

**The Future of Energy Tax Policy.
Background Paper and Bibliography**

for the

**American Bar Association
Section of Taxation
Tax Policy and Simplification Committee
Houston, Texas
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by

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THE FUTURE OF ENERGY TAX POLICY (Background Paper and Bibliography for the Tax Policy & Simplification Committee, January 30, 2015)

by **Jonathan Barry Forman & Roberta F. Mann**

I. THE PROGRAM AND SPEAKERS

Friday, January 30, 2015

9:00 AM – 11:00 AM

Tax Policy & Simplification Committee

Chair: Professor Jonathan B. Forman, University of Oklahoma College of Law, Norman, OK

10:00 AM **The Future of Energy Tax Policy.** This panel will discuss various energy-related tax proposals, ranging from Congressional calls for an energy bill, the Obama Administration's proposal to repeal the tax breaks for fossil fuels, and proposals to increase the gasoline excise tax or adopt a carbon tax.

MODERATOR:

Professor Roberta F. Mann, University of Oregon School of Law, Eugene, OR,
<http://law.uoregon.edu/faculty/rfmann/>:

Mr. & Mrs. L.L. Stewart Professor of Business Law

Professor Roberta Mann teaches tax law and focuses her research on tax policy, including the environmental impact of the tax system. Professor Mann earned her M.B.A. and J.D. cum laude from Arizona State University, where she also served as assistant editor of the Arizona State University Law Journal. In 1995, she received her LL.M. in taxation from Georgetown University Law Center.

Professor Mann practiced in the Office of Chief Counsel of the Internal Revenue Service, concentrating primarily on the areas of partnerships, corporate, estate and gift, and natural resources. She also served on the Staff of the Joint Committee on Taxation in the U.S. Congress.

PANELISTS:

Curtis Beaulieu, Bracewell & Giuliani LLP; Washington, DC,
<http://www.bracewellgiuliani.com/people/curtis-beaulieu>:

Curt Beaulieu is Senior Counsel at Bracewell & Giuliani in Washington, D.C. He focuses on tax policy, providing advice on federal legislation and regulations.

Prior to joining Bracewell, Mr. Beaulieu served for a decade on Capitol Hill working for several members in the House of Representatives and the Senate. During his tenure, he was Tax Counsel for the leaders of both tax-

writing committees in Congress—the House Ways and Means Committee and the Senate Finance Committee.

As Tax Counsel for the Senate Finance Committee, Mr. Beaulieu counseled on tax policy in a variety of legislation involving energy, financial services, transportation and health care. In addition he helped develop option papers, discussion drafts, and hearings on tax reform.

Stephen Comstock, Director of Tax & Accounting Policy Department, American Petroleum Institute, Washington, DC,

<http://www.law.georgetown.edu/faculty/comstock-stephen.cfm>:

B.A., University of Texas; J.D., George Washington.

Stephen Comstock is currently the Manager of Tax Policy for the American Petroleum Institute. His responsibilities cover technical tax issues impacting the industry arising from federal and state income and excise taxes. In addition, he coordinates advocacy efforts for tax issues on behalf of API. Prior to joining API, Stephen Comstock was a tax attorney with ExxonMobil in their Tax Department and provided planning advice for various projects in their Upstream, Downstream and Chemical operations. He is currently Vice-Chair of the Energy and Environmental Taxes Committee of the American Bar Association's Tax Section.

Professor Shi-Ling Hsu, Florida State University College of Law, Tallahassee, FL, <http://www.law.fsu.edu/faculty/shsu.html>:

Ph.D., Agricultural and Resource Economics, University of California at Davis, 1998; M.S., Ecology, University of California at Davis, 1994; J.D., Columbia Law School, 1987; B.S., Electrical Engineering, Columbia University, 1983.

Professor Shi-Ling Hsu is an expert in the areas of environmental and natural resource law, climate change, law and economics, and property. He has published in a wide variety of legal journals and recently published a book, *The Case for a Carbon Tax: Getting Past our Hang-ups to Effective Climate Policy* (Island Press 2011). Prior to entering academia, Hsu was a senior attorney and economist for the Environmental Law Institute in Washington, D.C. He also practiced law in California, both as a deputy city attorney for the City and County of San Francisco and as an associate attorney with the firm of Fenwick & West in Palo Alto. He teaches Property and Interdisciplinary Perspectives on Climate Change.

