpayer's cost has long since been deducted.[5] Integrated oil companies—those involved in refining and retailing as well as extraction—are limited to cost depletion, a far more conservative accounting system that limits deductions for invested capital to actual cost, and allows the deductions only as production takes place, without artificial acceleration.[6]

The percentage depletion benefit is subject to many limits and restrictions. The quantity of oil and gas to which it applies each year is limited,[7] and the excess of the percentage depletion deduction beyond the taxpayer's adjusted basis in the oil and gas property is treated as an item of tax preference for purposes of the alternative minimum tax (AMT).[8] Nonetheless, it is perhaps the most often cited of the subsidies for oil and gas production.[9]

2. *Intangible Drilling Costs (IDCs)*

The intangible costs of drilling and developing domestic oil and gas wells may be deducted immediately, rather than capitalized and recovered over time, at the election of the taxpayer.[10] Alternatively, these costs can be amortized over a 60-month period, again at the taxpayer's

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[4] I.R.C. §§ 611(a), 613(a)–(b), 613A(c)(1) (2006).

[5] *See id.* § 611(a).

[6] *See id.* § 613A(d)(2)–(4).

[7] *Id.* § 613A(c).

[8] *See id.* §§ 55(b)(2), 57.

[9] *See, e.g.*, Roberta F. Mann, *Back to the Future: Recommendations and Predictions for Greener Tax Policy*, 88 OR. L. REV. 355, 377 (2009); Patrick L. O'Daniel, Note, *Muddy Waters in the Pool of Capital:* ZuHone *and the Abolition of the Doctrine*, 70 TEX. L. REV. 243, 251 n.49 (1991).

[10] I.R.C. § 263(c); Treas. Reg. § 1.612-4 (2010).

election; this choice avoids triggering the AMT.[11] Costs eligible for the special treatment include wages, fuel, repairs, hauling, and supplies needed for drilling wells and preparing them for production. In contrast, the costs of production,[12] and those of tangible property with a salvage value,[13] are subject to normal tax accounting rules. Exploration costs are generally excluded as well, but if an exploratory well is capable of production, some intangible costs may be deducted under the election.[14]

Integrated companies are eligible for the expense election, but the election is limited to 70% of IDC each year;[15] the other 30% must be recovered no more rapidly than through a 60-month amortization.[16] For all electing taxpayers, recapture rules prevent conversion of ordinary income to capital gain on sale or exchange of a well property,[17] and some of the benefit of the election is treated as an item of tax preference for AMT purposes.[18]

3. Geological and Geophysical Expenditures

Although not eligible for immediate deduction as IDC, geological and geophysical expenses incurred in connection with exploring for oil and gas may be amortized over a 24-month period, as opposed to being included in the cost of the well.[19] For integrated companies with gross receipts of more than $1 billion per year, the amortization period is 7 years, rather than 24 months.[20]

For taxpayers using percentage depletion, this treatment is particularly advantageous in that the alternative—including the costs in the basis of the well—would cause the deductions to be lost entirely. Under percentage depletion, investment recovery is calculated based on a percentage of revenue, without regard to the actual cost of the underlying property.[21]

4. Oil Field Injectant Costs

The costs of injecting liquids and gases into oil wells to enhance the amount of oil that can be recovered from them are immediately deductible, even if the taxpayer has not elected to deduct IDC currently.[22] If the injectant includes more than an insignificant amount of a recoverable hydrocarbon, the deduction is reduced by the lower of the

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[11] *See* I.R.C. §§ 55(b)(2), 59(e).
[12] *Id.* § 1.612-4(c)(2).
[13] *Id.* § 1.612-4(c)(1).
[14] *Id.* § 1.612-4(a), (c)(1).
[15] *See* I.R.C. § 291(b)(1).
[16] *Id.* § 291(b)(1)–(2); Rev. Rul. 93-26, 1993-1 C.B. 50, 51.
[17] I.R.C. § 1254.
[18] *Id.* §§ 55(b)(2), 57(a)(2), (b).
[19] *Id.* § 167(h)(1).
[20] I.R.C. § 167(h)(5) (West 2010).
[21] *See supra* notes 4–6 and accompanying text.
[22] I.R.C. § 193(a) (2006).

