State and Local Taxation:

Energy Policy by Accident

by

Joe W. Loper

in cooperation with

Mary Beth Zimmerman

June 1994

The Alliance to Save Energy
1725 K Street
Suite 509
Washington, D.C. 20006-1401
(202) 857-0666

Preface

The Alliance to Save Energy is proud to publish *State and Local Taxation: Energy Policy by Accident.* This report contains the first comprehensive analysis of how state and local governments tax — and do not tax — end-use energy products.

The report demonstrates that, contrary to conventional wisdom, most state and local governments tax energy less — not more — than other goods and services. This unintended consequence of "energy policy by accident" presents opportunities for "win-win" tax reforms at the state and local levels that could simultaneously raise badly needed revenues, replace taxes currently inhibiting economic growth, and provide incentives for greater energy efficiency and pollution reduction.

I want to personally thank Joe Loper, Mary Beth Zimmerman, Mary Ann Gourlay and other members of the Alliance's staff who have given so much of their time and effort to researching, writing and editing this report. I would also like to thank the many state and local officials, energy economists and colleagues in other private and public organizations who gave generously of their time and effort to review and comment on the data and analysis contained in the report.

Publication of this report is just the beginning of a long journey toward meaningful reform of energy taxation at the state and local levels. The Alliance looks forward to working with all of you in completing that journey successfully.

William A. Nitze

William A. Nitze
President

Table of contents

Figures and tables

State abbreviations

Alabama	AL
Alaska	AK
Arizona	AZ
Arkansas	AR
California	CA
Colorado	CO
Connecticut	CT
Delaware	DE
District of Columbia	DC
Florida	FL
Georgia	GA
Hawaii	HI
Idaho	ID
Illinois	IL
Indiana	IN
Iowa	IA
Kansas	KS
Kentucky	KY
Louisiana	LA
Maine	ME
Maryland	MD
Massachusetts	MA
Michigan	MI
Minnesota	MN
Mississippi	MS
Missouri	MO
Montana	MT
Nebraska	NE
Nevada	NV
New Hampshire	NH
New Jersey	NJ
New Mexico	NM
New York	NY
North Carolina	NC
North Dakota	ND
Ohio	OH
Oklahoma	OK
Oregon	OR
Pennsylvania	PA
Rhode Island	RI
South Carolina	SC
South Dakota	SD
Tennessee	TN
Texas	TX
Utah	UT
Vermont	VT
Virginia	VA
Washington	WA
West Virginia	WV
Wisconsin	WI
Wyoming	WY

Acknowledgments

This report would have been impossible without assistance from state tax officials throughout the United States. Since the start of our research more than two years ago, we have seen the state tax offices through two budget cycles. Even at the height of those budget cycles, staff continued to politely bear the burden of our inquiries.

The Alliance also thanks those who helped us grapple with the ceaseless complications and subtleties that emerged as we moved deeper and deeper into the research. Special thanks in this regard go to Frank Muller and Andrew Hoerner at the Center for Global Change at the University of Maryland; Daniel Wood at the New York State Department of Taxation and Finance, Bureau of Tax Studies; Elliot Dubin, formerly of the Advisory Commission on Intergovernmental Relations; Mark Gripentrog at the District of Columbia Department of Finance and Revenue; Ronald Alt at the Federation of Tax Administrators; Forrest Marovelli at Tax Analysts, Inc.; Frank Moretti at The Road Information Program; Michael Mazerov at the Multistate Tax Commission; and Michael Foley at the National Association of Regulatory Utility Commissioners.

Joe Loper, author of this report, would like to extend special thanks to the staff at the Alliance for allowing him to bore them over and over again about state and local energy taxation. Particular thanks to Mark Hopkins, Bill Nitze, David Nemtzow and Jim Wolf for repeated readings of drafts and words of encouragement; to Mary Beth Zimmerman, for generating financial support for this project and for help in thinking through many of the issues; to Mary Ann Gourlay, for her patient editing; to Patty Glick, for helping research and check the numbers; and to Sigrid Wright, for giving the report some creative flair.

This report would not have been possible without the generous contributions of The Energy Foundation, The W. Alton Jones Foundation, The Joyce Mertz-Gilmore Foundation, and an anonymous donor.

Executive Summary

Taxes on energy can be an important part of efforts to improve the nation's energy efficiency, competitiveness and environmental quality. By making energy more expensive, energy taxes encourage conservation and investments in energy efficiency; they also allow the private sector to determine which investments are the most cost-effective given individual circumstances.

In the past, state and local governments rarely considered energy and environmental issues when debating tax policies. Numerous other priorities — the need for revenues, tax fairness, economic development and competitiveness, and popular sentiment — received much greater attention. The result? Many existing taxes and tax provisions encourage energy consumption and the use of polluting energy resources over investments in such alternatives as solar, wind and efficiency. In other words, tax policies are energy and environmental policies by accident.

How big are state and local tax revenues?

State and local governments collected $525 billion in taxes in 1991, equal to nine cents for every dollar of gross national product. Energy producers and consumers represent a huge tax base: Americans spend nearly $500 billion each year on energy; the net book value of investor-owned electric and gas utility plants is worth at least another $500 billion.

To the extent that energy-related activities are given tax breaks, other activities must bear a greater share of the overall tax burden. Reducing the overall tax rate on energy sales by just one percentage point, for example, would reduce overall state and local tax revenues by $5 billion a year, or 1 percent of total revenues. To make up that revenue loss, governments would have to rely on other measures — increasing their effective tax rates on corporate income by one-fifth, for example.

Isn't energy already taxed too much?

State and local governments collect nearly $40 billion in energy taxes each year, equal to 8 percent of their total tax revenues. The vast majority of revenues from energy taxes come from the relatively visible highway fuel taxes ($23.1 billion), distantly followed by gross receipts taxes on energy utilities ($8.4 billion) and taxes on energy resources extraction ($4.8 billion). Utility regulatory fees ($0.3 billion) and environmental assessments ($0.7 billion) make up a relatively small portion of the taxes collected on energy.

But state and local tax codes also include a multitude of special tax treatments that come in the form of exemptions, deductions or tax credits. Virtually every state provides tax breaks — ranging from sales tax exemptions to income tax deductions to special property tax assessment rates — for certain types of energy resources, producers, products and consumers. Sales tax exemptions alone cost state and local governments some $18 billion each year. The effectiveness and desirability of this special treatment dims somewhat in light of the nation's growing emphasis on environmental quality and sustainable economic growth.

Getting a handle on the issue

To help organize the maze of state and local tax codes, the Alliance to Save Energy developed a database of more than 1,000 energy-related state and local tax code provisions in place as of July 1993. Based on this data, we examined the tax treatments of the 10 most widely used end-use energy products, accounting for 87 percent of total energy expenditures.

To provide a clearer picture of how taxes on energy products compare to those on other typical products in each state, we calculated the "actual" energy tax rate for these products and then compared it to each state's prevailing general sales tax rate. We arrived at the actual tax rates by summing all applicable taxes on energy each product, subtracting any user fees or special tax breaks, and then adding applicable sales taxes. Our analysis includes only those taxes and tax provisions that are most likely to be passed through to end-use consumers.

Table 1. Comparison of Energy Tax Rates to Sales Tax Rates

Product	Energy Tax Rate (% of retail price)	Sales Tax Rate (% of retail price)	Percentage Point Difference
Home	**3.7**	**6.2**	**-2.5**
Oil	2.0	6.2	-4.2
Electric	3.6	6.2	-2.6
Natural Gas	4.7	6.2	-1.5
Industrial	**4.0**	**6.2**	**-2.2**
Oil	3.8	6.2	-2.4
Electric	4.0	6.2	-2.2
Natural Gas	4.0	6.2	-2.2
Commercial	**6.9**	**6.2**	**0.7**
Oil	8.8	6.2	2.6
Electric	6.7	6.2	0.5
Natural Gas	6.9	6.2	0.7
Gasoline	**3.0**	**6.2**	**-3.2**

Table 2. Combined State and Local Tax Rates on End-Use Products

ST	Energy Tax Rate (percent of pre-tax retail prices)	General Sales Tax Rate (percent of pre-tax retail prices)	Percentage Point Difference	Percentage Difference	ST	Energy Tax Rate (percent of pre-tax retail prices)	General Sales Tax Rate (percent of pre-tax retail prices)	Percentage Point Difference	Percentage Difference
States that "Undertax" Energy					MI	2.3	4	-1.7	72%
ND	-0.1	5.3	-5.4	3907%	OH	3.8	5.8	-2	53%
CT	-0.6	6	-6.6	1171%	FL	3.9	6	-2.1	53%
NV	0.5	6.6	-6	1163%	IN	3.4	5	-1.6	49%
ID	0.4	5	-4.6	1104%	TX	5.2	7.6	-2.4	45%
WI	0.5	5.3	-4.8	1051%	NC	4.4	6	-1.6	36%
MA	0.9	5	-4.1	454%	NM	4.5	6.1	-1.6	35%
ME	1.2	6	-4.8	399%	MD	3.7	5	-1.3	34%
SC	1.1	5	-3.9	349%	AR	4.2	5.2	-1	25%
KS	-2.5	5.9	-8.4	335%	VA	3.9	4.8	-0.9	23%
AK	-0.4	0.4	-0.8	219%	WA	6.3	7.4	-1.1	17%
CO	2.1	6.1	-3.9	184%	SD	4.5	5.3	-0.7	16%
PA	2.3	6	-3.7	165%	RI	6.5	7	-0.5	7%
MO	2.1	5.7	-3.5	164%	AZ	5.7	6.1	-0.3	6%
UT	2.5	6.3	-3.7	150%	**States that "Overtax" Energy**				
NE	2.4	5.9	-3.5	147%	GA	5.5	5.3	0.1	2%
MN	2.9	7.1	-4.2	146%	AL	7.2	6.3	1	14%
WY	2.0	4.8	-2.8	143%	WV	7.2	6	1.2	16%
TN	3.6	7.9	-4.3	121%	IL	10.7	8.6	2	19%
VT	2.3	5	-2.7	120%	NY	9.2	7.4	1.8	19%
KY	2.8	6	-3.2	115%	HI	5.1	4	1.1	21%
NH	-0.4	0	-0.4	100%	DC	7.7	6	1.7	23%
OK	3.6	7.3	-3.6	99%	NJ	7.8	6	1.8	23%
IA	2.7	5.1	-2.5	92%	DE	1.4	0	1.4	100%
CA	4.1	7.5	-3.5	85%	MT	1.6	0	1.6	100%
LA	4.3	7.8	-3.5	81%	OR	2.1	0	2.1	100%
MS	4	7	-3	77%	US	**4.3**	**6.2**	**-1.9**	**44%**

Our finding: energy is taxed lower than other products

Our analysis shows that taxes on energy products relative to other products usually are not high at all, and in fact are quite low. **Nationally, state and local taxes on end-use energy products are 30 percent lower than the average sales tax.** Taxes on energy sold for use in industrial processes are on average 43 percent lower than taxes on energy used in offices for lighting, computers, and heating and cooling. Highway gasoline is taxed at less than half the rate imposed on energy consumed in offices.

State and local governments would collect an additional $7 billion a year if they imposed tax rates on end-use energy products that were the same as their general sales tax rates.[1] The annual cost of exemptions just for electricity and gasoline amounts to $4.4 billion.

The combined revenue losses of the 40 states that undertax energy products is nearly $13 billion a year. California is the biggest loser, sacrificing $1.3 billion annually from special tax treatment of energy products. Other big revenue losers include Texas, Pennsylvania, Massachusetts, Ohio, Louisiana, Connecticut, Florida, Kansas and Tennessee.

When states tax energy at rates higher than their general sales tax rates, it usually is by a small amount. Ten states (plus the District of Columbia) tax energy at rates higher than their general sales tax rate, collecting $1.3 billion more in revenues than if they taxed energy the same as non-energy products. New York, New Jersey and Illinois are included in this category, together accounting for almost 80 percent of the total.

Opportunities for tax reform

Preferential treatment of energy frustrates the nation's efforts to meet its clean air objectives and goals for greenhouse gas reductions, contributes to increased reliance on imported oil, and discourages investments in new generations of domestically produced efficiency and renewable energy resources. The special tax treatment granted to the 10 end-use energy products examined in our analysis result in consumption levels that are 1.7 percent higher than if those products were simply subject to rates equal to the general sales tax rates levied on other products. Indeed, taxing those energy products the same as other products would achieve nearly 15 percent of President Clinton's carbon emissions reduction goal for the year 2000.

But before tax breaks for energy are eliminated, policymakers must consider why they were established in the first place. In many cases, states should not abandon their objectives in granting preferential tax treatment but should look for alternative ways to achieve them. As part of a broader strategy, tax breaks to energy can be eliminated in ways that promote fairness and competitiveness *and* help states achieve their energy and environmental goals.

Recommendation 1: Tax energy products at rates that are at least as high as those on non-energy products. Energy products should be taxed at rates at least as high as rates on other products, unless there are clearly stated reasons for doing otherwise, and unless alternative means for achieving the stated objective of a given tax break have been fully explored.

Recommendation 2: Eliminate subsidies to highway users. States required general taxpayers to foot more than 17 percent of the highway bill in 1991; these subsidies should be eliminated. In addition, if highway fuel taxes are employed by states as user fees, then motor fuels should not be excluded from the general sales tax.

Recommendation 3: Target energy tax breaks to people who need them. States should ask themselves whether residential energy exemptions are the most cost-effective way to achieve their goal of reducing the regressivity of the overall tax system. The regressivity of sales taxes on energy can be mitigated by transferring revenues back to the poor through refundable personal income tax credits, property tax relief, increased spending on social services, income-based caps on utility bills, or weatherization assistance.

Recommendation 4: Eliminate industrial energy exemptions and use the resulting revenues to promote industrial competitiveness. State and local governments sacrifice $2.2 billion each year as a result of undertaxing industrial process energy; they should reconsider exemptions that provide the greatest tax benefits to the most energy-intensive industries. States can use revenues from general sales taxes on industrial process energy to promote industrial competitiveness by: reducing the marginal rate for an existing tax on business; directly assisting businesses in making energy efficiency investments; and offering tax incentives for energy efficiency investments.

Introduction

Policymakers are beginning to recognize that taxes on energy can be an important part of efforts to improve the nation's energy efficiency and environmental quality.[2] Energy taxes complement conventional energy and environmental measures while providing revenues to supplement hard-hit state and local budgets. By making energy more expensive, taxes on energy encourage conservation and investments in energy efficiency; they also allow the private sector to determine which investments are the most cost-effective given individual circumstances.

In the past, state and local governments rarely considered energy and environmental issues when debating tax policies. Numerous other priorities — the need for revenues, tax fairness, economic development and competitiveness, and popular sentiment — competed for attention. Consequently, many existing taxes and tax provisions are inconsistent with stated energy and environmental policy goals. As currently written, they encourage energy consumption and the use of polluting energy resources over investments in alternatives such as solar, wind and efficiency. In other words, state and local governments are setting energy and environmental policy by accident.

These inconsistencies are largely ignored in state energy and environmental planning documents; we were unable to find any state energy plans that list the need for reform of energy tax codes as a priority.[3] Rather, these plans tend to focus on utility least-cost planning, building codes, weatherization, transportation planning, and the like. These types of efforts should be strengthened, but it should be kept in mind that tax laws encouraging energy consumption (or the use of polluting energy resources) reduce the effectiveness of these other non-tax measures.

Energy taxation is not just an energy policy issue — it also is a fiscal concern. The potential for state and local governments to influence energy markets through their tax systems should not be underestimated. In 1991, state and local governments collected $525 billion in taxes, equal to nine cents for every dollar of gross national product. State and local tax collections are equal to four-fifths of that collected by the federal government. If current trends continue, state and local tax policies will play an even more prominent role in coming years.[4]

Preferential tax treatment for energy producers and consumers cost state and local governments billions of dollars annually. This is not surprising given the potential energy tax base: Americans spend nearly $500 billion each year on energy; the net book value of investor-owned electric and gas utility plant is worth at least another $500 billion.[5]

To the extent that energy-related activities (energy production, conversion or consumption) are excluded from taxation or given preferential tax treatment, other activities must bear a greater share of the overall tax burden. Reducing the overall tax rate on energy sales by 1 percentage point, for example, would reduce state and local tax revenues by $5 billion annually, or 1 percent of total revenues. To make up that revenue loss through taxes on corporate income, governments would have to increase their effective tax rates by one-fifth. These are the kind of choices that governments make every time they submit a new budget.