Karl B. Schmalz, Senior Advisor, International Tax and Investment Center (Washington, DC), Dallas, TX:

Karl Schmalz, formerly an Assistant General Tax Counsel for Exxon Mobil Corporation responsible for federal tax legislative matters, retired in 2013 with over 33 years of company service and almost 38 years of

practicing tax law and planning in the oil and gas industry. Karl is currently serving as a Senior Advisor to the International Tax and Investment Center (ITIC). In this role, he provides technical assistance to ITIC's Oil and Gas Taxation and Regulatory Dialogue.

Karl grew up in Massachusetts, graduated from Princeton University with a degree in Economics, and received his law degree from the University of Texas in 1975—the same year he joined Exxon, based in Houston.

Karl worked in various assignments and locations with Exxon, now ExxonMobil, and with the Atlantic Richfield Company over his career, including working in Exxon's Far East Division (which included an assignment in Australia for two years), the U.S. domestic operating division (Exxon USA), the Chemicals Division, and the Exxon Corporation Headquarters in New York, ARCO Oil and Gas Company, and the ExxonMobil Headquarters based in Dallas.

II. BRIEF OVERVIEW

Energy policy is always a major concern for Congress. Over the years, Congress has enacted lots of legislation related to energy production (including oil and gas and renewables) and conservation. Energy tax policy involves using taxes and tax expenditures to alter the allocation or configuration of energy resources and their use. Of course, decisions about energy tax policy in the United States are political decisions that embody compromises between economic and political goals.¹ This paper offers some background on some of the most important energy tax policy issues that the 114th Congress will consider.

Oil and Gas Tax Preferences. The Internal Revenue Code includes a number of tax provisions that provide favorable treatment to investment in oil and gas production projects, including expensing of intangible drilling costs, percentage depletion, and accelerated amortization for geological and geophysical expenses. The Obama Administration has repeatedly indicated that it would like to repeal many of the tax expenditures that benefit the oil and natural

¹ See, e.g., Molly F. Sherlock, *Energy Tax Policy: Issues in the 113th Congress* i (Congressional Research Service Report No. R43206, Dec. 19, 2013), <https://fas.org/sgp/crs/misc/R43206.pdf>.

gas industries, but, of course, many in the oil and gas industry would like to protect these benefits.

The Gasoline Excise Tax. The federal government's spends more than \$50 billion per year for highways and mass transit programs, and most of it is financed through the excise taxes on gasoline and diesel fuels, which are fixed in terms of cents per gallon and have not been increased since 1993.² Of note, some states have recently increased their gasoline excise taxes, and many are experimenting with other approaches.³ For example, starting in 2015, Oregon is experimenting with having volunteer drivers pay a 1.5¢ per mile tax as an alternative to Oregon's 30¢ per gallon gasoline excise tax.⁴

Expiring Provisions. Many of the energy-related tax expenditures are designed to have built-in sunsets and expire unless they are renewed by Congress.⁵ Not surprisingly, a number of energy tax expenditures were included in the just-enacted "tax extender" law.⁶

A Carbon Tax. Congress could raise revenue and reduce emissions of carbon dioxide (CO₂) by establishing a carbon tax (on those emissions directly or on fuels that release CO₂ when they are burned [i.e., on coal, oil, and natural gas]). According to the Congressional Budget

² Robert S. Kirk & William J. Mallett, *Funding and Financing Highways and Public Transportation 1* (Congressional Research Service Report No. R42877, September 23, 2013), <https://fas.org/sgp/crs/misc/R42877.pdf>.

³ Richard C. Auxier, *Reforming State Gas Taxes: How States Are (and Are Not) Addressing an Eroding Tax Base* (Urban-Brookings Tax Policy Center, Nov. 2014), <http://www.taxpolicycenter.org/UploadedPDF/413286-reforming-state-gas-tax.pdf>.

⁴ See, e.g., *id.* at 10; Oregon Department of Transportation, *Road Usage Charge Pilot Program: Preliminary Findings* (Feb. 2013), http://www.oregon.gov/ODOT/HWY/RUFPP/docs/RUCPilotPrelimFind_Feb13.pdf.

⁵ See, e.g., Joint Committee on Taxation, *Present Law and Analysis of Energy-Related Tax Expenditures 1* (JCX-100-14, Sept. 16, 2014), https://www.jct.gov/publications.html?func=download&id=4667&chk=4667&no_html=1

⁶ Tax Increase Prevention Act of 2014, Pub. L. No. 113-295, ___ Stat. ___ (2014); STAFF OF THE JOINT COMMITTEE ON TAXATION, ESTIMATED REVENUE EFFECTS OF H.R. 5771, THE "TAX INCREASE PREVENTION ACT OF 2014," SCHEDULED FOR CONSIDERATION BY THE HOUSE OF REPRESENTATIVES ON DECEMBER 3, 2014 (JCX-107-14R, Dec. 3, 2014), https://www.jct.gov/publications.html?func=download&id=4677&chk=4677&no_html=1.