cost or market value of the hydrocarbon.[23] Additionally, there is a tax credit for injectant expenses,[24] but the credit comes into play only when oil prices are far below what they are today, or are likely to be in the future.[25] Similarly, a credit exists for production from marginal wells,[26] but it applies only if prices for oil and gas sink to levels far lower than current, or likely future, prices.[27]

5. Exception to Passive Loss Rules

Taxpayers who might otherwise be covered by the passive activity loss and credit limitations are not subject to those rules with respect to working interests in oil and gas wells, so long as taxpayers hold the interests directly or through a pass-through entity that does not limit their liability.[28] Thus, such interests can provide tax shelter even for taxpayers who do not actively participate in the management of the property. To qualify as holding a working interest, however, the taxpayer must typically be kept abreast of operations, have a proportionate share of the voting rights over the property, have responsibility for signing authorizations for expenditures with respect to the activity, have the option to continue operations if the current operator ceases to perform, be subject to a proportionate share of tort liability for accidents (which can, however, be covered by insurance), and bear at least some responsibility for future costs related to the property.[29]

6. Domestic Manufacturing Deduction

Although not targeted at the oil and gas industries, the deduction for domestic "production activities" is available to those selling property "manufactured, produced, grown, *or extracted* . . . in . . . the United States"[30]—which includes those extracting and selling oil and gas. The deduction—essentially a reduction in tax rates—is equal to a percentage of the lesser of taxable income or income from domestic "production" activities. Although for oil and gas producers the deduction is 6% rather than 9% of the applicable measure of income,[31] the deduction is said to be of great benefit to taxpayers involved in petroleum extraction and sale.[32] The deduction is generally limited to 50% of the wages that are paid by the taxpayer and allocable to the income that makes up the base of the deduction.[33]

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[23] *Id.* § 193(b).
[24] *Id.* § 43(a), (c)(1)(C).
[25] *See id.* § 43(b).
[26] *Id.* § 451.
[27] *See id.* § 451(b)(2).
[28] *Id.* § 469(c)(3).
[29] *See* S. REP. NO. 99-313, at 744 (1986).
[30] I.R.C. § 199(a), (c)(4)(A)(I) (emphasis added).
[31] *See* I.R.C. § 199(a)(1); I.R.C. § 199(d)(9) (Supp. II 2009).
[32] Johnson, *Tax Accounting*, *supra* note 2, at 577.
[33] *See* I.R.C. § 199(b) (2006).

7. LIFO Inventory

Some oil and gas companies are eligible to report income from sales of their inventories under the last-in first-out (LIFO) inventory accounting method. This method, which is not peculiar to petroleum-related industries, allows the taxpayer to treat the most recently acquired products as the first ones sold.[34] In times of rising costs, this reduces gross income as compared to the first-in first-out (FIFO) method. International accounting standards no longer permit use of the LIFO system,[35] but taxpayers who are not subject to those rules (including many U.S. oil companies) can, if they use LIFO on their financial books as well as on their tax returns,[36] reduce their taxable income considerably.

8. Pool of Capital Doctrine and Carried Interests

Some drilling companies compensate landowners, suppliers, and drillers with economic interests in the future profits of their operations.[37] These transfers generally are not treated as taxable to either the company or the compensated party, under the pool of capital doctrine,[38] or under the general principles currently governing the tax treatment of partnership profits interests,[39] also known as "carried interests." A case can be made that the fair market values of such interests should be taxed to both sides upon their creation—that the recipient is receiving compensation for goods, services, or the use of property, and the transferor is exchanging a portion of the oil and gas property for such goods, services, or use.[40]

B. Timber

Although far less generous than the tax benefits bestowed on oil and gas producers, advantageous provisions also appear in the Code for timber operators.