Few people would suggest that energy policy be the sole driver of tax policy, or that all of the provisions outlined in this report are inconsistent with current energy policies. It is important, however, that tax codes be periodically re-examined in light of current fiscal, energy and environmental goals. Many of the tax provisions identified in this report represent opportunities to reform state and local tax codes in ways that reduce energy use, clean up the environment and raise revenues.

About this report

This report describes the many ways in which state and local governments tax and don't tax energy — groundbreaking research never before conducted in such detail.[6] The reason this research was largely uncharted territory became quite clear early on: it required thorough examination of 50 state (plus the District of Columbia) tax codes and thousands of local taxing jurisdictions, multiplied by at least 10 broad categories of interrelated energy taxes. The greatest task in this two-and-a-half-year effort was organizing the information in a manner that is simple enough to be understood, while complex enough to accurately represent state and local energy tax codes.

This report is organized as follows:

Chapters 2 and 3 — describing how states tax energy and how they provide special tax treatment to energy producers and users — should help the reader become more familiar with the variety of taxes and tax breaks for energy and develop a greater awareness of the complex and diverse universe of state and local tax laws.

Chapter 4 lays out our analytical framework for comparing tax burdens on energy and non-energy products. We sum the energy-specific taxes levied on each of 10 selected end-use energy products and then make adjustments to account for offsetting tax breaks and user fees. We compare the resulting tax rates to combined state and local general sales tax rates to determine how each of the energy products is taxed relative to the typical consumer product.

The results of our analysis are reported in Chapter 5, which also addresses the revenue impacts on state and local budgets that result from taxing end-use energy products differently than non-energy products. The report concludes with Chapter 6, in which we make recommendations for energy tax code reforms and further research.

The Appendix to this report describes the approximately 1,000 energy-related tax provisions we identified in the course of our research. These tax provisions represent deviations from the uniform tax treatment of energy, both among various types of energy resources and relative to non-energy products. As such, they may result in energy products or businesses being taxed more or less than non-energy products or businesses, or certain types of energy products being taxed more or less than other types.

There are four basic ways in which those tax biases may occur:

- certain energy-related activities may be taxed at lower or higher statutory rates;
- certain energy-related activities may be partially or totally excluded from a tax;
- certain energy-related activities may qualify for tax refunds or credits; or
- certain energy-related activities may be subject to additional special taxes.

To collect this information, the Alliance examined the tax codes of all 50 states plus the District of Columbia. We analyzed all areas of the tax codes, including general sales taxes, gross receipts taxes, highway fuel taxes, income taxes and property taxes, along with a host of lesser-known taxes imposed on or containing some special treatment of energy or energy businesses. We obtained information from numerous secondary sources, followed by written correspondence and countless phone conversations with tax administrators in each state.[7] The provisions reported here were current as of July 1993.[8]

What this report includes

This report examines all of the many state and local tax laws that offer special tax treatment to energy. It became clear early on in this research that to obtain any meaningful result, individual taxes and provisions could not be considered in isolation of the overall tax system, for several reasons. First, states rely on different types of taxes for revenues. For example, if we looked only at highway excise taxes, we would conclude that New York and Pennsylvania taxed gasoline at rates that were about half the national average. That conclusion would ignore the fact, however, that those two states levy separate petroleum taxes on motor fuels that increase the total tax rate on gasoline considerably. Moreover, New York, unlike most other states, also subjects gasoline to general sales taxes. Looking at only one type of tax would thus be very misleading.

Second, some taxes are imposed in lieu of or in addition to other taxes. For example, severance taxes and public utility taxes are frequently imposed in the place of sales, property or income taxes. Fuels subject to highway excise taxes are usually exempt from general sales taxes. Given our intention to compare taxes on energy products to taxes on non-energy products, we need to be aware of tax provisions elsewhere in tax codes that lower overall tax rates on energy.

It is tempting to ignore local taxes since there are so many local tax jurisdictions and local tax rates are generally low compared to state taxes. This would be a mistake, however, given the wide variation in local taxation from state to state and the fact that local taxes at times eclipse state taxes in terms of both revenues and rates. For example, New York City collects more taxes (mostly on sales and property) than any state except California and New York state (and the District of Columbia). The city of Chicago's tax on utility gross receipts is higher than utility taxes in all but three states. Also, since local governments collect about 96 percent of total property tax revenues, ignoring local taxes would be equivalent to ignoring property taxes.[9] While this report does not detail the energy-related tax provisions for all 83,000 local tax jurisdictions, it does identify and account for the major tax provisions affecting local taxation of energy.[10]

What this report doesn't include

This report includes only state and local tax provisions that specifically affect energy consumers or producers. This approach omits several items that arguably affect the relative tax burdens on various energy products and businesses. For example, state and local tax breaks to capital, such as accelerated depreciation and investment tax credits, are not included. While these provisions undoubtedly affect energy use, they represent tax relief to capital, not energy. A heavy tax on capital may reduce the overall availability of capital, but market forces still are free to use capital in the most efficient ways (whether for energy production or for another activity). Of course, to the extent that capital is substituted for labor, raw materials or energy, it may be worth examining a reduction in income and property tax rates.

This report includes only limited discussion of passive tax provisions — tax breaks passed through from federal income tax codes. These may include deductions for interest on state and local bonds for public power, oil and gas deductions, and several others described later in the report. Since most states use federal adjusted income as the base for calculating state income tax liability, federal tax laws can have a significant impact on state and local budgets, in addition to their effect on the relative tax burdens on energy consumers and producers. In this report, we do not examine these provisions, nor their impacts.

Non-tax interventions, such as government regulation and spending, also are outside the scope of this report. Governments intervene in energy markets in many ways — by regulating energy prices and supplies, providing transportation infrastructure, establishing and enforcing pollution standards, and supporting research and development.

We have not examined the relative tax treatment of publicly owned versus privately owned utilities. According to the U.S. Energy Information Administration, investor-owned utilities (IOUs) paid $11.4 billion in non-income taxes (mostly sales, gross receipts and property taxes) in 1990, about 8.1 percent of sales. Publicly owned utilities paid the equivalent of 3.5 percent of sales in non-income taxes. The rate differentials represent a $2 billion reduction in costs for public utilities, equal to about 0.3 cents per kWh.[11]

This report also does not compare on a state-by-state basis the effective energy and non-energy tax rates. The data required for that comparison — detailed tax collections and tax bases — simply is not available. Instead, we compare statutory tax rates on various energy products to general sales tax rates on a typical product. Readers interested in a comparison of energy to a product like food or medicine must take into account the many exemptions for these products provided throughout the nation.

Finally, this report does not address the question of where tax burdens ultimately lie, or tax incidence. Are general sales taxes — added to the sales price of final goods — fully paid by consumers, or do businesses pay part of these taxes by compensating for the tax with lower pre-tax prices? Do property taxes reduce business profits or are they passed through to consumers in higher prices? To what extent are tax burdens exported to residents and businesses of other states? The answer to these questions is that both businesses and consumers — in-state and out-of-state — are likely to pay some portion of all taxes; the question is one of degrees and is the topic of an entire report unto itself. We found no conclusive estimates of tax incidence (applicable to the taxes we examine here) in the existing literature, and thus were forced to make some assumptions (discussed later) regarding the impacts of various types of taxes on end-use prices.

The analysis contained in this report is intended only as a beginning. We hope it will spur the interest of other analysts and policy makers in developing a more concise framework in which to evaluate state and local tax codes.

How state and local governments tax energy

State and local governments collect nearly $40 billion in taxes imposed specifically on energy production or consumption, producers or consumers, property or products. These taxes are not energy taxes in the strictest sense, as they are not limited to taxes on British thermal units (Btu), nor are they limited even to taxes based on volumes such as gallons, barrels, tons or cubic feet. In fact, the taxes reported in this report often are based on the value of sales, income or property.

The taxes discussed in this chapter differ from more broadly based taxes on sales, income and property, which do not target any specific types of activity. Many of these broad-based taxes also are imposed on energy-related activities, but they do not represent increased tax burdens on energy activities relative to non-energy activities.

We classify taxes on energy into eight broad categories:

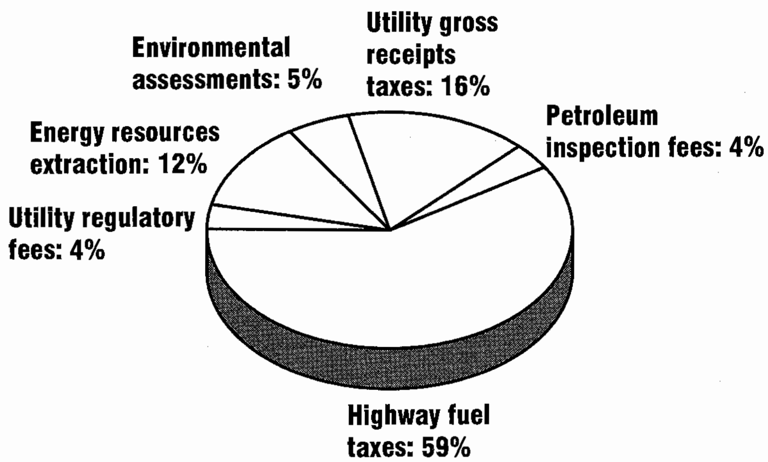
- utility gross receipts taxes;
- utility regulatory fees;
- kilowatt-hour taxes on electricity;
- highway motor fuel taxes;
- petroleum taxes;
- petroleum inspection fees;
- severance and production taxes; and
- environmental fees and assurances.

Table 3. Types of Energy Taxes by State

	Taxes and Fees on Energy Consumption							Taxes and Fees on		Taxes and Fees on Energy Consumption							Taxes and Fees on
ST	Motor Fuel Excise	Other Petro Taxes	Utility Receipt Taxes	Kilowatt Hour Taxes	Utility Regulat Assess	Petro Inspect Fees	Enviro Assur & Fees	Energy Resources Extraction	ST	Motor Fuel Excise	Other Petro Taxes	Utility Receipt Taxes	Kilowatt Hour Taxes	Utility Regulat Assess	Petro Inspect Fees	Enviro Assur & Fees	Energy Resources Extraction
AL	yes	yes	yes	yes	yes			yes	MT	yes			yes	yes			yes
AK	yes			yes	yes			yes	NE	yes		yes				yes	yes
AZ	yes				yes		yes		NV	yes				yes	yes	yes	yes
AR	yes				yes		yes	yes	NH	yes		yes				yes	
CA	yes		yes	yes			yes	yes	NJ	yes	yes	yes		yes			
CO	yes				yes			yes	NM	yes				yes		yes	yes
CT	yes	yes	yes						NY	yes	yes	yes		yes	yes	yes	
DE	yes	yes	yes		yes		yes		NC	yes		yes			yes		
DC	yes		yes						ND	yes			yes			yes	yes
FL	yes		yes		yes	yes	yes	yes	OH	yes		yes					yes
GA	yes				yes		yes		OK	yes						yes	yes
HI	yes		yes		yes		yes		OR	yes		yes		yes			
ID	yes			yes	yes		yes	yes	PA	yes	yes	yes		yes			
IL	yes		yes		yes		yes		RI	yes		yes					
IN	yes				yes	yes		yes	SC	yes			yes	yes	yes	yes	
IA	yes				yes		yes		SD	yes				yes	yes	yes	yes
KS	yes				yes	yes	yes	yes	TN	yes	yes	yes		yes		yes	yes
KY	yes				yes		yes	yes	TX	yes		yes		yes	yes	yes	yes
LA	yes		yes		yes	yes	yes	yes	UT	yes				yes		yes	yes
ME	yes				yes		yes		VT	yes	yes	yes		yes			
MD	yes	yes	yes	yes	yes		yes	yes	VA	yes	yes	yes		yes		yes	yes
MA	yes				yes				WA	yes		yes		yes		yes	
MI	yes		yes		yes		yes	yes	WV	yes	yes	yes	yes	yes			yes
MN	yes		yes		yes	yes	yes		WI	yes		yes			yes		
MS	yes				yes		yes	yes	WY	yes				yes	yes		yes
MO	yes					yes		yes	Total	51	11	28	9	39	14	32	29

Notes: A number of miscellaneous taxes are not included here, such as pipeline and wire-mileage taxes, taxes imposed on a per-meter basis, nuclear plant assessments, etc. Environmental and regulatory assessments on natural resources producers are included in "taxes and fees on energy resources extraction."

Figure 1: 1993 State & Local Energy Taxes
Total Revenues: $39 billion



Of course, energy taxes do not always fall neatly into any one of these categories. For example, Pennsylvania's "Oil Company Franchise Tax," which is included in the "petroleum taxes" category, may be more meaningfully classified as a highway motor fuel tax since revenues from the tax are dedicated to highway construction and maintenance, and the tax is imposed on a per-gallon basis only on highway fuels. Similarly, taxes on coal producers frequently are dedicated to mine reclamation activities, and thus in many cases could be categorized either as an environmental assessment or a severance tax (we include them in the severance tax category). In most cases, these difficult-to-categorize taxes are small and their characterization as one type of tax or another does not affect the results of our analysis.

As shown in Figure 1, the vast majority of revenues from energy taxes come from highway fuel taxes, distantly followed by gross receipts taxes on energy utilities and severance taxes. Utility regulatory fees, petroleum inspection fees, and environmental assessments make up a very small portion of the taxes collected on energy.

Utility gross receipts taxes

Taxes are levied on the gross receipts of energy utilities in 28 states and comprise more than one-fifth of state and local energy tax revenues. Fifteen of the states taxing utility gross receipts exempt utilities from taxes on property, income or capital. Gross receipts taxes are viewed as a convenient alternative to taxing utilities, since the valuation of utility property is often difficult, and even controversial.

Like most other taxes on utilities, gross receipts taxes are passed through to utility consumers in the form of increased rates (state regulators may deny utility recovery of these taxes but seldom do). Indeed, utilities effectively serve as tax collectors for state and local governments; since gross receipts taxes are technically levied on utilities rather than consumers, they do not appear explicitly on electric and gas bills and are therefore hidden from consumers.[12]

State gross receipts tax rates range from 0.5 percent in Vermont[13] to 14 percent in New Jersey. Local governments in 12 states impose utility gross receipts taxes. Local taxes are highest in Virginia, where the statewide average local tax rate on natural gas exceeds 8 percent. Chicago also imposes a gross receipts tax of 8 percent, but the state average is far lower due to lower rates outside the city. Nationally, combined state and local gross receipts taxes on investor-owned energy utilities average 4.7 percent (based only on states that impose the tax). Combined rates are lower for natural gas in seven states and lower for electricity in five states.

Most utility gross receipts taxes are imposed at a flat rate, but two states — Alabama and West Virginia — use declining rate structures to provide relief to energy-intensive businesses. To encourage utility services in rural areas, Texas levies its gross receipts taxes only on investor-owned utilities that serve cities of more than 1,000 population, thus effectively exempting municipal utilities and small rural utilities.

Utility gross receipts taxes are rarely used to encourage utility use of one type of primary fuel over another; but where they are used for that purpose, coal appears to be the primary beneficiary. Four states — Maryland, Virginia, West Virginia and Illinois — provide credits from their gross receipts tax for purchases of coal generated in-state. At least in West Virginia, the intention of the coal credit is clear: "The purpose of this credit is to stimulate increased generation of electricity at coal-fired generating stations in this State."[14] This, combined with the fact that West Virginia (unlike most states) taxes sales to out-of-state consumers, indicates a desire by state policy makers to generate revenues from the export of "coal by wire." Tax breaks are not entirely limited to coal. Pennsylvania — home of the Three-Mile Island nuclear facility — exempts gross receipts collected to recover the costs of clean-up, amortization, and back-up power required as the result of a nuclear accident.