Office, a tax of \$25 per metric ton on most energy-related emissions of CO₂ would raise \$1.06 trillion over 10 years.⁷

Comprehensive Tax Reform. Energy-related tax expenditures and excise taxes could also play a role in comprehensive tax reform. In the 113th Congress, both the Senate Finance Committee and the House Ways and Means Committee spent time considering energy tax policy reform.⁸

III. BIBLIOGRAPHY

A. ENERGY POLICY

Michael Ratner & Carol Glover, *U.S. Energy: Overview and Key Statistics* i, 5 tbl. 2 (Congressional Research Service Report No. R40187, June 27, 2014), <https://fas.org/sgp/crs/misc/R40187.pdf>:

Energy policy has been a recurring issue for Congress since the first major crises in the 1970s. As an aid in policymaking, this report presents a current and historical view of the supply and consumption of various forms of energy.

⁷ Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options* 176 (Revenue Option 35: Impose a Tax on Emissions of Greenhouse Gases) (2013), <https://www.cbo.gov/sites/default/files/cbofiles/attachments/44715-OptionsForReducingDeficit-3.pdf>.

⁸ See, e.g., U.S. House Committee on Ways and Means Chairman Dave Camp, *Tax Reform Act of 2014, Discussion Draft, Section-by-Section Summary* (2014), available at <http://waysandmeans.house.gov/news/documentsingle.aspx?DocumentID=370987%20>; Joint Committee on Taxation, *Technical Explanation of the Senate Committee on Finance Chairman's Staff Discussion Draft to Reform Certain Energy Tax Provisions* (JCX-21-13, Dec. 18, 2013), <http://www.finance.senate.gov/newsroom/chairman/download/?id=0723d09d-103f-404f-81c0-04181f5facbb>.

Table 2. Energy Consumption in British Thermal Units (Btu) and as a Percentage of Total, 1950-2013, selected years
(Quadrillion BTU)

	Petroleum		Natural Gas		Coal		Other		Total
	Quads	% of total	Quads	% of total	Quads	% of total	Quads	% of total	Quads
1950	13.3	38.5%	6.0	17.2%	12.3	35.7%	3.0	8.6%	34.6
1955	17.3	42.9%	9.0	22.4%	11.2	27.7%	2.8	7.0%	40.2
1960	19.9	44.2%	12.4	27.5%	9.8	21.8%	2.9	6.5%	45.1
1965	23.2	43.0%	15.8	29.2%	11.6	21.4%	3.4	6.4%	54.0
1970	29.5	43.5%	21.8	32.1%	12.2	18.0%	4.3	6.4%	67.8
1975	32.7	45.5%	19.9	27.7%	12.7	17.6%	6.6	9.2%	72.0
1980	34.2	43.8%	20.2	25.9%	15.4	19.7%	8.2	10.6%	78.1
1985	30.9	40.5%	17.7	23.2%	17.5	22.9%	10.3	13.5%	76.4
1990	33.6	39.7%	19.6	23.2%	19.2	22.7%	12.2	14.4%	84.5
1995	34.4	37.8%	22.7	24.9%	20.1	22.1%	13.8	15.1%	91.0
2000	38.3	38.7%	23.8	24.1%	22.6	22.9%	14.1	14.3%	98.8
2005	40.4	40.3%	22.6	22.5%	22.8	22.8%	14.5	14.4%	100.3
2007	39.8	39.3%	23.7	23.4%	22.7	22.0%	15.1	14.9%	101.3
2010	36.0	36.7%	24.6	25.1%	20.8	21.3%	16.6	16.9%	98.0
2011	35.4	36.3%	25.0	25.6%	19.7	20.2%	17.5	17.9%	97.5
2012	34.6	36.4%	26.1	27.5%	17.3	18.2%	17.0	17.9%	95.5
2013	35.1	36.0%	26.6	27.3%	18.1	18.5%	17.7	18.2%	97.5

Source: EIA, *Monthly Energy Review*, April 2014, Table 1.3, Primary Energy Consumption by Source.

Notes: Percentages calculated by CRS. "Other" includes nuclear, hydroelectric, and renewable energy.

Brent D. Yacobucci, *Energy Policy: 113th Congress Issues* (Congressional Research Service Report No. R42756, September 18, 2014), <https://fas.org/sgp/crs/misc/R42756.pdf>.