1. Capital Gain on Sales and Other Dispositions

Timber businesses have long been entitled to favorable capital gain treatment on the sale or other disposition of their timber,[41] with little or no regard to whether they are dealers in timber or forest products, or to whether the disposition amounts to a sale of the timber as opposed to a

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[34] *Id.* § 472.

[35] Sharda Sharma, *The Impact of the Adoption of International Financial Reporting Standards on the Legal Profession*, 10 HOUS. BUS. & TAX L.J. 139, 158 (2010); *see also* Lee A. Sheppard, *Cash on the Barrelhead: BP and Taxes*, 128 TAX NOTES 571, 576 (2010).

[36] *See* I.R.C. § 472(c).

[37] *See* Johnson, *Tax Accounting*, *supra* note 2, at 574.

[38] *See, e.g.*, Rev. Rul. 77-176, 1977-1 C.B. 77, 78.

[39] *See* Rev. Proc. 2001-43, 2001-2 C.B. 191, 191; I.R.S. Notice 2005-43, 2005-1 C.B. 1221, 1224.

[40] *See* Johnson, *Tax Accounting*, *supra* note 2, at 574.

[41] *See* I.R.C. § 1231.

lease or cutting contract.[42] The gains are taxed under section 1231, which roughly speaking treats gains as capital gains, which for individuals are taxed at favorable rates. (Losses are treated as ordinary losses, deductible against ordinary income or capital gain, but given the generous expensing rules, discussed shortly, losses on timber appear unlikely.[43]) Additionally, a taxpayer may elect to treat the cutting of timber as its sale, at a deemed sale price equal to the stand's value on the cutting date.[44] This election typically locks in capital gain treatment for the pre-cutting appreciation, thus limiting any ordinary income to gains from processing, manufacturing, and sale—that is, value added after harvest.[45]

Both types of favorable treatment are limited to timber held for more than one year before cutting or disposition.[46] An important limitation on the subsidy is the fact that unlike individuals and S corporations, C corporations generally are not taxed at favorable rates on capital gains.[47] At least for one recent year, however, favorable rates were temporarily enjoyed by C corporations on their timber gains.[48]

2. *Forestation and Reforestation Expenditures*

Taxpayers may elect to deduct currently limited amounts of reforestation costs as soon as they are paid or accrued,[49] and the rest may be amortized over 84 months.[50] These treatments are far superior for the taxpayer to the normal capitalization rules, which for long-lived timber stands could defer deductions for a much longer period of time. The annual limit for immediate deduction is generally $10,000 per taxpayer per property, with multiple co-owners of the same amount each allowed to take a full $10,000 deduction for that property.[51] Among the expenses eligible for the elective treatment are the costs of seeds or seedlings, site preparation, labor, tools, and depreciation on equipment connected with planting.[52] Only stands of commercial timber qualify; ornamental and Christmas trees are excluded.[53] Planting a new stand is eligible, as is replanting where prior growth has previously been cut.[54]

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[42] *See id.* § 631(b).
[43] *See id.* § 194(b); *infra* Part II.B.2.
[44] I.R.C. § 631(a).
[45] *Id.*
[46] *Id.* §§ 631(a)–(b), 1231(b)(1).
[47] *Compare* I.R.C. § 1202(a)(1), (g) (favorable capital gains rates for individuals and pass-through entities including S corporations), *with* I.R.C. §§ 11, 1201(a) (C corporations ineligible for capital gains rates).
[48] *See* I.R.C. § 1201(b) (Supp. II 2009).
[49] I.R.C. § 194(b) (2006).
[50] *Id.* § 194(a).
[51] *See id.* § 194(b)(1)(B), (2)(B).
[52] *See id.* § 194(c)(3)(A).
[53] *See id.* § 194(c)(1); Treas. Reg. § 1.194-3(a) (2010).
[54] *See* Treas. Reg. § 1.194-3(c).