Gross receipts taxes also are frequently imposed on such non-energy utilities as telephone, cable television and railroads. In this sense, they are really taxes on utilities (or more precisely, regulated monopolies) rather than on energy. Excluding them from our analysis, however, would cause us to seriously underestimate the taxes on energy utilities. Note also that, even though rates on electric and gas utilities are generally similar to rates imposed on non-energy utilities, the majority of revenues from utility gross receipts taxes are derived from electricity and gas.

Table 4. Utility Gross Receipts Taxes

ST	Electric Utilities Comb. Tax Rate (% of retail price)	Natural Gas Utilities Comb. Tax Rate (% of retail price)	Related Provisions in Property and Income Taxes
AL	6.20	6.20	##
CA	2.00	2.00	
CT	4.00 to 5.00	4.00 to 5.00	Personal prop. tax
DE	4.25	4.25	
DC	9.70	9.70	Personal prop. tax
FL	2.50	2.50	
HI	5.89	5.89	Real property tax
IL	10.72	10.72	
LA	----	1.00	##
MD	5.91	4.61	Income tax
MI	0.55	0.55	Income tax
MN	1.09	1.09	
NE	5.00	----	Personal prop. tax
NH	1.00	1.00	Income tax ##
NJ	14.00	14.00	Income tax
NY	4.71	4.71	Income tax
NC	3.22	3.22	Franchise tax
OH	4.75	4.75	Income tax ##
OR	3.50	3.00	
PA	4.40	5.00	Real property tax
RI	4.00	3.00	Income tax
TN	3.00	1.50	Income tax
TX	4.72	4.72	
VT	0.50	0.50	
VA	6.90	10.20	Income tax
WA	9.23	9.07	Income tax
WV	2.00	6.29	
WI	3.19	0.97	Income tax

Note: Delaware and Texas exempt residential gas customers; Delaware gives industrial gas customers a 10% rebate.
Utilities in these states are also subject to higher effective rates on property than most other businesses.

Utility regulatory fees

At least 39 states allow regulators to impose fees on electric and gas utilities to cover the costs of regulatory activities. Most states base their regulatory fees on a formula which prorates the cost of regulatory activities according to the gross receipts of each utility. Thus, the larger a utility's receipts, the larger the percentage of the total regulatory costs that must be paid by the utility.

States usually place a cap on the regulatory fee. Most caps are low, ranging from 0.02 percent in Michigan to 0.5 percent in New Mexico and Vermont, and the rates are the same for electric and gas utilities. While state tax laws usually specify that these taxes be used to fund regulatory activities, in at least one state (Texas), revenues in recent years have exceeded the requirements of utility regulators. It is unclear whether or when those monies will be refunded.

Table 5. Gas & Electric Utility Regulatory Assessments

ST	Tax Rate (percent of retail price)	ST	Tax Rate (percent of retail price)
AK	rate unavail.	MN	rate unavail.
AL	0.15%	MS	0.16%
AZ	0.20%	MT	0.28%
AR	0.40%	NV	0.43%
CO	0.20%	NJ	0.25%
DE	0.20%	NM	0.50%
FL	0.13%	NY	0.33%
GA	fee based on property value	OR	0.25%
HI	0.13%	PA	0.30%
ID	0.30%	SC	rate unavail.
IL	0.19%	SD	0.15%
IN	0.15%	TN	0.08%
IA	0.10%	TX	0.17%
KS	0.20%	UT	0.30%
KY	0.20%	VT	0.50%
LA	0.04%	VA	0.20%
ME	0.25%	WA	0.20%
MD	0.17%	WV	0.29%
MA	0.25%	WY	0.30%
MI	0.02%		

Kilowatt-hour taxes on electricity

Nine states impose kilowatt-hour (kWh) taxes on some or all electricity, with rates that range from 0.015 cents to 0.26 cents per kWh. Four states limit the tax to specific types of electricity generation or utilities. Alabama's and Idaho's taxes are imposed only on hydro-generated electricity. Alaska imposes its tax only on electric cooperatives. North Dakota's tax is applicable only to electricity produced from coal plants. The remaining states impose the tax regardless of how the electricity is generated. Two states offer tax breaks for certain types of electricity consumers: Idaho exempts electricity used for irrigation, manufacturing and mining; South Carolina exempts electricity used by industry, as well as electricity sales by municipal utilities.

The revenues collected from these taxes is small, totaling about $140 million a year nationwide. West Virginia tops the list, collecting about $60 million. California's tax, which is used to fund "ongoing energy programs and energy projects deemed appropriate by the legislature," generates around $40 million in revenues each year.

Table 6. Kilowatt-Hour Taxes on Electricity

ST	Tax Rate	Residential Tax Rate (pct. of retail price)	Industrial Tax Rate (pct. of retail price)	Commercial Tax Rate (pct. of retail price)	Related Provisions in Property and Income Taxes
AL	0.04 cents/kWh hydroelectricity	0.11	0.17	0.11	##
AK	0.025-0.05 cents/kWh electric co-ops	0.48	0.62	0.54	Property and income taxes
CA	0.02 cents/kWh electricity consumed	0.20	0.27	0.21	
ID	0.05 cents/kWh hydroelectricity	1.01	-----	1.17	
MD	0.015 cents/kWh electricity consumed	0.22	0.31	0.23	Income tax
MT	0.02 cents/kWh electricity produced	0.36	0.68	0.42	##
ND	0.025 cents/kWh electricity generated from coal	0.39	0.51	0.37	Personal property tax
SC	0.05 cents/kWh electricity produced	0.69	-----	0.79	
WV	0.26 cents/kWh electricity produced	4.59	7.78	5.02	

Note: Idaho exempts agriculture and industry purchases; South Carolina provides exemptions for industrial purchases.
Utilities in these states are subject to higher effective rates on property than most other businesses.

Highway motor fuel taxes

Motor fuel taxes have long been a major source of revenue for state governments. The first motor fuel tax was enacted by Oregon in 1919 to finance roads. Within 10 years every state in the nation levied motor fuel taxes, replacing property taxes as the primary source of highway funding at the state level.[15] State and local motor fuel excise tax revenues now equal about $23 billion a year, comprising nearly half of state and local budgets for roads and highways.

Gasoline and diesel fuel make up the vast majority of energy used in highway transportation, and thus represent the majority of the tax base. State tax rates on gasoline currently range from 7.5 cents per gallon in Georgia to 29 cents in Connecticut, and average 15.8 cents per gallon nationally.[16] The tax rate on diesel averages 17.4 cents per gallon nationally, 1.6 cents more than gasoline. Tax rates on diesel are higher than gasoline in 11 states and lower in seven states.

Local governments in seven states impose additional motor fuel taxes. Local taxes in Hawaii total almost 15 cents per gallon. Florida's local taxes add more than 10 cents to the pump price of gasoline. Combined state and local rates average 16.3 cents per gallon.

Nationally, more than 95 percent of highway fuel tax revenues is spent directly for highway purposes; much of the remainder is mixed with general funds, which are then drawn on to pay for highways. Most states levy motor fuel taxes only on fuels used on the state's roads and highways.[17] Thirty-five states require that all motor fuel tax revenues be used to support highway construction and maintenance programs. Of the remaining 16 states, 12 dedicate some portion of their motor fuel tax revenues to highways; only four states do not require that motor fuel tax revenues be used for highways.[18]

Gasohol — gasoline mixed with at least 10 percent ethanol or methanol — is partially exempted from highway fuel taxes, or taxed at reduced rates, in eight states. Other states provide incentives to alcohol production through income tax codes.[19] Natural gas and electricity used in highway vehicles typically are not taxed as motor fuels, although owners of alternative fuel vehicles often must pay special vehicle permit fees, and electricity and gas may be subject to other types of taxes, such as utility gross receipts taxes.[20]

Table 7. Gasoline Tax Rates

ST	State Rates (cents/gal)	Combined State & Local Rates (cents/gal)	Combined State & Local Rates (pct. of retail price)	ST	State Rates (cents/gal)	Combined State & Local Rates (cents/gal)	Combined State & Local Rates (pct. of retail price)
AL	18	20.1	27.2	MT	20	20	25.8
AK	8	8	7.7	NE	24.6	24.6	32.3
AZ	18	18	21.3	NV	23	29.9	36.2
AR	18.5	18.5	25.5	NH	18	18	22.6
CA	17	17	20.3	NJ	10.5	10.5	12.7
CO	22	22	27.5	NM	22	22	25.9
CT	29	29	35.9	NY	8	8	10.7
DE	19	19	25.8	NC	22	22	31.1
DC	20	20	30	ND	17	17	20.3
FL	11.8	22	28.7	OH	22	22	30.9
GA	7.5	7.5	10.4	OK	16	16	22.5
HI	16	30.9	30.9	OR	24	24.8	31
ID	21	21	28.7	PA	12	12	16.6
IL	19	22.1	29.9	RI	28	28	36.4
IN	15	15	20.9	SC	16	16	23
IA	20	20	27.2	SD	18	18	23
KS	18	18	24.5	TN	20	20	27.7
KE	15	15	20.7	TX	20	20	27.1
LA	20	20	26.8	UT	19	19	25.4
ME	19	19	23.7	VT	15	15	18.5
MD	23.5	23.5	32.1	VA	17.5	17.5	23.3
MA	21	21	27.3	WA	23	23	32.9
MI	15	15	21.3	WV	15.5	15.5	20
MN	20	20	24.7	WI	23.2	23.2	31.5
MS	18	18.3	24.7	WY	8	8	10
MO	13	13	18.5	**US**	**15.8**	**16.3**	**21.7**

Note: Retail gasoline prices used to convert from per-gallon tax to percentage of price are March 1993 average gasoline prices by state as reported in Energy Information Administration, Petroleum Marketing Monthly, June 1993, Table 28.

Petroleum taxes

Eleven states impose additional taxes on various types of petroleum products, including motor gasoline and diesel, heating and boiler fuels, and solvents. These taxes usually are imposed at the point of first sale in the state. Local governments in Maryland also impose taxes on petroleum products. Tax rates range from 0.22 percent in Delaware to 19.84 percent in New York (actually 14.84 cents per gallon). These taxes are based on gross receipts from sales of petroleum in nine states. Taxes in the remaining three states are imposed on a per-gallon basis.

Three states tax only highway or transportation fuels. Two states exclude only petroleum used for residential heating from taxation. Connecticut's tax is imposed in lieu of all other taxes on the personal property of petroleum businesses. New York's tax rate varies, depending on the type of fuel and its use: residential heating fuels are exempt from that state's tax altogether; utility and industrial consumers typically pay about 5 cents per gallon; the tax on motor fuels approaches 15 cents per gallon.

Petroleum taxes in several states appear to be intended to supplement those state's low highway motor fuel excise taxes. More than half of New York's petroleum business tax is dedicated to highways.[21] Pennsylvania's "Oil Company Franchise Tax" is practically indistinguishable from a highway fuel tax — since it is imposed on a per-gallon basis, it is imposed only on fuels used in highway vehicles, and revenues from the tax are dedicated to highway construction and maintenance. West Virginia's tax also is dedicated to highways, but the tax is imposed on residential heating fuels as well as highway fuels.

Table 8. Other Petroleum Taxes

		Tax Rate (percent of retail prices)				
ST	**Tax Rate**	Gasoline	Residential	Industrial	Commerc.	**Major Exemptions**
AL	0.5% of wholesale price	0.44	0.44	0.44	0.44	None
CT	5% of petroleum business receipts	4.19	0.00	4.19	4.19	No.2 heating oil and residential propane
DE	0.25% of petroleum business receipts	0.22	0.22	0.22	0.22	None
MD	Local -- varies (4 cent minimum)	2.28	2.28	2.28	2.28	Some residential use
NJ	2.75% of petroleum business receipts	2.21	0.00	2.21	2.21	Residential use
NY	Varies according to use	19.84	0.00	11.53	19.60	Residential use
ND	2% price	2.00	0.00	0.00	0.00	Non-transport use
PA	11.5% of average wholesale price (based on minimum 90 cents per gallon)	14.36	0.00	0.00	0.00	Non-highway use
TN	1 cent per gallon	1.39	1.35	1.57	1.68	None
VT	0.5% of receipts	0.50	0.50	0.50	0.50	None
VA	2% of motor fuel sales in transportation districts	0.66	0.00	0.00	0.00	Non-highway use
WV	5% of average wholesale price (based on minimum 97 cents per gallon)	6.56	6.56	6.56	6.56	None

Notes: Wholesale and retail gasoline prices used to convert from per-gallon tax to percentage of price are March 1993 average prices by state as reported in Energy Information Administration, Petroleum Marketing Monthly, June 1993, Tables 28 and 38.

ST	Tax Rate (cents/gal)	Tax Rate (percent of retail prices)				Tax Base
		Gasoline	Residential	Industrial	Commercial	
FL	0.10	0.13				motor fuels
IN	0.01	0.01				motor fuels
KS	0.02	0.03	0.02	0.03	0.03	petroleum products
LA	0.03	0.04	0.04	0.05	0.05	petroleum products
MN	rate n/a	n/a				motor fuels
MO	0.03	0.04				motor fuels
NV	0.06	0.07				motor fuels
NY	0.50	0.67				motor fuels
NC	0.25	0.35				motor fuels
SC	0.25	0.36				motor fuels
SD	2.00	2.56				motor fuels
TX	0.50	0.68	0.68	0.78	0.84	petroleum products
WI	2.00	2.72	2.38	2.99	3.07	petroleum products
WY	1.00	1.25				motor fuels

Table 9. Petroleum Inspection Fees

Conversions from per-gallon tax to percentage of price are based on March 1993 average prices by state as reported in Energy Information Administration, Petroleum Marketing Monthly, June 1993, Tables 28 and 38.

Petroleum inspection fees

At least 14 states levy fees on petroleum stored or consumed in the state to fund inspection and quality control activities.[22] Inspection fees usually are small, ranging from 0.01 cents per gallon in Indiana to 2 cents per gallon in South Dakota and Wisconsin. Most states levy their inspection fees only on motor fuels; four states levy their fees more broadly on petroleum products. Revenues from inspection fees total about $190 million a year, led by Wisconsin, Texas and New York.

Severance and production taxes

Forty states collect taxes based on the volume or value of natural resources extracted from the ground. Revenues from these taxes total about $5.5 billion annually.[23] More than 85 percent of those revenues is derived from taxes on energy resources, including petroleum, natural gas, coal, uranium and geothermal. Seven states — Alaska, Louisiana, Montana, New Mexico, North Dakota, Oklahoma and Wyoming — derive more than 10 percent of their total tax revenues from energy severance taxes. Alaska obtains more than two-thirds of total tax revenue from taxes based on the volume or value of production of oil and natural gas, and Wyoming obtains well over one-third of its total tax revenues from severance taxes on coal, oil and natural gas.

Texas enacted the first severance tax in 1905, four years after the Spindletop well site made the state a major oil producer. Although half of the states had some form of severance tax in the years prior to 1972, Texas and Louisiana accounted for three-quarters of total severance tax revenues collected through 1971.[24] By 1991, however, that share had fallen to 36 percent as severance tax collections exceeded $200 million in each of seven states (all major producers of oil, natural gas or coal): Texas, Alaska, Louisiana, Oklahoma, Wyoming, New Mexico and Kentucky.[25]

Severance taxes are based on the quantity of resources extracted from the ground or on the value of the resource at the point of first sale.[26] Fifteen states report revenues from taxes on coal, 25 from taxes on oil, 17 from taxes on natural gas, two from taxes

Table 10a. Severance and Production Taxes on Coal

ST	Rate	1990 Average Mine Prices ($/ton)	Rate (percent)	Credits or In Lieu	Estimated Collections (million$)
AL	20 cents to 35 cents/ton	40.82	0.70		7.40
	50 cents/ton (local)		1.22		12.86
CO	54 cents/ton	21.33	2.53		5.40
KS	$1.03 to $1.10/ton	26.00	4.23	property tax	0.40
KY	4.5% value	24.50	4.50		176.92
LA	10 cents to 12 cents/ton	35.50	0.34	property tax	0.39
MD	18 cents	25.39	0.71		0.59
	36 cents/ton (local)		1.42		1.19
MO	30 cents to 45 cents/ton	27.73	1.08		0.86
MT	3.4% to 15.4% value	10.20	12.26	property tax	43.43
	5% value (local)		5.00		13.15
NM	58 cents to $1.17/ton	23.14	4.68		26.29
	0.94% value	23.14	0.94		4.43
ND	77 cents/ton	7.48	10.29	property tax	24.44
OH	10 cents/ton	26.93	0.37		3.02
TN	20 cents/ton	27.11	0.74		0.68
VA	3 cents to 4 cents/ton	27.55	0.15		1.48
	1% to 3% value (local)		2.00		26.32
WV	5% value	28.15	5.00		159.45
WY	3.5% to 7% value	8.14	6.10	property tax	94.43
US					**603.13**

Note: Kansas price is average of Colorado and Oklahoma; Louisiana coal price is average of Alabama and Tennessee; Missouri coal price is Illinois price.
Price and production data from Energy Information Administration, Coal Production 1992, Department of Energy, Washington, D.C., Table 17.