B. ENERGY TAX POLICY, IN GENERAL

Joint Committee on Taxation, *Present Law and Analysis of Energy-Related Tax Expenditures 1* (JCX-100-14, Sept. 16, 2014), https://www.jct.gov/publications.html?func=download&id=4667&chk=4667&no_html=1:

Since 2004, the Congress has been active in enacting legislation related to energy production (including oil and gas and renewables) and conservation. Part I of this document, prepared by the staff of the Joint

Committee on Taxation, provides tables that summarize current and recently expired energy-related Federal tax incentives.

Part II of this document provides a brief discussion of the economic rationale for certain government intervention in energy markets through the tax code and issues related to the proper design of such tax preferences. These tax expenditures create incentives that have the potential to affect economic decisions and allocate economic resources from other uses to the tax-favored uses. Such tax preferences may produce an allocation of resources that is more efficient for society at large if they are properly designed to overcome negative effects (such as atmospheric pollution, for example) that would otherwise result from a purely market based outcome without any government intervention. Tax expenditures for energy production and conservation have been criticized for lacking well defined objectives, and for lacking coordination among provisions having similar objectives. Some argue that the simultaneous existence of tax preferences for the fossil fuel industry and for renewable energy production represents conflicting government policy. Others have noted that the incentives for renewable energy and conservation are not themselves designed in a coordinated way to produce the most efficient or equitable subsidies for renewable energy and conservation.

Joint Committee on Taxation, *Technical Explanation of the Senate Committee on Finance Chairman's Staff Discussion Draft to Reform Certain Energy Tax Provisions* (JCX-21-13, December 18, 2013), <http://www.finance.senate.gov/newsroom/chairman/download/?id=0723d09d-103f-404f-81c0-04181f5facbb> (provides a technical explanation of the Senate Committee on Finance Chairman's staff discussion draft to reform certain energy tax provisions; prepared at the request of Senate Committee on Finance Chairman Max Baucus).

Molly F. Sherlock, *Energy Tax Policy: Issues in the 113th Congress* i (Congressional Research Service Report No. R43206, Dec. 19, 2013), <https://fas.org/sgp/crs/misc/R43206.pdf>:

Energy tax policy involves the use of one of the government's main fiscal instruments, taxes (both as an incentive and as a disincentive) to alter the allocation or configuration of energy resources and their use. In theory, energy taxes and subsidies, like tax policy instruments in general, are intended either to correct a problem or distortion in the energy markets or to achieve some economic (efficiency, equity, or even macroeconomic) objective. The economic rationale for government intervention in energy markets is commonly based on the government's perceived ability to correct for market failures. Market failures, such as externalities, principal-agent problems, and informational asymmetries, result in an economically inefficient allocation of resources—in which society does not maximize

well-being. To correct for these market failures governments can utilize several policy options, including taxes, subsidies, and regulation, in an effort to achieve policy goals. In practice, energy tax policy in the United States is made in a political setting, determined by fiscal dictates and the views and interests of the key players in this setting, including policymakers, special interest groups, and academic scholars. As a result, enacted tax policy embodies compromises between economic and political goals, which could either mitigate or compound existing distortions.

C. OIL & GAS

Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options* 43 (Revenue Option 65: Repeal Certain Tax Preferences for Extractive Industries) (2014), <https://www.cbo.gov/publication/49638>:

Option 65

Repeal Certain Tax Preferences for Extractive Industries

(Billions of dollars)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2015-2019	2015-2024
Change in Revenues												
Repeal the expensing of exploration and development costs	1.7	2.5	2.3	2.1	1.9	1.6	1.1	0.7	0.6	0.9	10.5	15.1
Disallow the use of the percentage depletion allowance	1.3	2.0	2.0	2.1	2.2	2.2	2.3	2.4	2.4	2.4	9.6	21.3

Source: Staff of the Joint Committee on Taxation.

Note: This option would take effect in January 2015. Estimates are relative to CBO's April 2014 baseline projections.

U.S. Department of the Treasury, *General Explanations of the Administration's Fiscal Year 2015 Revenue Proposals* 16, 18, 114, 116, 120, 121, 123 (Incentives for Clean Energy), 75 (Eliminate Fossil Fuel Preferences) (2014), <http://www.treasury.gov/resource-center/tax-policy/Documents/General-Explanations-FY2015.pdf>.