3. Maintenance Costs

Once a stand has been planted, costs of fire, disease, insect and brush control, and of fertilization have all been ruled to be currently deductible expenses, and need not be rolled into the basis of the timber.[55] The uniform capitalization rules, which require that many expenditures incurred by producers of property be included in the taxpayers' inventory costs, as opposed to being currently deducted, are expressly inapplicable to commercial timber.[56]

4. Exclusion of Cost-share Payments

Many timber owners and operators receive direct state or federal subsidy payments under government conservation programs covering private timberlands. These payments reimburse eligible taxpayers for a portion of their operating costs.[57] Recipients of these payments are permitted to exclude a portion of the payments from gross income.[58] The excludable portion is that amount "made primarily for the purpose of conserving soil and water resources, protecting or restoring the environment, improving forests, or providing a habitat for wildlife," and which does not have the effect of "increasing substantially the annual income derived from the property."[59]

5. Deferral

One tax advantage sometimes noted with respect to an investment in timber is the ability of the timber owner to defer taxable income for long periods of time.[60] This aspect of a realization-based income tax is common to many industries, including farming, fishing, mining, and oil and gas production. A farmer, for example, does not realize income upon the mere growth of her crops, or even their harvest; not until she markets her harvest does she realize taxable gain. In the case of timber, however, the deferral period is typically much longer than in other industries.[61]

6. Domestic Manufacturing Deduction

Timber operations are deemed to be "production" for purposes of the general domestic production activity deduction, generally equal to 9% of qualified income.[62] As with all industries that benefit from it, the deduction is limited to 50% of the taxpayer's domestic production wage base.[63] Sales of standing timber do not qualify for the deduction, as they

[55] Rev. Rul. 2004-62, 2004-1 C.B. 1072, 1072.

[56] I.R.C. § 263A(c)(5) (incorporating I.R.C. § 263A(e)(4)(B)(ii)).

[57] *E.g.*, *id.* § 194.

[58] *Id.* § 126(a)(8), (a)(10).

[59] *Id.* § 126(b)(1).

[60] Calvin H. Johnson, *Timber!*, 125 TAX NOTES 801, 801 (2009) [hereinafter Johnson, *Timber!*].

[61] *See id.* at 801 (timber harvest occurs 50 years after reforestation).

[62] *See supra* Part II.A.6.

[63] *See supra* note 33 and accompanying text.

are sales of real property under state law,[64] but sales of cut logs, lumber, and finished products are eligible.[65] If a taxpayer elects to treat cutting as a sale, the IRS has taken the position that the resulting capital gain is not eligible for the deduction.[66]

7. LIFO Inventory

Like oil and gas operators, timber operators are sometimes entitled to use LIFO inventory accounting in determining their income on sales of finished products.[67] However, for purposes of determining capital gain under an election to treat cutting as a sale, the IRS has ruled that LIFO is inapplicable.[68]

III. PROPOSED REFORMS

Calls for repeal of the oil and gas tax subsidies have been ongoing for many years, coming from government, environmental advocacy, and academic camps.[69] The current administration's two most recent annual budgets provided for repeal of most of the subsidies,[70] and stand-alone bills that would have the same effect are regularly introduced.[71] In 2007, the House passed an energy bill[72] that would have repealed several of the tax subsidies to support a reserve for energy efficiency and renewable energy, but the tax reform aspects of the House bill were lost in the measure that finally became law.[73]

Currently, interest in reforming income taxation of timber is more academic than pragmatic. A great deal of scrutiny was recently paid to the paper industry's outrageous manipulation of an alternative fuels credit, which led to congressional action expressly disallowing the credit to paper producers.[74] The more basic tax accounting questions that affect

[64] *See, e.g.*, OR. REV. STAT. § 307.010(1)(b)(B), (2)(a) (2009) (defining real property to include "trees . . . upon the land" and "the ownership of . . . standing timber").

[65] "Qualifying production property" includes "tangible personal property." I.R.C. § 199(c)(5) (West Supp. 2010). Standing timber does not fall within this definition.

[66] *See* I.R.S. REG-105847-05, 2005-2 C.B. 987, 1007.

[67] *See supra* Part II.A.7.

[68] Rev. Rul. 86-152, 1986-2 C.B. 72, 73.

[69] *See, e.g.*, Mann, *supra* note 9, at 376.