Table 10b. Severance and Production Taxes on Oil

ST	Rate	March '90 Domestic Oil 1st Purchase Price ($/bl)	Rate (percent)	Credits or In Lieu	Estimated Collections (million$)
AL	10% value	18.22	10.00		20.60
AK	12.25% value	11.73	12.25	property tax	901.41
	5 cents/barrel	11.73	0.43	property tax	31.37
	0.4 cents/barrel	11.73	0.03	property tax	2.51
AR	5% value plus	17.33	5.00		8.89
	7 cents/barrel	17.33	0.40		0.72
CA	2.61 cents/barrel	13.55	0.18		7.33
CO	2.13% to 5.13%	19.04	5.13		4.93
FL	8% value	18.37	8.00		7.97
	5 mills/50 mcf		0.00		
IN	1% value	19.27	1.00		0.58
KS	8%	18.50	8.00		36.85
	1.35 cents/barrel	18.50	0.07		0.32
KY	4.5% value	18.75	4.50		4.62
LA	12.5% value	19.00	12.50	property tax	338.08
	2 cents/barrel		0.11	property tax	2.85
MI	7.6% value	18.99	7.60	property tax	16.82
MS	6% value	16.70	6.00	property tax	25.23
	3.5 cents/barrel		0.21	property tax	0.88
MT	5.2% value	17.08	5.00	property tax	16.17
	8.4% value (local)				29.60
	7% value (local)				2.96
NE	3.4% value	17.51	3.40		3.26
NV	2% to 5% net value	17.27	1.65		1.43
	5 cents/barrel		0.29		0.25
NM	7.08% value	18.55	7.08		81.91
ND	11.5% value	18.02	11.50	property tax	79.75
OH	10 cents/barrel	18.96	0.53		0.98
OK	7.95% value	18.74	7.95	property tax	152.88
SD	4.74% value	18.19	4.74	property tax	1.34
TN	3% value	18.37	3.00		0.28
TX	4.6% value	18.32	4.31		549.51
	3/16 cents/barrel	18.32	0.01		1.22
UT	5.2% value	19.39	5.20		15.20
WV	5% value	18.09	5.00		2.10
WY	2.08% to 6.08% value	16.38	5.40	property tax	112.49
US					**2463.29**

Price data from Energy Information Administration, Petroleum Marketing Monthly, April 1994, Table 20, p. 42; production data from Energy Information Administration, Petroleum Supply Annual 1992, Vol. 2, Table 14, p. 44.

on uranium, and one from taxes on electricity produced from geothermal energy.

When converted to ad valorem rates, state taxes on coal range from 0.14 percent in Virginia to 15.4 percent in Montana. Local governments in four states also tax energy natural resources, with state-wide average rates ranging from 1.16 percent in Alabama to 5 percent in Montana. The largest combined state and local rates on coal are in Montana, at 20.4 percent. State and local revenues from taxes on coal total more than $630 million annually.

State and local governments collect more than $2.5 billion annually in taxes on oil production. State tax rates ranges from 0.15 percent in California (actually a regulatory fee) to 12.7 percent in Alaska. Local governments also are allowed to tax oil production in Montana; the state again tops the list with a combined state and local tax rate of 20.4 percent.

About $1.6 billion is collected annually from taxes on natural gas. State tax rates range from 0.1 percent in California (again a regulatory fee) to around 10 percent in Alabama and Alaska. In Montana, local governments are again allowed to impose taxes on production which, combined with the state tax of 2.85 percent, makes the total state and local rate on natural gas in that state 30.1 percent.

Table 10c. Severance and Production Taxes on Natural Gas

ST	Rate	1990 Average Wellhead Price ($/mcf)	Rate (percent)	Credits or In Lieu	Estimated Collections (million$)
AL	10% value	2.31	10.00		27.30
AK	10% value		10.00	property tax	0.00
	0.4 cents/50 mcf	1.41	0.01	property tax	0.04
CA	0.261 cents/mcf	2.34	0.10		0.88
CO	2.13% to 5.13%	1.37	5.00		3.57
FL	12.8 cents/mcf	2.51	5.10		0.85
KS	8%	1.54	8.00		59.38
	0.43 cents/mcf		0.28		2.08
LA	7.5 cents/mcf	1.73	4.34	property tax	136.54
MI	6% value	2.71	6.00	property tax	27.39
MS	6% value	1.64	6.00	property tax	9.02
	0.4 cents/mcf		0.24		0.00
MT	2.65% value	1.62	2.65	property tax	1.11
	0.2% value		0.20		0.00
	15.25% value (local)				6.58
	12% value (local)				1.91
NM	7.08% value	1.60	7.28		118.70
ND	4 cents/mcf	1.97	2.03	property tax	6.00
OK	7.95% value	1.70	7.95	property tax	294.50
TX	7.5% value	1.76	7.50		811.25
UT	5.02% value	1.63	5.00		8.55
WV	5% value	3.01	5.00		18.70
WY	2% to 6% value	1.13	5.00	property tax	48.16
	0.08% value				
US					**1582.51**

Price and production data from Energy Information Administration, Natural Gas Annual 1992, Vol. 2, Table 7, p. 47.

Table 10d. Severance and Production Taxes on Uranium

ST	Rate	Rate (percent)	Estimated Collections (million$)
NM	2.5% value	2.50	0.14
	10 cents/lb	0.64	0.04
UT	2.6% value	2.60	7.52
US			**7.70**

Table 10e. Severance and Production Taxes on Geothermal

ST	Rate	Rate (percent)	Estimated Collections (million$)
NV	3.64% net value	1.20	0.86

Table 11a. Dedication of Revenues from Coal Severance and Production Taxes

AL	15 cents to state docks bulk handling facility trust fund; 20 cents to local governments where resource production took place. Local revenues must be used for county highway maintenance.
CO	50% to severance trust fund; 50% to local govt. severance tax fund. State allows credit for amount given to local governments to mitigate impacts of coal development. Credit given for 50% of tax liability for underground mined coal and lignite.
KS	93% to general fund; 7% to special county mineral tax production fund to be used by counties of production. Rate includes a 3 cent to 10 cent per ton conservation and reclamation tax administered by Dept. of Health and Environment.
KY	Amount requested (up to $3 million) by Governor's Office for Coal and Energy Policy to be used for r&d projects; amount required by Kentucky Turnpike Authority to be used for resource recovery road projects.
LA	General fund (1/3); local parishes (1/5); $48 million to highways; $10 million to bond security and redemption fund; remainder to severance tax fund.
MD	Depending on whether coal is underground-mined or surface-mined, 15 cents of tax goes either to the bituminous coal open-pit mining reclamation fund or to the deep mining fund. Remaining 3 cents to bond suplement reserve fund. 36 cent local tax collected and retained by county of production.
MO	Tax represents required purchase of reclamation bonds.
MT	Coal tax trust fund (50%); highway reconstruction trust fund (12%); local impact account (6.65%); state equalization aid (11.4%); county land planning (0.38%); renewable resource development (0.475%); state library commission (0.38%); conservation districts (0.19%); water development (0.475%); growth through agriculture project (0.76%); cultural and aesthetic projects (0.633%); state parks/historic sites (1.27%); state general fund (15.39%).
NM	Severance tax bonding fund used for long-term capital development, training and other programs. Resource excise tax (0.75% ov value) goes to general fund. Conservation tax (0.19% of value) used for environmental clean-up.
ND	75 cents to general fund (50%); education trust for impacted localities (15%) from which legislature may appropriate up to 50% for lignite research, development and marketing; and local governments (35%). Remaining 2 cents goes to lignite research fund.
OH	Unreclaimed lands fund (16.8%); coal mining administration and reclamation reserve (45%); defaulted areas fund (22%); reclamation supplemental forfeiture bond (11%); geological mapping fund (4.9%). 1 percentage point of tax is imposed only in years when reclamation trust fund balance falls below $2 million.
TN	General fund (3%) to defray collection expenses; local governments (97%).
VA	All revenues to surface mining reclamation trust fund.
WV	Two taxes: 5% tax goes to general fund; 0.35% tax used to benefit local governments.
WY	General fund (31%); Wyoming mineral trust fund (22%); local governments (11%); budget reserve (12%); water development accounts (8%); highway fund (9%); capital facilities revenue account (7%).

Some part of severance and production tax revenues usually is given to the local governments where the extraction occurred. Revenues also may be used to fund roads, to fund regulatory and environmental clean-up activities, or for other government services designed to support the resources industry. Nationally, nearly half of all revenues from taxes on coal are restricted to specific purposes, or are given to local governments. About 20 percent of revenues from taxes on oil and gas extraction are dedicated to special funds or given to local area governments.

Most tax breaks found in severance and production tax codes are intended to benefit small energy producers and encourage production of marginal resources. Stripper well incentives are probably the most widespread provisions found in severance tax codes. Stripper wells comprise over three-quarters of U.S. oil wells. Those incentives are intended to keep those wells from being abandoned in periods of low oil prices.[27]

Table 11b. Dedication of Revenues from Oil Severance and Production Taxes

AL	General fund (25%); of remainder, 83.34% to local governments and 16.67% to state general fund.
AK	All of 12.5% tax to general fund. The 5 cent/barrel tax is a hazardous waste contingency fee. The 0.4 cent/barrel tax is a conservation tax.
AR	The 5% tax and 4.5 cents/barrel taxes as follows: general fund to defray collection costs (3%); county aid fund (97%), of which 12.5% goes to schools and 87.5% to highways. Remaining 2.5 cents/barrel is a conservation tax.
CA	All revenues are used for oversight and regulation of production sites.
CO	Tax consists of two components: a 5% tax, which goes to general fund; and a 0.13% conservation tax.
FL	General fund (87.5%) and local governments (12.5%).
IN	All revenues go to oil and gas fund to be used by Oil and Gas Division of Dept. of Natural Resources for research pertaining to development and "wise use" of petroleum.
KS	The 8% tax distributed as follows: general fund (93%); special county mineral tax production fund to be used by counties of production (7%). The 1.35 cents/barrel tax is an environmental assessment collected for the Dept. of Health and Environment to cover the costs of services provided to prevent surface and subsurface water pollution.
KY	Amount requested (up to $3 million) by Governor's office for Coal and Energy Policy to be used for r&d projects; amount required by Kentucky Turnpike Authority to be used for resource recovery road projects. Remainder to general fund.
LA	The 12.5% tax as follows: general fund (1/3); local parishes (1/5); $48 million to highways; $10 million to bond security and redemption fund; remainder to severance tax fund. The 2 cents/barrel tax is an oil spill contingency fee.
MI	Revenues go to the general fund.
MS	The 6% tax as follows: general fund (95%); county (5%). The 3.5 cents/barrel tax is an oil and gas board maintenance tax.
MT	Consists of two components: a 5% tax which goest to the general fund and a 0.2% conservation tax.
NE	Consists of two components: a 3% tax which goes into severance tax fund dedicated to schools where production occurs, and a 0.4% conservation tax.
NV	The 2% to 5% tax goes to general fund. The 5 cents/barrel tax is a conservation tax.
NM	Tax consists of several components: a 3.75% production tax which goes into severance tax bonding fund used for long-term capital development; a 3.15% emergency school tax which goes to general fund; and a 0.18% conservation tax used for environmental clean-up.
ND	One percentage point to general fund. Of remainder: first $1 million goest to county (75%) and state (25%); second $1 million to county (50%) and state (50%); remainder to county (25%) and state (75%).
OH	Oil and gas well plugging fund and oil and gas permit fund (90%); reclamation supplemental forfeiture bond and geological mapping fund (10%).
OK	General fund (80%); county receives 1/10 of amount collected in that county.
SD	The 4.5% tax distributed to county (50%); energy development impact fund (16.67%); and general fund (33.33%. The 0.24% tax is a conservation tax.
TN	General fund (3%) to defray collection expenses; local governments (97%).
TX	The 4.6% tax as follows: general fund (75%); school fund (25%). The 3/16 cents per barrel tax is used to fund regulatory activities.
UT	Consists of two components: a 5% tax which goes to general fund and a 0.2% conservation tax.
WV	All revenues go to general fund.
WY	Consists of two components: the 2% to 6% tax to general fund (31%), Wyoming mineral trust fund (22%), local governments (11%), budget reserve (12%), water development accounts (8%), highway fund (9%), and capital facilities revenues account (7%); the 0.08% tax is a conservation tax.

Table 11c. Dedication of Revenues from Natural Gas Severance and Production Taxes

AL	General fund (25%); of remainder, local (83.34%) and state general fund (16.67%).
AK	All of 10% tax to general fund. The 0.4 cents/barrel tax is a conservation tax.
AR	Consists of two components: the 0.3 cents/mcf tax to general fund (3%) to defray collection costs, and county aid fund (97%), of which 12.5% goes to schools and 87.5% to highways. The 0.5 cents/mcf tax is a conservation tax.
CA	All revenues are used for oversight and regulation of production sites.
CO	Consists of two components: a 5% tax which goes to the general fund and a 0.13% conservation tax.
FL	General fund (87.5) and local governments (12.5%).
IN	All revenues go to oil and gas fund to be used by Oil and Gas Division of Dept. of Natural Resources for research pertaining to development and "wise use" of petroleum.
KS	The 8% tax as follows: general fund (93%), special county mineral tax production fund to be used by counties of production (7%). The 0.43 cents/mcf tax is an environmental assessment collected for the Dept. of Health and Environment to cover the costs of services provided to prevent surface and subsurface water pollution.
LA	General fund (1/3); local parishes (1/5); $48 million to highways; $10 million to bond security and redemption fund; remainder to severance tax fund.
MI	All revenues go to the general fund.
MS	The 6% tax as follows: general fund (95%); county (5%). The 0.4 cents/mcf tax is oil and gas board maintenance tax.
MT	Consists of two components: a 2.65% tax which goes to general fund and a 0.2% conservation tax.
NM	Consists of several components: a 3.75% production tax which goes into severance tax bonding fund used for long-term capital development; a 3.15% emergency school tax which goes to the general fund; and a 0.18% conservation tax used for environmental clean-up.
ND	One percentage point to general fund; of the remainder, the first $1 million to county (75%) and state (25%), second $1 million to county (50%) and state (50%), remainder to county (25%) and state (75%).
OH	Oil and gas well plugging fund and oil and gas permit fund (90%); reclamation supplemental forfeiture bond and geological mapping fund (10%).
OK	General fund (80%); county receives 1/10 of amount collected in that county.
SD	Consists of two components: 4.5% tax distributed to county (50%), energy development impact fund (16.67%), and general fund (33.33%); and a 0.24% conservation tax.
TN	General fund to defray collection expenses (3%); local governments (97%).
TX	General fund (75%) and school fund (25%).
UT	Consists of two components: a 5% tax which goes to general fund; and a 0.2% conservation tax.
WV	All revenues go to the general fund.
WY	Consists of two components: the 2% to 6% tax to general fund (31%), Wyoming mineral trust fund (22%), local governments (11%), budget reserve (12%), water development accounts (8%), highway fund (9%), capital facilities revenue account (7%); the 0.08% tax is a conservation tax.

Environmental fees and assurances

There are a number of taxes on energy that are used to fund environmental actions required as a result of oil spills. Revenues from these taxes often are placed in trust funds to be used in the event of an environmental accident. None of the taxes are based on emissions; rather, they are based on units of end-use energy products (e.g., gallons or barrels of petroleum, cubic feet of natural gas). They are more accurately described as taxes on the *risk* of environmental damage, and even this is not completely accurate, since businesses that are very careful to avoid or contain spills will pay the same amount of tax (per unit of product handled) as businesses that are less careful.