Robert Pirog, *Oil and Natural Gas Industry Tax Issues in the FY2014 Budget Proposal* i (Congressional Research Service Report No. R42374, Oct. 30, 2013), <https://fas.org/sgp/crs/misc/R42374.pdf>:

The Obama Administration, in the FY2014 budget proposal, seeks to eliminate a set of tax expenditures that benefit the oil and natural gas industries. Supporters of these tax provisions see them as comparable to those affecting other industries and supporting the production of domestic oil and natural gas resources. Opponents of the provisions see these tax expenditures as subsidies to a profitable industry the government can ill afford, and impediments to the development of clean energy alternatives.

The FY2014 budget proposal outlines a set of proposals, framed as the termination of tax preferences, that would potentially increase the taxes paid by the oil and natural gas industries, especially those of the independent producers. These proposals include repeal of the enhanced oil recovery and marginal well tax credits, repeal of the current expensing of intangible drilling costs provision, repeal of the deduction for tertiary injectants, repeal of the passive loss exception for working interests in oil and natural gas properties, elimination of the manufacturing tax deduction for oil and natural gas companies, increasing the amortization period for certain exploration expenses, and repeal of the percentage depletion allowance for independent oil and natural gas producers. In addition, a variety of increased inspection fees and other charges that would generate more revenue for the Department of the Interior (DOI) are included in the budget proposal.

The Administration estimates that the tax changes outlined in the budget proposal would provide \$24.2 billion in additional revenues over the period FY2014 through FY2018, and \$40.7 billion from FY2014 to FY2023. These changes, if enacted by Congress, would reduce the tax advantage of independent oil and natural gas companies over the major oil companies. They would also likely raise the cost of exploration and production, with the possible result of higher consumer prices and more slowly increasing domestic production; however, the measurement of these effects is beyond the scope of this report.

Joint Committee on Taxation, *Description of Present Law and Select Proposals Relating to the Oil and Gas Industry* (JCX-27-11, May 11, 2011), https://www.jct.gov/publications.html?func=download&id=3787&chk=3787&no_html=1:

The Internal Revenue Code includes a number of tax provisions that provide favorable treatment to investment in oil and gas production projects. These incentives include the enhanced oil recovery credit, the marginal wells credit, the expensing of intangible drilling costs, the deduction for using tertiary injectants, the passive loss exemption for working interests in oil and gas properties, percentage depletion, the domestic manufacturing deduction for oil and gas production, and accelerated amortization for geological and geophysical expenses.

Some of these incentives are available to all domestic producers and all domestic production, while others target smaller producers or production that utilizes specific types of extractive technologies. Some of the incentives are not available (or are only partially available) to oil and gas producers whose production activities are integrated with refining and retail sales activities.

Taxpayers for Common Sense, *Understanding Oil and Gas Tax Subsidies* (Apr. 2014),

[http://www.taxpayer.net/images/uploads/Understanding%20Oil%20%20Gas%20Subsidies\(3\).pdf](http://www.taxpayer.net/images/uploads/Understanding%20Oil%20%20Gas%20Subsidies(3).pdf):

Today, the oil and gas industry is one of the largest and most profitable industries in the world. With the country facing more than \$17 trillion in debt and half a trillion dollars in annual deficits, it is past time to eliminate subsidies for highly profitable industries such as oil and gas. They don't need them and the country can't afford them. Furthermore, over time, subsidies have been layered over more subsidies and in the energy sector they are often working at cross-purposes. Subsidies to encourage renewable energy development are undercut by subsidies for fossil energy. A better way forward would be to adopt a "clean slate" approach that wipes out all the subsidies.

ERNST & YOUNG, GLOBAL OIL AND GAS TAX GUIDE 606-22 (United States) (2014), [http://www.ey.com/Publication/vwLUAssets/EY-Global-oil-and-gas-tax-guide-2014/\\$FILE/EY-Global-oil-and-gas-tax-guide-2014.pdf](http://www.ey.com/Publication/vwLUAssets/EY-Global-oil-and-gas-tax-guide-2014/$FILE/EY-Global-oil-and-gas-tax-guide-2014.pdf)

Internal Revenue Service, *Business Expenses* 33-38 (Depletion) (Publication No. 535, 2014), <http://www.irs.gov/pub/irs-pdf/p535.pdf>.

D. GASOLINE EXCISE TAX

Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options* 46 (Revenue Option 70: Increase Excise Taxes on Motor Fuels by 35 Cents and Index for Inflation) (2014), <https://www.cbo.gov/publication/49638>:

Option 70

Increase Excise Taxes on Motor Fuels by 35 Cents and Index for Inflation

(Billions of dollars)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2015-2019	2015-2024
Change in Revenues	32	45	46	47	48	49	50	50	51	52	217	469

Source: Staff of the Joint Committee on Taxation.