[70] *See* U.S. DEP'T OF THE TREASURY, GENERAL EXPLANATIONS OF THE ADMINISTRATION'S FISCAL YEAR 2011 REVENUE PROPOSALS 75–84 (2010) [hereinafter 2011 REVENUE PROPOSALS]; U.S. DEP'T OF THE TREASURY, GENERAL EXPLANATIONS OF THE ADMINISTRATION'S FISCAL YEAR 2010 REVENUE PROPOSALS 59–69 (2009).

[71] *See, e.g.*, S. 3405, 111th Cong. (2010); H.R. 5644, 111th Cong. (2010); S. Amdt. 4318 to S. Amdt. 4301 to H.R. 4213, 111th Cong. (2009).

[72] H.R. 6, 110th Cong. (2007) (as passed by House of Representatives Jan. 18, 2007).

[73] Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 (2007).

[74] *See* Jeremiah Coder, *Black Liquor Payments Still Leaking Out to Paper Industry*, 128 TAX NOTES 347, 347 (2010).

the overall forest products industry, however, have lately been addressed only by environmentalists and scholarly commentators.[75] Congress seems quite content to stand pat on the existing subsidies, at least for the foreseeable future—especially in light of the serious harm done to the forest products industry by the current economic slump.

IV. ENVIRONMENTAL EFFICACY OF PROPOSED REFORMS

A. *Oil and Gas*

An income tax increase on oil and gas production could conceivably be borne by investors, consumers, or both. Critics of the current regime have based their arguments in part on the hypothesis that ending tax subsidies would place an additional tax burden, an environmentally benign one, on those groups.[76] Some, like the current federal administration, argue that the subsidies artificially steer capital away from other investments, such as renewable energy; this appears to assume that the corporate tax is borne by investors.[77] Others argue that the subsidies artificially lower the price of oil- and gas-based consumer products, thereby increasing consumption; this appears to assume that the corporate tax is borne by consumers.[78] Assuming that both points of view are valid to a certain extent,[79] the question remains whether an increase in income taxes on production would have the salutary effect of increasing investor interest in greener energy or decreasing consumer demand for petroleum-related products.

One problem at either end of the spectrum is the amount of revenue at stake, which may not be substantial enough to make a meaningful difference in investment returns or consumer prices. The administration's estimate of the revenue to be gained by repealing most of the special federal tax privileges for the oil and gas industry is $36.5 billion over a decade.[80] Although certainly a large number in absolute terms, this figure is less than one-tenth of what the estate and

[75] *See, e.g.*, Francisco X. Aguilar & Adam Saunders, *Policy Instruments Promoting Wood-to-Energy Uses in the Continental United States*, 108 J. FORESTRY 132 (2010); Michael G. Jacobson et al., *Influence and Effectiveness of Financial Incentive Programs in Promoting Sustainable Forestry in the South*, 33 S. J. APPLIED FORESTRY 35 (2009).

[76] *See, e.g.*, J. Larry Nichols, Chairman, Am. Petroleum Inst., Statement to the Subcomm. on Energy, Natural Res., and Infrastructure of the S. Comm. on Fin. (Sept. 10, 2009), http://finance.senate.gov/imo/media/doc/091009lntest.pdf.

[77] *See, e.g.*, Alan B. Krueger, Assistant Secretary for Econ. Policy and Chief Economist, U.S. Dep't of the Treasury, Statement to the Subcomm. on Energy, Natural Res., and Infrastructure of the S. Comm. on Fin. (Sept. 10, 2009), http://www.treasury.gov/press-center/press-releases/Pages/tg284.aspx.

[78] *See, e.g.*, Johnson, *Tax Accounting*, *supra* note 2, at 577–78.

[79] *See generally* CONG. BUDGET OFFICE, THE INCIDENCE OF THE CORPORATE INCOME TAX (1996).

[80] 2011 REVENUE PROPOSALS, *supra* note 70, at 151.

gift taxes would have raised if allowed to return to their 2001 levels,[81] and on an annual basis, it appears to represent not much more than what the "cash for clunkers" automobile subsidy program cost.[82] Whether such a relatively modest increase in tax burdens would significantly affect investor behavior is not clear.