Thirty-two states impose some form of environmental assurance tax on energy products. Revenues from these levies total about $715 million annually. Ten of those states impose taxes on gasoline and petroleum products and earmark revenues to fund leaking underground storage tank cleanup efforts;[28] these rates range from 0.1 cents per gallon in Georgia to 1 cent per gallon in Arizona, Iowa and Oklahoma. Taxes to fund clean-up of land and marine spills more generally are levied by 20 states. Except for Kansas, all of the environmental assurance fees included in Table 12 are imposed on petroleum products; Kansas levies fees on natural gas produced or marketed in the state. Environmental taxes levied on natural resources producers are excluded from Table 12, since they are typically levied as part of severance taxes.

Only two states — Montana and Texas — levy taxes based in some way on Btu content. In the late 1980s, Texas adopted a law requiring the Texas Air Control Board to impose a clean fuel incentive surcharge of 20 cents per MBtu on fuel oil used in industrial and utility boilers capable of using natural gas. The surcharge applies to fuel oil used between April 15 and October 15 in metropolitan areas with population of

Table 12. Safety and Environmental Fees and Assurances

ST	Tax Base	Tax Rate	Tax Rate (percent of retail price)			
			Gasoline	Residential	Industrial	Commercial
AZ	motor fuels	1 cent/gal	1.18	-----	-----	-----
AR	motor fuels	0.2 cents/gal	0.27	-----	-----	-----
CA	motor fuels	0.6 cents/gal	0.72	-----	-----	-----
DE	petrol products	0.9% of receipts	0.78	0.78	0.78	0.78
FL	petrol products	80 cents/bl	2.37	1.89	2.73	2.85
	petrol products	2 cents/bl	0.06	0.05	0.07	0.07
	petrol products	5 cents/bl	0.15	0.12	0.17	0.18
GA	motor fuels	0.1 cents/gal	0.14	-----	-----	-----
HI	petrol products	5 cents/bl	0.11	0.12	0.16	0.17
ID	petrol products	1 cent/gal	1.37	1.14	1.35	1.43
IL	motor fuels	0.3 cents/gal	0.41	-----	-----	-----
IA	motor fuels	1 cent/gal	1.36	-----	-----	-----
KS	oil mktg./prod.	1.35 cents/bl	0.04	0.04	0.05	0.05
	gas mktg./prod.	0.43 cents/mcf	0.00	0.10	0.15	0.10
	petrol products	1 cent/gal	1.36	1.21	1.51	1.65
KY	motor fuels	0.4 cents/gal	0.55	-----	-----	-----
LA	motor fuels	0.3 cents/gal	0.40	-----	-----	-----
ME	petrol products	3 cents/bl	0.09	0.08	0.09	0.09
	petrol products	25-44 cents/bl	1.43	1.16	1.39	1.38
MD	petrol products	5.75 cents/bl	0.18	0.13	0.19	0.19
MI	petrol products	0.875 cents/gal	1.24	0.97	1.22	1.37
MN	petrol products	1 cent/gal	1.23	1.19	1.46	1.53
MS	petrol products	0.2 cents/gal	0.27	0.28	0.32	0.35
NE	petrol products	0.1-0.3 cents/gal	0.13	0.12	0.17	0.18
NV	motor/heat fuels	0.6 cents/gal	0.73	0.62	-----	0.88
NH	petrol products	0.6 cents/gal	0.75	0.69	0.92	0.81
NM	motor fuels	1 cent/gal	1.18	-----	-----	-----
NY	petrol products	1 cent/bl	0.03	0.02	0.03	0.03
ND	petrol products	0.225 cents/gal	0.27	0.25	0.31	0.34
OK	motor fuels	1 cent/gal	1.40	-----	-----	-----
SC	petrol products	0.5 cents/gal	0.72	0.53	0.76	0.79
SD	petrol products	1 cent/gal	1.28	1.17	1.46	1.59
TN	motor fuels	0.4 cents/gal	0.55	-----	-----	-----
TX	some boiler fuels	20 cents/mmbtu	-----	-----	-----	-----
UT	petrol products	0.5 cents/gal	0.67	0.56	0.69	0.73
VA	petrol products	0.2 cents/gal	0.27	0.21	0.30	0.30
WA	petrol products	5 cents/bl	0.16	0.11	0.16	0.18

Notes: Conversions are based on March 1993 average motor fuel and no. 2 distillate prices for each sector from Energy Information Administration, Petroleum Marketing Monthly, Tables 28 and 38. Due to incomplete information, some prices have been estimated using the ratio of the state price of no. 2 distillate sales to end users to the Petroleum Administration for Defense Districts price obtained in Table 36. Environmental and safety assurance fees levied only on natural resources producers are not included here.

Table 13. Clean Air Permit Fees

ST	Status of Rule Allowing Title V Fees	Basis for Emission Based Fees	Rate per Ton	ST	Status of Rule Allowing Title V Fees	Basis for Emission Based Fees	Rate per Ton
AL	final rule 1991	actual	$25.00	MS	final rule 4/93	source chooses	$4.00
AK	proposed 1993	actual	$7.25	MO	proposed	actual	$25.00
AZ	proposed 4/14/93	actual	$33.00	MT	revised annually	actual	$1.00 to $4.00
AR	proposed 2/13/93	allowable	$16.00	NE	not applicable	maybe actual	undecided
CA*	will retain 1980 rule	actual	$34.54	NH	draft 7/1/92	actual	$25.00
CA**	proposed 6/11/93	actual	$3.29 to $632.00	NY	proposed 1/1/93	actual	$22.00 (up to $25.00)
CO	final rule 7/1/93	actual	$10.98 to $100	NC	draft	actual	$12.28
CT	anticipated 6/15/93 proposal	actual	$28.50	ND	draft	actual	$4.00 to $25.00
DE	proposed 5/19/93	actual	undecided	OH	proposed	actual	$15.00 (up to $25.00 by 1995)
FL	final rule 12/92	allowable	$10.00 (up to $25.00 for 1994)	OR	initial planning	actual & allowable	$13.00
GA	initial planning	mostly allowable	$25.00	PA	initial planning	actual	$14.00
HI	initial planning	mostly allowable	undecided	RI	anticipated proposal by 8/93	allowable	$35.00
IL	final rule 6/92	allowable	$13.50	SC	awaiting statutory authority	actual	$11.00 (up to $25.00 after 1994)
IN	to be proposed 8/93	n/a	n/a	SD	final anticipated 6/93	actual	$3.40
IA	proposed	actual	not available	TN	draft	source chooses	not available
KS	draft 5/23/93; to be proposed 8/93	actual	$18.00	TX	proposed	source chooses actual or allowable	$25.00
KY	to be proposed 7/15/93	actual	undecided	UT	in drafting	undecided	$30.00
LA	final rule 9/88	actual	$7.00 to $100.00	VA	anticipated 8/93 proposal	actual	$25.00
ME	proposed	allowable	$5.00 to $15.00	WV	proposed 6/2/93	actual	$25.00
MA	to be proposed 8/93	n/a	n/a	WI	final rule effective 6/93	actual	$18.00 ($25.00 +CPA next year)
MI	interim fee program in place	not available	$25.00	WY	proposed 2/93	source chooses actual or allowable	$10.00
MN	planning	actual	$15.00				

*California -- Bay Area **California -- South Coast

Source: Radian Corp.

350,000 that have not met the federal ambient air quality standard for ozone. As of 1992, the Air Control Board had collected about $100,000 in "penalties" from this surcharge.[29] At least one observer contends that the tax may be intended as much to encourage consumption of the state's large natural gas reserves as to reduce air emissions.[30] Montana's severance tax on coal is based on the Btu content of the coal and whether the coal is obtained from surface or underground mining.

To date, few states impose taxes based specifically on air or water emissions.[31] This may be changing, however, since the Clean Air Act Amendments of 1990 require that all states develop clean air permit fees to pay for their compliance activities.[32] These fees are to be charged to all fixed emissions sources. Most states have chosen to base the fees on *actual* emissions of pollutants and to impose them on a per-ton basis. As of 1993, 27 states had decided not to differentiate between pollutants, charging the same amount for each. Only six states have said that they will make distinctions between different types of emissions, while four were as yet undecided. The Southern California Air Quality Management Region provides the widest variation in per ton-rates, ranging from $3.29 to $632 per ton. Colorado's fees will range from $10.98 to $100 per ton.[33]

Some states plan to base their fees on allowable, rather than actual, emissions, thus providing little incentive to reduce emissions. Most states will collect other types of fees in addition to or in lieu of per-ton fees. For example, Alaska plans to charge companies $75 per hour for inspection and processing of air emissions data. Arkansas plans to charge an annual application fee of $13,000 for major emissions sources and $2,000 for minor sources. The San Francisco Bay Area intends to charge construction and renewal fees that will be highest for certain sources, such as chemicals and petroleum refining, and will provide discounts for small business.[34]

How state and local governments don't tax energy

State and local tax codes include a multitude of preferential tax treatment for various activities, businesses and individuals. Tax breaks usually come in the form of exemptions, deductions or credits and include everything from limits on property tax liability for the elderly, to income tax credits for employer-provided child care, to sales tax exemptions for products purchased by the federal government.

It comes as little surprise, then, that every state also provides tax adjustments for certain types of energy resources, producers, products and consumers. As with more broadly based tax relief, the intentions behind energy tax breaks is as varied as the treatments themselves. Residential energy is exempted from sales taxes to reduce tax burdens on the poor and to reduce the regressivity of the overall tax system. Small oil producers are provided incentives through income and severance tax codes to keep them from abandoning marginal wells when petroleum prices fall. Oil and other natural resources are exempted from property taxes because it is difficult to know exactly how much of the resource exists in the ground, and because the value of the resource fluctuates according to world market prices.

While the intentions of tax breaks often are quite clear, questions emerge as to their effectiveness and desirability in light of the nation's growing emphasis on environmental quality, energy security, and sustainable economic growth. Exempting energy from sales taxes, for example, is not the most cost-effective way to provide tax relief to the poor, since the majority of the benefits accrue to energy consumers in middle- and upper-income groups. On the other hand, exempting in situ natural resources from property taxes probably makes sense for the reasons set out above, as well as for environmental and national security reasons. By taxing natural resources after they leave the ground, as opposed to taxing them in the ground, the tax system provides an incentive to save those resources for the future.

In this chapter, we describe some of the major elements of energy tax bias contained in general sales, income and property taxes.

Sales tax exemptions

Sales tax exemptions that encourage energy consumption and production are widespread. Nationally, there are approximately 300 separate sales tax exemptions specifically applicable either to energy purchases or to energy businesses. Nearly every state exempts some form of energy or energy-related equipment. Idaho is the only state that exempts all fuels and electricity from its sales tax. Georgia's sales tax is the only one containing no energy-related exemptions.

Energy exemptions found in sales tax codes rarely are the products of stated energy policy objectives. Rather, the reluctance on the part of state and local governments to tax energy sales is the result of other concerns, including tax fairness, multiple taxation and industrial competitiveness. States typically exempt fuels and electricity that are sold to certain classes of consumers or are subject to special taxes. Residential energy purchases are exempted from sales taxes in order to reduce tax burdens on the poor. Industrial purchases of energy are exempted to avoid tax pyramiding (taxing goods at multiple stages of production) and for fear that industry will choose to relocate operations in states with lower taxes. Motor fuels are exempted from sales taxes because they are subject to highway excise taxes.

In many cases, these exemptions do not single out energy for special treatment, but are put in place as part of a broader set of exemptions that include both energy and non-energy items. Food and clothing are often exempted along with residential energy. Industrial purchases of certain types of machinery are exempted similar to industrial energy purchases. For the most part, sales tax exemptions applicable to energy do not appear to be intended to promote consumption of certain types of energy or energy overall.

General sales taxes

Sales taxes comprise one-third of state tax revenues — the largest single source of state revenues — and 10 percent of taxes collected by local governments. Forty-five states and the District of Columbia, representing 95 percent of the U.S. population and roughly the same percentage of nationwide sales, impose general sales taxes. The five states that do not levy a general sales tax are: Alaska (although some of the state's local governments do impose sales taxes), Delaware, Montana, New Hampshire and Oregon. Approximately 6,400 counties, cities and other local jurisdictions levy additional taxes on sales.

General sales taxes are imposed as a percentage of the price of a broad range of items sold at retail. They are collected by the retailer and submitted to the state or local government and are generally intended to be a single-stage tax on final goods. State tax rates range from 2 percent in Nevada (excluding a mandatory local tax) to 7 percent in New Jersey and Rhode Island. Local rates range from less than 1 percent to upwards of 8 percent, and in some cases exceed the state's rate.[35] Combined state and local sales tax rates average just over 6 percent, led by Illinois at 8.6 percent.[36]

Historically, states have exempted many energy and non-energy items from sales taxes. Exemptions range from the general (e.g., sales for resale) to the specific (e.g., exemption of fuels used in the production of crawfish). Commonly exempted items include: industrial energy purchases; food, medicine and other household necessities; and purchases by governments and non-profit organizations. Most states require local governments to tax (or exempt) the same items as the state.

Manufacturing exemptions

Most states exempt at least some portion of energy used by industry. In all but three states, any materials that become an ingredient of a manufactured product (energy feedstocks) are exempted from general sales taxes. Most states also exempt fuels and electricity used to power manufacturing process machinery: 33 states exempt (or tax at reduced rates) petroleum products; 36 states exempt electricity; and 37 states exempt natural gas. [37] Exemptions often apply to non-manufacturing industries as well, such as construction, mining and agriculture.

Some states target industrial exemptions to the most energy-intensive industries. Kentucky exempts industrial energy purchases if they comprise more than 3 percent of the total cost of production. Missouri exempts energy purchases if they exceed 10 percent of the costs of production. A number of other states exempt energy used the manufacture of aluminum or steel.

Determining what portion of a company's energy use is taxable can be complicated. Some states simply require separate metering for companies wishing to claim the exemption. Other states have developed complicated (and somewhat arbitrary) rules for determining a company's tax liability. Missouri, for example, uses hours of operation and machinery name plate ratings (the energy used per hour of operation) to estimate process energy use. A number of other states exempt all of a company's energy use if process energy accounts for a large portion of total energy use.

Nationally, states forgo well over $4 billion in revenues each year as a result of exemptions for process energy.

Residential exemptions

Exemptions for home energy from general sales taxes cost state and local governments more than $6 billion annually. Some or all residential energy purchases are exempted from sales taxes (or taxed at lower rates) in 36 states. Thirty-five states exempt residential electricity and natural gas purchases, while 24 states exempt purchases of home heating oil. Like exemptions for food (exempt in 26 sales-tax states), clothing (exempt in six sales-tax states) and medicine (taxed in only two states), residential energy exemptions are intended to ease tax burdens on the poor, who spend a large portion of their income on these and other necessities.

Most states provide residential exemptions regardless of the taxpayer's income. Only two states target their residential energy exemptions to low-income or elderly households: Arkansas exempts the first 500 kilowatt-hours of electricity per month sold to households with annual incomes under $12,000; Michigan exempts fuels sold to households receiving public assistance.

Some states provide broader relief to the poor or elderly through refunds or credits for *all* sales tax paid: New Mexico provides a personal income tax credit for sales taxes paid by residents with modified gross incomes under $10,000; in North Dakota, residents over the age of 65 and disabled residents receiving social security benefits may apply for refund of sales and service taxes paid. Minnesota and Wisconsin provide exemptions for home energy use, but only during the winter heating months.

Motor fuel exemptions

Exemptions for highway motor fuels cost state and local governments between $5.5 billion and $6 billion annually. All but six states exempt highway motor fuels from general sales taxes. The remaining states also prohibit local governments from taxing highway motor fuels, although local governments in Alaska and Virginia may impose sales taxes. Exemptions from sales taxes for highway fuels are often justified on the grounds that highway fuels are subject to highway fuel excise taxes. Fuels used for off-highway activities, such as gasoline and diesel used to fuel agricultural and construction equipment, are typically subject to general sales taxes but exempted from highway excise taxes.