Note: This option would take effect in January 2015. Estimates are relative to CBO's April 2014 baseline projections. Because excise taxes reduce producers' and consumers' income, higher excise taxes would lead to reductions in revenues from income and payroll taxes. The estimates shown here reflect those reductions.

Revenues from federal excise taxes on motor fuels are credited to the Highway Trust Fund to pay for highway construction and maintenance as well as for investment in mass transit. This option would increase federal excise taxes on gasoline and diesel fuel by 35 cents per gallon, to 53.4 cents per gallon of gasoline and 59.4 cents per

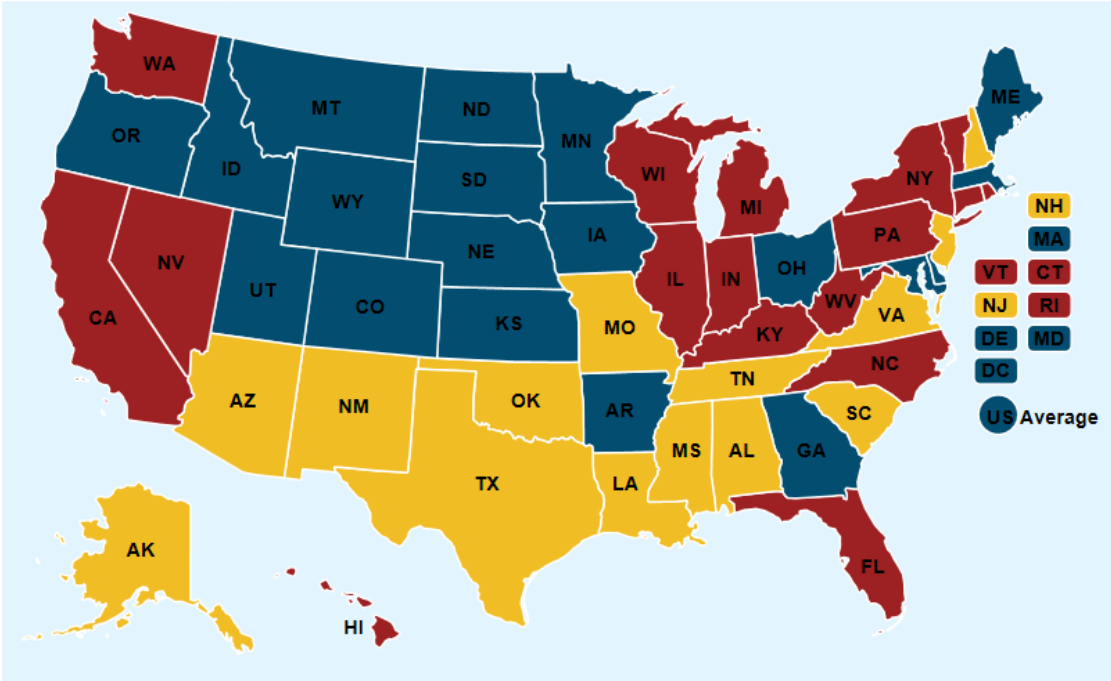
gallon of diesel fuel. In future years, those values would be adjusted to reflect changes in the price index for gross domestic product between calendar year 2015 and the most recent year for which data for that price index were available.

American Petroleum Institute, *Gasoline Tax*, <http://www.api.org/oil-and-natural-gas-overview/industry-economics/fuel-taxes/gasoline-tax> (last visited Dec. 5,

2014) (copy of an [interactive map](#) showing total state and federal taxes averaging 49.28¢ per gallon of gasoline (55.15¢ per gallon of diesel):

Gasoline Tax

For more detailed information, please click on the state.



	Greater than 49.5
	40.0-49.5
	Less than 40.0
U.S AVERAGE: 49.28	

US National Average	Gasoline	Diesel
State Excise Tax	20.50 ¢ per gallon	19.07 ¢ per gallon
Other State Taxes/Fees	10.39 ¢ per gallon	11.68 ¢ per gallon
Total State Taxes/Fees	30.88 ¢ per gallon	30.75 ¢ per gallon
Total State and Federal Taxes	49.28 ¢ per gallon	55.15 ¢ per gallon

Congressional Budget Office, *The Highway Trust Fund and the Treatment of Surface Transportation Programs in the Federal Budget 1* (2014), <https://www.cbo.gov/sites/default/files/45416-TransportationScoring.pdf>:

The federal government spends more than \$50 billion per year on surface transportation programs, mostly in the form of grants to state and local governments. Much of this spending is for highways and mass transit programs financed through the Highway Trust Fund. Those programs have an unusual treatment in the federal budget, and the way they are classified

in the budget facilitates the spending of more money from the trust fund than there are dedicated revenues to support such spending. Those revenues come from excise taxes on the sale of motor fuels, trucks and trailers, and truck tires, and from taxes on the use of certain kinds of vehicles.