Additionally, although the subsidies likely skew investment decisions in favor of petroleum-based industries, it is not clear that eliminating them would stimulate interest in alternative energy sources, any more than it would stimulate interest in completely different types of investments. If capital is pulled out of oil and gas, it may be redirected to industries that are no less harmful to the environment. At best, higher domestic taxes on oil production are likely to curb investment in extraction operations that are only marginally profitable under the current rules. In the case of shale oil production, which is uniquely harmful to the environment,[83] the ecological benefit could be noticeable, but again there is no guarantee that capital withdrawn from those activities in the United States would be reinvested in "greener" pursuits.

On the demand side, increasing taxes on oil and gas does not realistically promise to affect consumer behavior. The administration itself has stated that the increased taxes resulting from repeal of the subsidies would cause little or no increase in the prices of oil and gas products at the consumer level.[84] The markets for oil and gas are global, and production that is subject to U.S. taxation makes up but a small percentage of overall supply.[85] Thus, increased federal taxes resulting from the proposed reforms in tax accounting should not be expected to raise prices at the gas pump or at the thermostat.

Moreover, consumer demand for oil and gas products has been shown to be price inelastic.[86] Even substantial fluctuations in retail prices have proved to have relatively little effect on consumer demand for petroleum products, except in the extremely long term. Thus, even if tax increases were passed on to consumers in a noticeable way, it appears that decreased consumption—the key to environmental improvement—would not likely result.

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[81] CONG. BUDGET OFFICE, FEDERAL ESTATE AND GIFT TAXES 5 (Dec. 18, 2009), http://www.cbo.gov/ftpdocs/108xx/doc10841/12-18-Estate_GiftTax_Brief.pdf.

[82] *See Cash for Clunkers Wraps Up with Nearly 700,000 Car Sales and Increased Fuel Efficiency*, U.S. DEP'T OF TRANSP. (Aug. 26, 2009), http://www.dot.gov/affairs/2009/dot13309.htm.

[83] *See, e.g.*, JAMES T. BARTIS ET AL., RAND CORP., OIL SHALE DEVELOPMENT IN THE UNITED STATES: PROSPECTS AND POLICY ISSUES 35–51 (2005).

[84] Krueger, *supra* note 77.

[85] *Id.*

[86] *See, e.g.*, James D. Hamilton, *Causes and Consequences of the Oil Shock of 2007–08*, BROOKINGS PAPERS ON ECON. ACTIVITY, 3 (2009), http://www.brookings.edu/economics/bpea/~/media/Files/Programs/ES/BPEA/2009_spring_bpea_papers/2009_spring_bpea_hamilton.pdf.

Another concern is the question of whether the revenue estimates tied to reform are realistic, or whether increased taxation will instead trigger effective tax-avoidance behavior by the oil and gas industries. These taxpayers have shown themselves to be keenly interested in, and adept at, avoiding U.S. taxes, for example, by corporate "inversions" and other maneuvers that have exploited the weaknesses of nation-based taxation systems in an era of multi-national business enterprise.[87] Even if increased U.S. taxation would decrease investment returns or increase gasoline and natural gas prices at the retail level, one intuits that at least some attempts would be undertaken by oil producers and processors to avoid the reforms by shifting profits to entities and jurisdictions that are difficult for the U.S. tax system to reach.

Moreover, increased U.S. taxation of oil and gas could cause capital presently invested in domestic exploration and production to flee in favor of petroleum operations abroad.[88] If such foreign substitution occurred, the domestic economy would suffer, with no decrease in consumption and thus no overall environmental benefit.

B. Timber

The tax favors bestowed on timber operators differ in many respects from those enjoyed by oil and gas operators. For one thing, the timber tax benefits are not as numerous or as radical as those applicable to oil and gas.[89] Most noticeably for the present purposes, however, some of the special provisions for timber are ostensibly incentives to adopt environmentally sensitive practices. Reforestation credits and tax-free receipt of government conservation program grants recognize and promote the beneficial ecological effects of growing forests. Although it would certainly restore a degree of theoretical purity to timber tax accounting, repealing these provisions in the name of environmental goals would be blatantly counter-productive.