Natural gas and coal exemptions

A few states provide across-the-board exemptions for specific types of fuels. In most cases, these energy resources are major contributors to the states' economies. Louisiana and New Mexico — the nation's second- and fourth-largest producers of natural gas — provide exemptions for natural gas that are not available to other fuels. Similarly, California — the eighth-largest natural gas producer in the country — exempts all sales and purchases of natural gas from the general sales tax. Most of the major coal-producing states — Kentucky, West Virginia, Pennsylvania and Illinois — and many of the smaller producing states exempt sales of coal. Interestingly, none of the major oil-producing states — Texas, Alaska, California, Louisiana, Oklahoma and Wyoming — appear to provide preferential treatment of petroleum through their general sales taxes.

Pollution control exemptions

Nearly every state exempts pollution control equipment from its general sales taxes. Cogeneration, energy efficiency measures, and renewable energy devices are not recognized as pollution control options in most state tax codes.[38] Cogeneration equipment is exempt in only four states — Arkansas, Louisiana, New Jersey and Washington. Similarly, only five states — Arizona, Louisiana, Minnesota, New Jersey and Rhode Island — exempt *business* purchases of solar and wind energy devices.

Income tax deductions and credits

Income tax breaks usually take the form of deductions (which reduce taxable income and thus tax liability) or credits (which directly reduce tax liability). They may apply to a wide range of energy activities, including: oil and gas development, natural gas vehicle conversions, coal research, purchases of coal mined within the state, ethanol production, home insulation, and purchases of solar, wind and geothermal systems. Some energy businesses — mostly utilities and electric cooperatives — are exempted entirely from income taxes but may be subject to special taxes in lieu of income taxes.

Income taxes

Income taxes are an important part of state and local government tax revenues, accounting for 40 percent of state tax revenues and six percent of local tax revenues. Only seven states — Alaska, Florida, Nevada, South Dakota, Texas, Washington and Wyoming — do not levy income taxes on individuals, while New Hampshire and Tennessee tax only income from interest and dividends. Similarly, corporate income taxes are imposed in every state except Nevada, South Dakota, Texas, Washington and Wyoming.[39]

Individual income tax rates are usually graduated and range from a low of 0.4 percent of taxable income in Iowa to a high of 11 percent of taxable income in California. Approximately 3,700 local jurisdictions (three-fourths of which are in Pennsylvania) in 13 states impose additional income taxes on individuals. Nationally, local tax rates range from about 1 percent to 5 percent of state taxable income; most are 1 percent or 2 percent. Corporate income tax rates are likewise usually graduated and vary from 1 percent to 12.25 percent. Few local governments impose corporate income taxes, largely due to the difficulties in apportioning income to local jurisdictions.[40]

Energy extraction and production

Corporate tax laws in roughly one-third of the income-tax states contain provisions that specifically affect businesses involved in the production, conversion or transmission of conventional energy resources, mostly fossil fuels. Alabama allows a deduction for depletion of oil and gas at 27.5 percent of the value of the year's production. Arkansas offers a depletion allowance for all natural resource development. Alaska allows an investment credit for up to $250 million or 60 percent of tax liability for gas and mineral development. Rhode Island offers a credit for 10 percent of the cost of a hydroelectric facility, up to $50,000.

Other states encourage the use of domestic energy resources through income tax credits for purchases of energy produced in those states. Oklahoma allows credits for $0.003 per thousand cubic feet of natural gas purchased by manufacturers. Five states — Colorado, Maryland, Oklahoma, Utah and Virginia — offer credits for purchases of coal mined in those states. Kentucky provides a credit for 4.5 percent of purchase price of coal used to generate steam or hot water used for space heating or industrial processing. Illinois provides a credit for 20 percent of investments in coal research and 5 percent for investments in related equipment. Ohio excludes income derived from the operation of coal conversion facilities. West Virginia allows a credit for coal coking facilities.

Energy utilities

In some states, electric and gas utilities also benefit from income tax breaks. Seven states — Maryland, New Jersey, New York, Ohio, Rhode Island, Virginia and Washington — exempt utilities from income taxes but subject them to gross receipts taxes. New Hampshire allows a credit for public utility franchise taxes paid. Massachusetts exempts utilities from the general income tax but imposes a utility tax based on net income at a much lower rate. Michigan allows a credit for up to 5 percent of public utility property taxes paid.

Passive tax expenditures

Most states use federal taxable or adjusted gross income as the base for calculating state taxable corporate and personal income. Consequently, tax adjustments affecting businesses and investments at the federal level may in some cases affect state income tax liability. These include: deductions for interest on state and local bonds for public power facilities and pollution control; utility retention of excess deferred taxes; exclusions of electric cooperative income; oil and gas deductions for excess of percentage over cost depletion; exceptions for passive losses for working interests in oil and gas properties; and tax exemptions for public utilities. A number of additional federal tax preferences contained in the Energy Policy Act of 1992 will take effect in 1994.[41]

There is much variation among states with regard to adjustments that must be made to federal taxable income for state income tax purchases. Thus, not all federal income tax breaks will be passed through in every state. Although we have not attempted to calculate the impact of energy-related tax provisions passed through from federal tax codes, the potential impact is substantial. All but five states — Alabama, Arkansas, Mississippi, New Jersey and Pennsylvania — use federal taxable income as the base for calculating *personal* taxable income. Personal income taxes in Vermont and Rhode Island contain no modifications from the federal tax, but rather are a straight percentage of federal income tax liability. *Corporate* taxable income is based on federal taxable income in all but eight states — Alabama, Arkansas, California, Michigan (the nation's only value added tax), Mississippi, North Dakota, Utah and Wisconsin.[42]

Federal tax provisions applicable exclusively to energy businesses (i.e., not including tax breaks for capital or investment) cost the federal government as much as $3.6 billion in 1989, and principally benefited producers of oil, gas, coal and alcohol fuels.[43] The total cost to states is uncertain since few states have attempted to measure lost revenues resulting from federal provisions. For purposes of illustration, the New York State Department of Taxation and Finance estimates that the federal provision allowing the expensing of oil and gas exploration and development cost the state treasury $32 million in 1992.[44] According to the Montana Department of Revenue, federal provisions affecting energy businesses cost that state a half million dollars in each of the fiscal years 1992 and 1993.[45]

Property tax exemptions and utility assessments

There are at least three ways that energy property (or equipment) is treated differently than other types of property in tax codes: 1) energy-related property or equipment may be exempted; 2) energy property or equipment may be assessed at a higher or lower percentage of value than other types of property; and 3) energy property or equipment may be subject to higher or lower tax rates than other types of property. The major beneficiaries (or victims) of these special tax treatments are utilities, energy producers and owners, owners of pollution control equipment, and producers of ethanol.

Property taxes

Property taxes have long been the primary source of revenues for local governments. They currently comprise about three-fourths of local tax revenues. Property taxes represent a much smaller portion of state tax revenues, approximately 6 percent. Although most property taxes are imposed locally, local governments receive taxing authority from state constitutions and must tax according to certain rules proscribed by state legislatures. States may prevent certain types of property from being taxed by local governments.[46]

There are advantages and disadvantages to using property taxes as a major source of revenues. On the plus side, property taxes generate large amounts of revenue, they are virtually impossible to evade or avoid, and unlike other taxes, they allow governments to tax unrealized capital gains. But they also can create severe hardship for elderly and low-income homeowners and property values (and tax liabilities). Also, in periods of rapidly increasing property prices, tax burdens increase with no regard for increases in income of property owners.[47]

Property taxes are imposed on the assessed value of real and personal property located in a tax jurisdiction.[48] The assessed value is some fraction of the market value and usually varies according to class of property. Residential and agricultural properties are usually assessed at the lowest percentage of value. Utilities and other commercial and industrial property are usually highest.

Assessment of most property is conducted by local governments; however, in 36 states public utility property is assessed by the state government.[49] In most cases, the local property tax rate is then applied to the state assessed value. States assess utility property because it often crosses local boundaries; also, there are fewer opportunities for local governments to intentionally or unintentionally overvalue (and thus overtax) utility property.

Treatment of utilities

The bulk of the property tax breaks we identified apply to utilities. In some states the real or personal property of utilities is completely exempted from property taxes altogether. Kansas exempts the personal property of utilities with no offsetting special taxes. Hawaii and Wisconsin exempt both real and personal property of utilities but levy a gross receipts tax. Connecticut and the District of Columbia exempt the personal property of utilities in lieu of gross receipts taxes, but tax real property normally. Massachusetts exempts 75 percent of the value of electric transmission lines. In Pennsylvania and Michigan, utilities are exempt from local property taxes but must pay property taxes imposed by state governments.

More limited exemptions are available in other states. Utility property used to generate electricity for agricultural purposes is exempted in three states: Idaho, Minnesota and Utah. North Dakota exempts coal conversion plants from property taxes. At least eight states provide property tax breaks for electric cooperatives, which are completely exempt from property taxes in six states — Alaska, Idaho, Mississippi, North Dakota, South Dakota and Wisconsin. Idaho, North Dakota and South Dakota subject cooperatives to gross receipts taxes in place of property taxes. Tennessee exempts new plants and facilities of electric cooperatives for four assessment years. Missouri assesses the property of electric cooperatives at a reduced percentage of value. At least two states — Arizona and South Carolina — exempt the property of federal power marketing authorities.

Tax biases also may occur less formally through more (or less) frequent assessments of energy property or equipment. Recently, Seabrook, N.H., was ordered to refund some $50 million obtained through over-assessment of the Seabrook Nuclear Power Plant over a four-year period in the early 1980s. The court determined that the city had reassessed the Seabrook plant more frequently than other types of property. In periods of rapidly increasing property values, property that is assessed more often than other property will receive higher assessed values, thus increasing its tax burden.[50]

The incentive for state and local governments to heavily tax utility property may be strong for several reasons. First, utilities have enormous fixed capital investments and thus cannot readily leave the state; second, the demand for utility services is inelastic compared with most other products, thus the tax can more easily be passed through to consumers; third, many utilities sell some or all of their services to businesses and people outside the tax jurisdiction, and therefore some or all of the tax burden can be exported.

Historically, utility property has been taxed heavily compared to other businesses. In the 1960s and 1970s, IOUs were subject to effective tax rates on property that were two-thirds higher than effective rates on other types of non residential property.[51] In some states, IOUs may still be taxed more heavily than other types of businesses. For example, according to the Montana Department of Revenue, the effective tax rate on utility property in that state is 2.74 percent of market value, while the effective tax rate on most other property is 1.65 percent.

The disparity between the taxation of IOU property and other commercial property probably has diminished over the last two decades, however, and by some accounts may even have been reversed.[52] Today, assessment rates and tax rates in most states are the same for IOUs and other commercial property. Only seven states — Alabama, Arizona, Louisiana, Minnesota, Mississippi, Ohio and Tennessee — assess electric and gas utilities at higher rates. One state — Wyoming — assesses electric utilities at lower rates than other industrial property.

Improved assessment methods also have brought locally assessed property values more in line with the value of those properties in the marketplace. Disparities resulting from the undervaluation of non-utility properties relative to utility properties have consequently been reduced. As insurance against local property tax abuses, many states have instituted limits on how much assessments, rates or revenues may increase in a given year and require full disclosure of tax code changes.[53] Consequently, utilities and other property owners are better able to take their grievances to court.

Finally, in 1976, Congress enacted the "4-R Act," which provides relief to railroads and other transportation property owners who can prove in federal courts that transportation property values exceed the prevailing values for commercial and industrial property by more than 5 percent.[54] In the last few years, decisions emerging from those federal court cases have been used by non-transportation utilities to challenge property tax valuations in state courts. Indeed, many large companies now maintain well-funded legal staffs to challenge state and local tax laws, and to avoid court challenges by those companies, state and local governments must be careful not to step over the "litigation threshold" by over-valuing property.[55]

Table 14. States Exempting Pollution Control Equipment from Property Taxes

Alabama	Connecticut	Georgia	Idaho	Illinois
Indiana	Louisiana	Maine	Michigan	Nevada
New Hampshire	New Jersey	New York	North Carolina	Ohio
Rhode Island	South Carolina	Vermont	Wyoming	

Primary energy resources

Property tax laws in at least 14 states provide for special treatment of energy resources in the ground and equipment used in energy resource production. These provisions vary widely. At least three states — Alaska, Mississippi and Oklahoma — exempt all oil and natural gas in the ground, as well as production equipment. Louisiana and Michigan exempt oil and gas from property taxes, but they tax production equipment. Louisiana, Montana and North Dakota exempt coal. Wyoming's severance taxes are imposed in lieu of real property taxes on energy resources. Kansas and Oregon provide severance tax credits for property taxes paid.

Treatment of pollution control equipment

Pollution control equipment receives preferential treatment in at least 24 states. It is valued at a reduced percentage of value in Florida, Missouri, Tennessee and West Virginia. Oregon exempts pollution control equipment installed after 1966 by non-profit taxpayers. As shown in Table 14, pollution control equipment is entirely exempted from property taxes in 19 states.

Alcohol Fuels

At least three states provide property tax relief to producers of alcohol fuels. In South Dakota, alcohol production facilities are exempted entirely from property taxes. In Kentucky, alcohol production equipment is exempt from local property taxes, but it is taxed by the state at a reduced rate. Missouri assesses the property of gasohol production facilities at a reduced percentage of value.

Comparing energy tax rates: our method

In this section, we examine the tax treatments of petroleum, electricity and natural gas sold to residential, industrial and commercial energy consumers, along with gasoline sold for use in highway vehicles. These energy products account for 87 percent of total energy expenditures.[56]

First, we sum the rates for all energy taxes applied to these 10 end-use energy products. We subtract any portion of the taxes that serve as user fees and any special tax breaks that the energy product or its retail supplier receives. We then adjust the numbers upward to reflect property and income tax provisions that would increase the relative tax liability of utilities. Finally, we add any applicable sales taxes imposed on each energy product. Comparing these "actual" energy tax rates to each state's prevailing general sales tax provides a picture of how the tax rate on energy products compares to that of a typical product in the state.

Since the focus of our analysis is on the impact of state and local taxes on end-use energy prices, we include only those taxes and tax provisions that are most likely to be passed through to end-use consumers. Motor fuel excise taxes — added to the price of gasoline and diesel as they are sold at the pump — can safely be assumed to fall on consumers. Given the manner in which utilities are regulated — most expenses (including taxes) are recovered through rates — taxes on electric and natural gas utilities are assumed to be passed through to utility ratepayers. In other cases, the incidence is less clear. For example, a couple of states impose special taxes on the net income of energy businesses, and 12 states tax the gross receipts or volume sales of petroleum wholesalers. Even less certain are taxes on the production of energy natural resources, including coal, oil, natural gas, uranium and geothermal electric power.

For purposes of our analysis, we have assumed that taxes based on the value or per-unit sales of end-use energy products and taxes on energy utilities are fully passed through to consumers, and that all other taxes are not passed through to consumers. Thus we include taxes on energy product wholesalers if those taxes are based on end-use products. We exclude severance taxes and tax provisions that are based on the income of non-utility energy businesses.[57]

Our estimates of relative tax burdens on end-use energy products are comprised of four steps, each of which is described in detail below.

Step 1:

Identify taxes imposed on energy products.

First, we calculate the total energy tax burden on each of the 10 end-use energy products. These tax rates establish a baseline on the relative size of taxes on energy consumption, as well as an indication of which energy resources and uses are taxed most heavily.

State and local governments impose a variety of taxes on energy, and often more than one type of tax is imposed on a single end-use energy product. In New York, for example, motor gasoline is subject to a motor fuel excise tax, a petroleum tax, the general sales tax, a petroleum inspection fee and an oil spill contingency tax. If we looked only at the state's motor fuel excise tax (8 cents per gallon), we would conclude that taxes on motor fuels in New York are quite low compared with other states. When all of these taxes are combined, however, we see that the total tax burden on highway gasoline approaches 29 cents per gallon, about 39 percent of the pre-tax price.