Robert S. Kirk & William J. Mallett, *Funding and Financing Highways and Public Transportation* 1 (Congressional Research Service Report No. R42877, September 23, 2013), <https://fas.org/sgp/crs/misc/R42877.pdf>:

Federal surface transportation programs are currently funded primarily through taxes on motor fuels that are deposited in the highway trust fund. Although there has been some modification to the tax system, the tax rates, which are fixed in terms of cents per gallon, have not been increased at the federal level since 1993. Prior to the recession that began in 2007, annual increases in driving, with a concomitant increase in fuel use, were sufficient to keep revenues rising steadily. This is no longer the case. Future increases in fuel economy standards are expected to suppress motor fuel consumption in the years ahead even if annual increases in vehicle mileage resume.

Congress has yet to address the surface transportation program’s fundamental revenue issues, and has not given serious consideration to raising fuel taxes in recent years. Instead, Congress has financed the federal surface transportation program by supplementing fuel tax revenues with transfers from the U.S. Treasury general fund. . . .

E. CARBON TAX

Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options* 176 (Revenue Option 35: Impose a Tax on Emissions of Greenhouse Gases) (2013), <https://www.cbo.gov/sites/default/files/cbofiles/attachments/44715-OptionsForReducingDeficit-3.pdf>:

Revenues—Option 35

Impose a Tax on Emissions of Greenhouse Gases

(Billions of dollars)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	
											2014–2018	2014–2023*
Change in Revenues	63	98	100	103	107	111	114	118	121	125	471	1,060

Sources: Staff of the Joint Committee on Taxation; Congressional Budget Office.

Note: This option would take effect in January 2014. [*Span of years corrected on June 12, 2014]

Congressional Budget Office, *Effects of a Carbon Tax on the Economy and the Environment* 1 (2013), https://www.cbo.gov/sites/default/files/44223_Carbon_0.pdf:

Lawmakers could increase federal revenues and encourage reductions in emissions of carbon dioxide (CO₂) by establishing a carbon tax, which would either tax those emissions directly or tax fuels that release CO₂ when they are burned (fossil fuels, such as coal, oil, and natural gas). Emissions of CO₂ and other greenhouse gases accumulate in the atmosphere and contribute to climate change—a long-term and potentially very costly global problem.

The effects of a carbon tax on the U.S. economy would depend on how the revenues from the tax were used. Options include using the revenues to reduce budget deficits, to decrease existing marginal tax rates (the rates on an additional dollar of income), or to offset the costs that a carbon tax would impose on certain groups of people. This study examines how a carbon tax, combined with those alternative uses of the revenues, might affect the economy and the environment.

How Much Revenue Could a Carbon Tax Raise?

Neither the Congressional Budget Office (CBO) nor the staff of the Joint Committee on Taxation has published an estimate of how much revenue a carbon tax might produce. However, CBO has extensively analyzed policies, known as cap-and-trade programs, that would similarly set a price on CO₂ emissions. Those analyses suggest that a carbon tax that covered the bulk of CO₂ emissions or the carbon content of most fossil fuel consumed in the United States could generate a substantial amount of revenue. For example, in 2011, CBO estimated that a cap-and-trade program that would have set a price of \$20 in 2012 to emit a ton of CO₂ (and increased that price by 5.6 percent each year thereafter) would raise a total of nearly \$1.2 trillion during its first decade. In addition, total U.S. emissions of CO₂ would be about 8 percent lower over that period than they would be without the policy, CBO estimated.

Joint Committee on Taxation, *Climate Change Legislation: Tax Considerations 1* (JCX-29-09, June 12, 2009),

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This document, prepared by the staff of the Joint Committee on Taxation, provides a discussion of Federal income tax issues relating to cap-and-trade proposals.

The first section describes the basic design features common to cap-and-trade proposals. The sections that follow discuss the fundamental income tax issues raised by cap and trade proposals, including (1) taxation of allocated emission allowances; (2) recovery of basis in emission allowances; (3) taxation of offset producers; and (4) taxation of the sale or exchange of emission allowances. The remaining sections discuss the tax

aspects of trading emission allowances and emission allowance derivatives, international tax considerations, sales and exchanges of emission allowances by tax exempt organizations, and the imposition of penalties.

SHI-LING HSU, *THE CASE FOR A CARBON TAX: GETTING PAST OUR HANG-UPS TO EFFECTIVE CLIMATE POLICY* (Island Press, 2011).