Timber also differs from oil and gas in that the markets for wood products are at least somewhat less global than those for petroleum-based products. The United States produces nearly enough wood to match its consumption, with imports (mostly from Canada, China, and southeast Asia) and exports (mostly to Canada and China) amounting to only a small percentage of consumption and production, respectively.[90] Even for sawn wood and plywood, in which the influence of global markets is greatest, the nation imports only about one-quarter of what it consumes,

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[87] *See* Martin A. Sullivan, *Oil Drillers Gain Billions from 'Immoral' Tax Break*, 127 TAX NOTES 1183, 1183 (2010).

[88] *See* David Kocieniewski, *As Oil Industry Fights a Tax, It Reaps Subsidies*, N.Y. TIMES, July 4, 2010, at A1.

[89] *See* CENTURY FOUND., *supra* note 1, at 129–31.

[90] *See Value of Exports, General Imports, and Imports for Consumption by (NAICS - 321) Wood Products*, U.S. CENSUS BUREAU (Nov. 2010), http://censtats.census.gov/naic3_6/naics3_6.shtml.

and in no major category of product, other than hardboard, do exports exceed 15% of production.[91] Exports of paper and cardboard have remained relatively flat at around 15% of U.S. production, and imports of these goods have ranged from 17–20% of consumption.[92] In this respect, the case for removing some of the tax subsidies on environmental grounds may be more appealing than it is for oil and gas.

On the other hand, one could argue that unilaterally tightening the federal income tax rules for timber without international cooperation might cause multinational timber operations to flee the United States for other parts of the world. Forestry operations are more portable than oil and gas production, at least so long as native forests are available, and in the long run, with the availability of reforestation, location is not as much of an obstacle as it is with oil deposits. Developed countries should not act alone in increasing tax burdens, it is said, lest developing countries with less restrictive harvesting and reforesting regulations take up the slack and provide the missing production.[93] In this view, favorable tax treatment could be seen as a sort of fee being collected by the affected firms for operating within the bounds of relatively strict U.S. regulation.

As for the largest of the identified tax benefits, deferral of gains from growth, the call for tax reform would mark a radical change from the prevailing rules under the realization-based income tax. Assuming that the political will to make this change emerged, converting timber investments to a mark-to-market accounting system would accelerate a substantial amount of revenue. However, leaving aside its novelty, such a move would likely lead to earlier harvesting of timber, which can be less than optimal from an ecological standpoint.[94]

The remaining subsidies—capital gains and immediate deduction of maintenance costs—are worthy candidates for legislative attention, but their importance should not be overstated. At present, publicly traded companies and other C corporations do not receive preferential tax rates on capital gains for federal income tax purposes,[95] and thus only taxpayers operating in other entity formats would feel any adverse effects from repeal of the capital gain preference applicable to timber. There are many operators using these other formats, but the large, publicly traded timber companies are not among them.

[91] *See* JAMES L. HOWARD & REBECCA WESTBY, U.S DEP'T OF AGRIC., U.S. FOREST PRODUCTS ANNUAL MARKET REVIEW AND PROSPECTS, 2005–2009, at 3 (2009).

[92] *See The 2010 Statistical Abstract: Forestry, Fishing, and Mining: Timber-Based Manufacturing*, U.S. CENSUS BUREAU, tbls.855 & 859 (2010), http://www.census.gov/compendia/statab/2010/cats/forestry_fishing_and_mining.html.

[93] *See generally* Jianbang Gan & Bruce A. McCarl, *Measuring Transnational Leakage of Forest Conservation*, 64 ECOLOGICAL ECON. 423 (2007).

[94] *Cf.* Jonathan H. Adler, *Anti-Conservation Incentives*, REG., Winter 2007–2008, at 54, 55–56.

[95] But they did, temporarily, in 2009. *See supra* note 48 and accompanying text.