Neither the state of New York, nor highway gasoline, is unique in this regard. Most states impose more than one type of tax on petroleum and other energy products, and the combination of taxes typically far exceeds any individual taxes. Of the 10 end-use energy products examined in this report, highway gasoline is subject to the highest aggregate tax rates, ranging from 7.7 percent of retail price in Alaska to 40 percent in Connecticut. In two-thirds of the states, combined state and local taxes on highway gasoline exceed 25 percent of the pump price. States that stand out as having relatively low aggregate taxes (less than 15 percent of pre-tax retail price) on gasoline include Alaska, Georgia, New Jersey and Wyoming.

Twenty-one states levy no energy taxes on non-highway uses of petroleum. Thirty-six states have aggregate rates that are 1 percent or less for non-highway uses of petroleum. In all states, petroleum products sold for non-highway uses are taxed at fractions of the rates imposed on highway gasoline (and diesel).

Electricity purchases are subject to some type of special taxes in all but a handful of states. Only three states levy no taxes on residential, industrial or commercial uses of electricity; seven states impose no taxes on natural gas. Aggregate rates are often low, however, representing 1 percent or less of electric and gas prices in 22 states. The highest aggregates tax on energy utilities is in New Jersey, followed by Illinois, Virginia, the District of Columbia and Washington. It is important to keep in mind that many of these high-tax states exempt electricity and natural gas from their general sales taxes, while many of the lower-tax states do not.

Table 15 reports aggregate energy tax rates as a percentage of the state average retail price of each product; excise tax rates have been converted to ad valorem rates using March 1993 prices, and taxes on wholesale products have been adjusted to reflect differences in retail and wholesale prices.

	Petroleum				Electricity			Natural Gas				Petroleum				Electricity			Natural Gas		
ST	Hwy	Home	Indust	Office	Home	Indust	Office	Home	Indust	Office	ST	Hwy	Home	Indust	Office	Home	Indust	Office	Home	Indust	Office
AL	27.6	0.4	0.4	0.4	6.5	6.5	6.5	6.4	6.4	6.4	**MT**	25.8	0.0	0.0	0.0	0.6	1.0	0.7	0.3	0.3	0.3
AK	7.7	0.0	0.0	0.0	0.5	0.6	0.5	0.0	0.0	0.0	**NE**	32.4	0.1	0.2	0.2	5.0	5.0	5.0	0.0	0.0	0.0
AZ	22.5	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	**NV**	37.0	0.6	0.0	0.9	0.4	0.4	0.4	0.4	0.4	0.4
AR	25.7	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	**NH**	23.4	0.7	0.9	0.8	1.0	1.0	1.0	1.0	1.0	1.0
CA	21.1	0.0	0.0	0.0	2.2	2.3	2.2	2.0	2.0	2.0	**NJ**	14.9	0.0	2.2	2.2	14.3	14.3	14.3	14.3	14.3	14.3
CO	27.5	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	**NM**	27.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5
CT	40.0	0.0	4.2	4.2	4.0	5.0	5.0	4.0	5.0	5.0	**NY**	31.2	0.0	11.5	19.6	5.0	5.0	5.0	5.0	5.0	5.0
DE	26.8	1.0	1.0	1.0	0.2	4.0	4.5	0.2	4.0	4.5	**NC**	31.4	0.0	0.0	0.0	3.2	3.2	3.2	3.2	3.2	3.2
DC	30.0	0.0	0.0	0.0	9.7	9.7	9.7	9.7	9.7	9.7	**ND**	20.6	2.2	2.3	2.3	0.4	0.5	0.4	0.0	0.0	0.0
FL	31.3	2.1	3.0	3.1	2.6	2.6	2.6	2.6	2.6	2.6	**OH**	30.9	0.0	0.0	0.0	4.8	4.8	4.8	4.8	4.8	4.8
GA	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**OK**	23.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HI	31.0	0.1	0.2	0.2	6.0	6.0	6.0	6.0	6.0	6.0	**OR**	31.0	0.0	0.0	0.0	3.8	3.8	3.8	3.3	3.3	3.3
ID	30.1	1.1	1.3	1.4	1.3	0.3	1.5	0.3	0.3	0.3	**PA**	31.0	0.0	0.0	0.0	4.7	4.7	4.7	5.3	5.3	5.3
IL	30.3	0.0	0.0	0.0	10.9	10.9	10.9	10.9	10.9	10.9	**RI**	36.4	0.0	0.0	0.0	4.0	4.0	4.0	3.0	3.0	3.0
IN	20.9	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	**SC**	24.0	0.5	0.8	0.8	0.7	0.0	0.8	0.0	0.0	0.0
IA	28.5	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	**SD**	26.9	1.2	1.5	1.6	0.2	0.2	0.2	0.2	0.2	0.2
KS	26.0	1.3	1.6	1.7	0.2	0.2	0.2	0.3	0.4	0.3	**TN**	29.7	1.4	1.6	1.7	3.1	3.1	3.1	1.6	1.6	1.6
KY	21.3	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	**TX**	27.7	0.7	0.8	0.8	0.2	4.9	4.9	4.9	4.9	4.9
LA	27.2	0.0	0.1	0.1	0.0	0.0	0.0	1.0	1.0	1.0	**UT**	26.0	0.6	0.7	0.7	0.3	0.3	0.3	0.3	0.3	0.3
ME	25.2	1.2	1.5	1.5	0.3	0.3	0.3	0.3	0.3	0.3	**VT**	19.0	0.5	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0
MD	32.3	2.4	2.5	2.5	6.3	6.4	6.3	4.8	4.8	4.8	**VA**	24.2	0.2	0.3	0.3	7.1	7.1	7.1	10.4	10.4	10.4
MA	27.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	**WA**	33.0	0.1	0.2	0.2	9.4	9.4	9.4	9.3	9.3	9.3
MI	22.5	1.0	1.2	1.4	0.6	0.6	0.6	0.6	0.6	0.6	**WV**	26.5	6.6	6.6	6.6	6.9	10.1	7.3	6.6	6.6	6.6
MN	25.9	1.2	1.5	1.5	1.1	1.1	1.1	1.1	1.1	1.1	**WI**	34.2	2.4	3.0	3.1	3.2	3.2	3.2	1.0	1.0	1.0
MS	25.0	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	**WY**	11.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3
MO	18.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*Percent of retail price										

Step 2:

Subtract user fees.

Some taxes are used to fund government-provided services that primarily benefit the payers of the taxes, or they are intended to compensate governments for costs incurred as a result of the taxable activity. These taxes — referred to as "user fees" — come in many forms, including garbage collection charges, tuition fees at public colleges and airport terminal fees. Traditionally, a large portion of the cost of building and maintaining highways has been paid for through tolls, vehicle registration fees, weight and axle fees, and highway fuel taxes. Over the last couple of decades, states also have relied increasingly on user fees to fund environmental mitigation activities.

User fees are fundamentally different from taxes used to finance government-at-large. Unlike user fees, general taxes are unrelated (or only distantly linked) to an individual's consumption of specific government services, or to costs incurred by governments as a result of an individual's activities.[58] Acknowledging this distinction, a senior research scientist at the American Association of State Highway and Transportation Officials said that "user taxes can be defined as those taxes or fees motor vehicle operators must pay for highways over and beyond their obligations for general government support."[59] For our purposes, this distinction is relevant not just to highway fuel taxes, but to environmental assessments, petroleum inspection fees and utility regulatory fees.

Gasoline is the only one of our 10 energy products with a significant user fee component, including both highway fuel taxes and petroleum inspection fees. The user fees associated with the other nine energy products are relatively small, consisting mostly of utility regulatory fees and environmental assessments.

Even when motor fuel excise taxes are combined with other highway user fees, they still fall far short of paying for highways. In 1990, general taxpayers contributed more than $16 billion to support road construction and maintenance, mostly coming from local taxes on non-highway related property. In other words, state governments generally collect sufficient funds from highway users to cover their roadway costs, but local governments do not.

In our analysis, we have counted highway fuel taxes as user fees in those states in which highway users are subsidized by general taxpayers. In states where the per-gallon subsidy to highways would be more than the existing highway tax, the subsidy is constrained to be no more than the highway tax rate. Not all highway fuel taxes are counted as user fees, since highway user revenues exceed current spending on highways in two states: Oklahoma and Rhode Island.[60] For these two states, only a portion of each state's highway fuel tax is counted as a user fee; we have reduced the user fee portion by the amount needed to eliminate the subsidy from highway users to general taxpayers.

The definition of motor fuel taxes as user fees evokes some controversy, but from an energy and environmental perspective is it important that roadway users be charged the full cost of their transportation. Revenues from these taxes — used to fund highways — primarily benefit payers of the tax. Also, highway fuel taxes correspond (although imperfectly) to costs imposed by the taxpayer in highway "wear and tear" and the need for additional lane capacity. If high-

Table 16. Aggregate User Fee Portions of Energy Tax Rates*

	Petroleum				Electricity			Natural Gas		
ST	Hwy	Home	Indust	Office	Home	Indust	Office	Home	Indust	Office
AL	27.2	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
AK	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AZ	22.5	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
AR	25.7	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4
CA	21.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO	27.5	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
CT	35.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DE	26.6	0.8	0.8	0.8	0.2	0.2	0.2	0.2	0.2	0.2
DC	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FL	31.3	2.1	3.0	3.1	0.1	0.1	0.1	0.1	0.1	0.1
GA	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HI	31.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
ID	30.1	1.1	1.3	1.4	0.3	0.3	0.3	0.3	0.3	0.3
IL	30.3	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
IN	20.9	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
IA	28.5	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
KS	26.0	1.3	1.6	1.7	0.2	0.2	0.2	0.3	0.4	0.3
KY	21.3	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
LA	27.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
ME	25.2	1.2	1.5	1.5	0.3	0.3	0.3	0.3	0.3	0.3
MD	32.3	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
MA	27.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3
MI	22.5	1.0	1.2	1.4	0.0	0.0	0.0	0.0	0.0	0.0
MN	25.9	1.2	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
MS	25.0	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2
MO	18.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MT	25.8	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3
NE	32.4	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
NV	37.0	0.6	0.0	0.9	0.4	0.4	0.4	0.4	0.4	0.4
NH	23.4	0.7	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0
NJ	12.7	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3
NM	27.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5
NY	22.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3
NC	31.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ND	20.6	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
OH	30.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OK	18.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OR	31.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3
PA	31.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3
RI	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SC	24.0	0.5	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
SD	24.3	1.2	1.5	1.6	0.2	0.2	0.2	0.2	0.2	0.2
TN	29.7	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
TX	27.7	0.7	0.8	0.8	0.2	0.2	0.2	0.2	0.2	0.2
UT	26.0	0.6	0.7	0.7	0.3	0.3	0.3	0.3	0.3	0.3
VT	18.5	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5
VA	23.6	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
WA	33.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
WV	20.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3
WI	34.2	2.4	3.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
WY	11.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3

*Percent of retail price

way transportation is subsidized by taxpayers, or if infrequent roadway users subsidize frequent roadway users, highways will tend to be over-used compared to less energy-intensive and environmentally damaging forms of transportation and alternatives to transportation.

Our treatment of highway fuel taxes as user fees also is consistent with a recent report by the U.S. Department of Energy looking at federal energy subsidies, which states that "although the earmarked taxes increase the cost of fuel and transportation services on which they are levied, they should not be viewed as negative subsidies relative to energy use, since the tax proceeds are expended to improve transport facilities which will increase overall transport demand."[61]

We also classify petroleum inspection fees and utility regulatory fees as user fees. Consumers of petroleum products benefit from inspection fees, which ensure that product quality meets specified standards. Suppliers of petroleum products also benefit, since they are assured that competitors cannot enter the market with inferior products at lower costs and undermine credibility of the industry. Utility regulatory fees are similar in that electricity and gas consumers benefit from a regulated utility structure that controls pricing and guarantees a reliable supply of power. In either case, persons who do not consume the taxable products do not benefit from the services provided with the revenues, and the more the taxpayer consumes, the more he benefits.

Environmental assessments also qualify as user fees. Revenues from these fees are used to bolster contingency funds to enable rapid and effective response by states to oil spills in inland or coastal waterways, or they are used to fund mitigation efforts associated with leaking underground petroleum storage tanks. The funds are in effect government-provided insurance or bonding for which the premiums are made up of involuntary fees.

When user fees are subtracted from the aggregate tax rates, the tax picture changes dramatically. Taxes on gasoline are all but eliminated in most states. The highest aggregate tax on gasoline is that of Rhode Island at 15.4 percent. Only 15 states are shown to have any energy taxes at all on petroleum products. Aggregate tax rates on electricity and natural gas are almost entirely unaffected by subtracting user fees, since there are relatively few user fees that apply to sales of electricity or natural gas.

As a final note, the classification of various levies as "user fees" or "taxes" is a precarious task that involves tracing revenues from various taxes to their respective uses. Complicating the matter is the fact that revenues from various taxes are often commingled in a single "general fund." For example, as of 1991, 12 states submitted all or some of their highway fuel tax revenues to a general fund, which was then tapped to pay for construction and maintenance of roads.[62] These are issues that states will have to wrestle with as they examine their individual energy tax codes.

In some states, certain types of energy businesses are subject to preferential or discriminatory treatment in state property and income tax codes. Nineteen states treat electric or gas utilities differently from other businesses. In some case, utilities are penalized through higher property assessment rates or higher property or income tax rates. In other cases, they receive tax breaks through exemptions or credits contained in income and property tax codes.

Table 17. State and Local Subsidies to Highways (thousand$)

ST	State Highway Funds	State Nonhighway Funds	Local Highway Funds	Local Nonhighway Funds	Net State & Local Subsidies to Highways	ST	State Highway Funds	State Nonhighway Funds	Local Highway Funds	Local Nonhighway Funds	Net State & Local Subsidies to Highways
AL	284	45,566	0	202,053	246,666	MT	5,373	8,751	0	67,178	70,337
AK	0	153,595	0	77,160	230,755	NE	4,372	96,410	659	128,928	219,307
AZ	2,980	165,606	0	289,658	452,170	NV	12	31,588	0	57,300	88,811
AR	753	21,306	0	113,000	133,303	NH	771	19,842	57,000	115,000	76,024
CA	2,148,294	2,565,498	1,480,158	1,894,870	818,937	NJ	52,538	236,507	0	520,590	614,496
CO	3,974	45,898	2,887	394,432	429,953	NM	5,924	18,404	4,206	43,995	44,441
CT	64,330	109,166	0	282,100	208,056	NY	127,213	152,556	678,610	2,403,006	1,631,857
DE	5,296	59,365	0	14,559	59,064	NC	5,026	109,595	0	193,158	274,316
DC	0	128,489	0	0	128,489	ND	2,856	4,631	0	73,785	72,982
FL	209,998	190,621	24,782	481,669	322,355	OH	4,864	96,711	0	259,655	316,969
GA	0	314,802	0	545,879	860,681	OK	198,180	54,493	2,336	78,976	-67,293
HI	4,949	306,801	37,853	57,107	321,081	OR	9,369	66,377	0	144,236	201,239
ID	4,174	6	288	51,955	44,676	PA	9,926	135,015	0	816,117	924,236
IL	5,841	185,521	100,206	408,379	487,853	RI	29,081	1,871	0	48,795	-47,514
IN	0	121,577	0	82,883	204,460	SC	1,289	12,631	0	99,191	108,301
IA	4,742	94,710	34	192,600	275,870	SD	12,943	33,916	7,811	81,573	94,378
KA	185	193,014	0	472,684	662,733	TN	3,099	97,802	9,915	92,936	127,292
KY	1,179	116,086	0	91,027	205,154	TX	1,064,026	116,790	14,432	2,278,606	923,688
LA	8,936	47,689	1,012	349,013	381,320	UT	0	55,618	0	87,924	143,542
ME	0	8,716	0	123,328	132,044	VT	1,045	3,998	0	60,096	58,506
MD	66,795	79,347	0	222,602	163,248	VA	88,307	305,411	15,169	247,527	323,590
MA	120,847	49,209	0	421,875	125,314	WA	417,562	554,435	0	330,196	414,243
MI	44,293	164,054	162	447,867	497,185	WV	0	56,213	0	49,815	106,028
MN	1,520	87,356	1	768,958	853,036	WI	12,514	24,628	0	700,352	662,785
MS	491	116,974	0	134,117	242,562	WY	1,201	49,139	0	56,636	103,226
MO	395	119,336	0	281,255	399,513	**US**	**4,757,717**	**7,833,640**	**2,437,521**	**17,435,601**	**16,372,265**

Step 3:

Adjust for related income and property tax provisions.