Brian D. Galle & Manuel A. Utset, *Is Cap and Trade Fair to the Poor? Short-Sighted Households and the Timing of Consumption Taxes*, 79 *GEORGE WASHINGTON LAW REVIEW* 33 (2010),
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Roberta F. Mann, *The Case for the Carbon Tax: How to Overcome Politics and Find Our Green Destiny*, 39(2) *ENVIRONMENTAL LAW REPORTER* 10,118 (2009),
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1345181.

Donald Marron & Eric Toder, *Tax Policy Issues in Designing a Carbon Tax*, 104(5) *AMERICAN ECONOMIC REVIEW: PAPERS & PROCEEDINGS* 563 (2014),
<http://www.taxpolicycenter.org/UploadedPDF/413132-tax-policy-issues-in-designing-a-carbon-tax.pdf>.

Donald Marron & Eric Toder, *Carbon Taxes and Corporate Tax Reform* (Tax Policy Center, Feb. 11, 2013),
<http://www.taxpolicycenter.org/UploadedPDF/412744-Carbon-Taxes-and-Corporate-Tax-Reform.pdf>.

Gilbert E. Metcalf, *Using the Tax System to Address Competition Issues with a Carbon Tax*, 67(4) *NATIONAL TAX JOURNAL* 779 (2014).

Gilbert E. Metcalf & David Weisbach, *The Design of a Carbon Tax*, 33 *HARVARD LAW REVIEW* 499 (2009),
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1324854.

Jonathan Ramseur, Jane A. Leggett & Molly F. Sherlock, *Carbon Tax: Deficit Reduction and Other Considerations* (Congressional Research Service Report No. R42731, Sept. 17, 2012), <http://www.fas.org/sgp/crs/misc/R42731.pdf>.

Michael Waggoner, *Why and How to Tax Carbon*, 20 *COLORADO JOURNAL OF INTERNATIONAL ENVIRONMENTAL LAW AND POLICY* 1 (2008),
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1367746.

Roberton C. Williams, III, Hal Gordon, Dalla Burtraw, Jared C. Carbone & Richard D. Morganstern, *The Initial Incidence of a Carbon Tax Across U.S. States*, 67(4) *NATIONAL TAX JOURNAL* 807 (2014).

F. OTHER

Margot L. Crandall-Hollick & Molly F. Sherlock, *Residential Energy Tax Credits: Overview and Analysis* (Congressional Research Service Report No. R42731, Mar. 18, 2014), <https://fas.org/sgp/crs/misc/R42089.pdf>.

Joint Committee on Taxation, *Tax Expenditures for Energy Production and Conservation 1* (JCX-25-09R, Apr. 21, 2009), https://www.jct.gov/publications.html?func=download&id=3555&chk=3555&no_html=1;

The Senate Committee on Finance has scheduled a public hearing on April 23, 2009, titled “Technology Neutrality in Energy Tax: Issues and Options.” Since 2004, the Congress has been very active in promulgating legislation related to energy production (including oil and gas and renewables) and conservation. Part II of this document, prepared by the staff of the Joint Committee on Taxation, provides a description of present law tax expenditures for energy production and conservation. These tax provisions vary widely, and are summarized in the tables that follow. In addition to the energy specific tax expenditures, energy sector producers and manufacturers may also benefit from other general tax expenditures, such as the section 199 deduction for income attributable to domestic production activities, additional first year depreciation (“bonus depreciation”), the lower rates of tax on the first \$10 million of corporate taxable income, and, in general, the deferral of tax on active business income derived by foreign subsidiaries.

The various tax benefits create incentives that have the potential to affect economic decisions and allocate economic resources from other uses to the tax-favored uses. Such tax preferences may produce an allocation of resources that is more efficient for society at large if they are properly designed to overcome negative effects (such as atmospheric pollution, for example) that would otherwise result from a purely market based outcome without any government intervention. The extensive variety of tax expenditures for energy production and conservation have been criticized for lacking well defined objectives, and for lacking coordination among provisions having similar objectives. Some argue that the simultaneous existence of tax preferences for the fossil fuel industry and for renewable energy production represents an incoherent government policy. Others have noted that the incentives for renewable energy and conservation are not themselves designed in a coordinated way to produce the most efficient or equitable subsidies for renewable energy and conservation.

Part III of this document provides the staff of the Joint Committee on Taxation’s most recent estimates of tax expenditures in the energy sector, a brief discussion of the economic rationale for certain government

intervention in energy markets through the tax code, and issues related to the proper design of such tax preferences.