Forced capitalization of maintenance costs would surely raise some revenue, but like a mark-to-market accounting system, it could conceivably lead to accelerated timber harvests. Moreover, one call for repealing immediate expensing of costs has admitted that its impact on after-tax timber investment returns would not be dramatic.[96] Leaving the other tax benefits in place and assuming no effect on price received at harvest, capitalization would cut the after-tax internal rate of return (IRR) on an 11% pre-tax-yield timber investment from 11.64% to 11.19%. In effect, the loss of 45 basis points in after-tax IRR would amount to approximately a 4% tax on the pre-tax profit.[97] Even assuming that such a tax would be passed on to consumers, increasing the price of timber by 4% of its current markup may not be enough to change consumer behavior to a significant extent.

V. WHAT TAX REFORMS COULD ACHIEVE

Given that tax subsidy repeal may not automatically lead to substantial reduction in production or consumption of traditional energy and forest products, is there any linkage between the subsidies and the environment? Certainly there could be. For example, the proposed 2007 legislation that would have repealed many oil and gas tax subsidies would have used the resulting revenue to establish an alternative energy reserve fund dedicated to promotion of less environmentally insulting energy sources.[98] Funding alternative energy programs with revenues derived from traditional oil and gas production would have served an important symbolic function and tied progress in the green energy field to a toll charge for some of the negative externalities that accompany petroleum operations. A similar dedication of the proceeds of tax increases on timber operations, to fund enhanced conservation or recycling, is not difficult to imagine.

Any tax by definition raises revenue, however, and so if a source of funding for alternative energy or forest preservation initiatives is needed, virtually any tax loophole-closer, involving any type of transaction in any activity, could suffice. Moreover, there are tools other than taxation that the federal government could use to extract dollars from oil, gas, and timber operations. Many entities in these industries pay royalties and similar fees to the federal government for operations on public lands and seabeds; these charges could be increased to support environmental goals.[99]

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[96] *See* Johnson, *Timber!*, *supra* note 60, at 802–03.

[97] *Id.* at 802.

[98] Edmund L. Andrews, *House Votes to Rescind Oil Drillers' Tax Breaks*, N.Y. TIMES (Jan. 19, 2007), http://www.nytimes.com/2007/01/19/business/19royalty.html.

[99] *See generally* Craig L. Shafer, *The Unspoken Option to Help Safeguard America's National Parks: An Examination of Expanding U.S. National Park Boundaries by Annexing Adjacent Federal Lands*, 35 COLUM. J. ENVTL. L. 57, 79 (2010).

Conversely, if income taxes on these industries are increased, one can expect the government to hear about it whenever such royalties and fees are up for renegotiation. For example, in federal timber sales, the "fair market value" at which the timber is sold is likely to take into account a reasonable after-tax profit for the purchaser.[100] Surely it would be ironic if decreased after-tax profits resulting from tax reforms in turn were used as a justification to decrease the size of the government's take of oil, gas, and timber production through royalties and similar charges.

VI. CONCLUSION

The substantial federal income tax subsidies for oil, gas, and timber operations do violence to basic principles of tax accounting and are worthy of reduction or elimination on that ground. Moreover, increases in federal revenue from such reforms would constitute an attractive pool of funds for programs that might offset the environmental harms that those operations cause. The proposition that curtailing the tax subsidies would in itself bring about improvement to the environment, however, is a difficult case to make. With oil and gas, global markets seem likely to absorb the additional tax burden without much of an increase in prices, and even if prices did rise, the increase seems unlikely to affect consumer behavior. In the case of timber, some of the tax subsidies promote environmental goals, and the tax increase flowing from repeal of the other subsidies may be too small to have a price impact that would significantly reduce consumer demand. In both cases, the prospect of substitution of imported goods limits the potential of U.S. taxes to bring about beneficial changes in consumption habits.

[100] *See* Nicolas M. Kublicki, *The Paper Triangle: National Forest Timber, Solid Waste Disposal and Recycling*, 7 TUL. ENVTL. L.J. 1, 33 (1993).