Utilities are not the only energy businesses subject to special income and property tax treatments. At least one state (Connecticut) exempts businesses subject to the state's petroleum business tax from the state's income tax. Nine of the 25 states that impose severance taxes on oil and natural gas exempt those resources from property taxes. Five of the 15 states with coal severance taxes exempt coal from property taxes. For reasons discussed above, the concern here is only with income and property taxes that apply to electric and gas utilities, since they are most likely to be passed through to end-use energy consumers.

In our analysis, we make adjustments for property and income tax provisions. Using data from the Federal Energy Regulatory Commission, we calculate the value of these provisions and convert them to end-use ad valorem equivalents.[63] Although these calculations were severely constrained by data limitations, not incorporating energy-related property and income tax treatments clearly would result in a biased picture.

About two-thirds of these provisions reduce the aggregate tax rate on electricity and natural gas, often by substantial amounts. The aggregate tax rate on electricity is reduced by more than 8 percentage points in Kansas and Connecticut, and Nebraska's is reduced by more than 7.1 points. Increases in aggregate tax rates are the result of states assessing utility property at a higher percentage of value than other types of businesses; the greatest increase is found in Mississippi, where aggregate tax rates on electricity and natural gas increase by almost four percentage points and two percentage points, respectively.

Table 18. Related Income and Property Tax Provisions*

	Petroleum				Electricity			Natural Gas		
ST	Hwy	Home	Indust	Office	Home	Indust	Office	Home	Indust	Office
AL	0.0	0.0	0.0	0.0	1.2	1.2	1.2	0.6	0.6	0.6
AK	0.0	0.0	0.0	0.0	-2.5	-2.5	-2.5	0.0	0.0	0.0
AZ	0.0	0.0	0.0	0.0	1.7	1.7	1.7	0.8	0.8	0.8
AR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CT	0.0	0.0	0.0	0.0	-8.2	-8.2	-8.2	-4.1	-4.1	-4.1
DE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC	0.0	0.0	0.0	0.0	-4.3	-4.3	-4.3	-2.2	-2.2	-2.2
FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HI	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
ID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
KS	0.0	0.0	0.0	0.0	-8.1	-8.1	-8.1	-4.1	-4.1	-4.1
KY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LA	0.0	0.0	0.0	0.0	2.2	2.2	2.2	1.1	1.1	1.1
ME	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	0.0	0.0	0.0	0.0	-2.1	-2.1	-2.1	-0.5	-0.5	-0.5
MA	0.0	0.0	0.0	0.0	-0.9	-0.9	-0.9	-0.1	-0.1	-0.1
MI	0.0	0.0	0.0	0.0	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2
MN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MS	0.0	0.0	0.0	0.0	3.9	3.9	3.9	2.0	2.0	2.0
MO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

	Petroleum				Electricity			Natural Gas		
ST	Hwy	Home	Indust	Office	Home	Indust	Office	Home	Indust	Office
MT	0.0	0.0	0.0	0.0	2.7	2.7	2.7	1.3	1.3	1.3
NE	0.0	0.0	0.0	0.0	-7.1	-7.1	-7.1	0.0	0.0	0.0
NV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NH	0.0	0.0	0.0	0.0	-1.8	-1.8	-1.8	-0.5	-0.5	-0.5
NJ	0.0	0.0	0.0	0.0	-3.3	-3.3	-3.3	-0.8	-0.8	-0.8
NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NY	0.0	0.0	0.0	0.0	-3.0	-3.0	-3.0	-0.7	-0.7	-0.7
NC	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1
ND	0.0	0.0	0.0	0.0	-2.8	-2.8	-2.8	0.0	0.0	0.0
OH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8
OK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PA	0.0	0.0	0.0	0.0	-3.6	-3.6	-3.6	-1.8	-1.8	-1.8
RI	0.0	0.0	0.0	0.0	-1.2	-1.2	-1.2	-0.3	-0.3	-0.3
SC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TN	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0
TX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VT	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0
VA	0.0	0.0	0.0	0.0	-1.9	-1.9	-1.9	-0.5	-0.5	-0.5
WA	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5
WV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WI	0.0	0.0	0.0	0.0	-4.6	-4.6	-4.6	-2.3	-2.3	-2.3
WY	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.2	0.2	0.2

*Percent of retail price

Step 4:

Add applicable sales taxes.

Energy products are frequently exempted from state and local sales taxes. Table 19 shows the general sales tax rates levied on each of the 10 end-use products. Only eight states subject gasoline to sales taxes. Frequently, energy products purchased for residential and industrial uses also are exempted. By contrast, commercial energy products are usually taxed at the full sales tax rate. As general sales tax rates average more than 6 percent nationally, they increase the overall tax on energy products to which they are applied by a significant amount.

Table 19. Applicable General Sales Tax Rates*

	Petroleum				Electricity			Natural Gas		
ST	Hwy	Home	Indust	Office	Home	Indust	Office	Home	Indust	Office
AL	0.0	6.3	6.3	6.3	2.3	2.3	2.3	2.3	2.3	2.3
AK	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
AZ	0.0	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
AR	0.0	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
CA	7.5	7.5	7.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0
CO	0.0	3.1	3.1	6.1	0.0	3.1	6.1	0.0	3.1	6.1
CT	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.6
DE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC	0.0	6.0	0.0	6.0	0.0	0.0	6.0	0.0	0.0	6.0
FL	0.0	0.0	0.0	6.0	0.0	7.0	7.0	0.0	6.0	6.0
GA	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
HI	4.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
ID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IL	8.6	8.6	8.6	8.6	0.0	0.0	0.0	0.0	0.0	0.0
IN	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0
IA	0.0	5.1	0.0	5.1	5.1	0.0	5.1	5.1	0.0	5.1
KS	0.0	1.0	1.0	5.9	1.0	2.5	5.9	1.0	2.5	5.9
KY	0.0	0.0	6.0	6.0	0.0	6.0	6.0	0.0	6.0	6.0
LA	0.0	7.8	0.0	7.8	7.8	7.8	7.8	0.0	0.0	0.0
ME	0.0	0.0	0.3	6.0	0.1	0.3	6.0	0.0	0.3	6.0
MD	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0
MA	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0
MI	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0
MN	0.0	0.0	0.0	7.1	3.5	0.0	7.1	3.5	0.0	7.1
MS	0.0	0.0	1.5	7.0	0.0	1.5	7.0	0.0	1.5	7.0
MO	0.0	1.4	0.0	5.7	1.4	5.7	5.7	1.4	0.0	5.7

	Petroleum				Electricity			Natural Gas		
ST	Hwy	Home	Indust	Office	Home	Indust	Office	Home	Indust	Office
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	5.9	0.0	5.9	5.9	0.0	5.9	5.9	0.0	5.9
NV	0.0	0.0	6.6	6.6	0.0	0.0	0.0	0.0	0.0	0.0
NH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NM	0.0	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
NY	7.4	1.7	1.7	7.4	1.7	1.7	7.4	1.7	1.7	7.4
NC	0.0	6.0	1.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0
ND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.3	4.3
OH	0.0	5.8	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0
OK	0.0	7.3	0.0	7.3	2.8	0.0	7.3	2.7	0.0	7.3
OR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PA	0.0	0.0	0.0	6.0	0.0	0.0	6.0	0.0	0.0	6.0
RI	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0
SC	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0
SD	0.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
TN	0.0	0.0	1.5	7.9	0.0	1.5	7.9	0.0	1.5	7.9
TX	0.0	7.6	7.6	7.6	1.3	1.3	7.6	1.3	1.3	7.6
UT	0.0	3.3	0.0	6.3	3.3	0.0	6.3	3.3	0.0	6.3
VT	0.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0
VA	0.2	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0
WA	0.0	7.4	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0
WV	0.0	6.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
WI	0.0	0.0	0.0	5.1	1.3	0.0	5.1	1.3	0.0	5.1
WY	0.0	4.8	0.0	4.8	4.8	0.0	4.8	4.8	0.0	4.8

* Percent of retail price, including energy taxes

Comparing energy tax rates: our findings

Our analysis underscores the importance of looking at energy taxation comprehensively. On the surface, it may appear that energy products are heavily taxed. Every time we put gasoline in our cars, we face a host of taxes that includes everything from highway fuel taxes to sales taxes to petroleum inspection fees. Each month, we receive a bill from our electric or gas company that includes utility gross receipts taxes, sales taxes and regulatory fees.

But hidden within state and local tax codes are hundreds of special provisions that significantly alter the tax equation. Energy products often are exempted from taxes imposed on non-energy products — every sales-tax state except Georgia, for example, provides exemptions for energy in their sales tax codes. Also, many of the taxes levied on energy products are in fact user fees that are intended to compensate for highway usage, regulatory activities, product inspections, environmental clean-up and other direct costs.

This chapter reports the results of our analysis, including energy tax rates, comparisons between energy tax rates and general sales tax rates, and revenue impacts.

Energy tax rates

In our analysis, we examine the tax treatments of the 10 most widely consumed end-use energy products, including: petroleum, electricity and natural gas sold for use in cars, homes, factories and offices. These are products that virtually all businesses and consumers use on a daily basis, representing some 87 percent of total energy expenditures. It is necessary to look at the tax treatment of energy sold to different types of consumers because state and local tax laws frequently differentiate among different energy uses; energy products consumed in homes are treated differently from energy products consumed in factories, which are treated differently from energy products consumed in offices.

Rather than examining only a few well-known energy taxes, such as gasoline taxes or utility gross receipts taxes, the energy tax rates reported in Table 20 incorporate all of the energy taxes that apply to each energy product in each state. The tax rates are adjusted to reflect user fees, various special tax provisions that apply to the sellers or users of each energy product, and applicable general sales taxes.[64]

When those adjustments are made, **state and local taxes on the 10 energy products represent 4.3 percent of pre-tax retail prices, nationally.**

The national average energy tax rate masks differences between uses and types of energy. Taxes on energy sold for use in industrial processes are on average 43 percent lower than taxes on energy used in offices for lighting, machinery, and heating and cooling. Highway gasoline is taxed at less than half the rate imposed on energy consumed in offices. The average tax rates imposed on different types of energy ranging from 3.3 percent on petroleum to 4.7 percent on electricity to 5 percent on natural gas.

The national average also masks considerable variation among states. After accounting for user fees and offsetting tax breaks, 33 states are shown to effectively impose no taxes on highway gasoline. In 11 states, tax rates are negative or zero for energy consumed in homes, in 12 states tax rates are negative or zero for energy consumed in industrial processes, and in 12 states tax rates are negative or zero for energy consumed in offices.[65] New York imposes the highest overall combined rates on gasoline and non-transportation petroleum products. Illinois and New Jersey top the list for tax rates on electricity and natural gas sales. On a sectoral basis, Illinois imposes the highest rate on home and industrial process energy use, while Texas imposes the highest overall energy tax rates on the non-industrial commercial sector.

Table 20. Tax Rates on Energy*

	Petroleum				Electricity			Natural Gas		
ST	Hwy	Home	Indust	Office	Home	Indust	Office	Home	Indust	Office
AL	0.4	6.7	6.7	6.7	9.9	10.0	9.9	9.2	9.2	9.2
AK	0.5	0.4	0.4	0.4	-1.6	-1.4	-1.5	0.4	0.4	0.4
AZ	0.0	6.1	6.1	6.1	7.8	7.8	7.8	6.9	6.9	6.9
AR	0.0	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
CA	9.1	7.5	7.5	7.5	2.2	2.3	2.2	2.0	2.0	2.0
CO	0.0	3.1	3.1	6.1	0.0	3.1	6.1	0.0	3.1	6.1
CT	4.2	0.0	4.2	4.8	-4.2	-3.2	-2.5	-0.1	0.9	1.6
DE	0.2	0.2	0.2	0.2	0.0	3.8	4.3	0.0	3.8	4.3
DC	0.0	6.0	0.0	6.0	5.4	5.4	11.9	7.5	7.5	14.1
FL	0.0	0.0	0.0	6.2	2.5	9.7	9.7	2.5	8.7	8.7
GA	5.9	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
HI	4.0	4.0	4.0	4.0	5.7	5.7	5.7	5.8	5.8	5.8
ID	0.0	0.0	0.0	0.0	1.0	0.0	1.2	0.0	0.0	0.0
IL	11.2	8.6	8.6	8.6	10.7	10.7	10.7	10.7	10.7	10.7
IN	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0
IA	0.0	5.1	0.0	5.1	5.1	0.0	5.1	5.1	0.0	5.1
KS	0.0	1.0	1.0	6.0	-7.1	-5.6	-2.2	-3.1	-1.6	1.9
KY	0.0	0.0	6.0	6.0	0.0	6.0	6.0	0.0	6.0	6.0
LA	0.0	7.8	0.0	7.8	10.0	10.0	10.0	2.1	2.1	2.1
ME	0.0	0.0	0.3	6.1	0.1	0.3	6.0	0.0	0.3	6.0
MD	0.0	2.4	2.5	7.6	4.0	4.1	9.4	4.1	4.1	9.3
MA	0.0	0.0	0.0	5.0	-0.9	-0.9	4.1	-0.1	-0.1	4.9
MI	0.0	4.0	0.0	4.1	4.2	0.2	4.2	4.4	0.4	4.4
MN	0.0	0.0	0.0	7.2	4.7	1.1	8.2	4.7	1.1	8.2
MS	0.0	0.0	1.5	7.0	3.9	5.5	11.0	2.0	3.5	9.0
MO	0.0	1.4	0.0	5.7	1.4	5.7	5.7	1.4	0.0	5.7

	Petroleum				Electricity			Natural Gas		
ST	Hwy	Home	Indust	Office	Home	Indust	Office	Home	Indust	Office
MT	0.0	0.0	0.0	0.0	3.1	3.4	3.1	1.4	1.4	1.4
NE	0.0	5.9	0.0	5.9	4.1	-2.1	4.1	5.9	0.0	5.9
NV	0.0	0.0	6.6	6.6	0.0	0.0	0.0	0.0	0.0	0.0
NH	0.0	0.0	0.0	0.0	-0.8	-0.8	-0.8	0.5	0.5	0.5
NJ	2.2	0.0	2.2	2.2	10.7	10.7	10.7	13.2	13.2	13.2
NM	0.0	6.1	6.1	6.1	6.2	6.2	6.2	6.2	6.2	6.2
NY	18.6	1.7	13.4	28.4	3.5	3.5	9.5	5.8	5.8	11.7
NC	0.0	6.0	1.0	6.0	6.1	6.1	6.1	6.2	6.2	6.2
ND	0.0	2.0	2.0	2.0	-2.4	-2.2	-2.4	4.3	4.3	4.3
OH	0.0	5.8	0.0	5.8	4.8	4.8	4.8	5.5	5.5	5.5
OK	4.9	7.3	0.0	7.3	2.8	0.0	7.3	2.7	0.0	7.3
OR	0.0	0.0	0.0	0.0	3.5	3.5	3.5	3.0	3.0	3.0
PA	0.0	0.0	0.0	6.0	0.8	0.8	7.1	3.2	3.2	9.5
RI	15.4	0.0	0.0	7.0	2.8	2.8	10.1	2.7	2.7	9.9
SC	0.0	0.0	0.0	5.0	0.7	0.0	5.8	0.0	0.0	5.0
SD	2.6	5.3	5.3	5.4	5.3	5.3	5.3	5.3	5.3	5.3
TN	0.0	1.4	3.1	9.7	2.9	4.4	11.0	1.5	3.0	9.5
TX	0.0	7.6	7.6	7.6	1.3	6.1	12.7	6.1	6.1	12.7
UT	0.0	3.3	0.0	6.3	3.3	0.0	6.3	3.3	0.0	6.3
VT	0.5	0.5	5.5	5.5	0.7	5.7	5.7	0.5	5.6	5.6
VA	0.9	0.0	0.0	4.8	5.0	5.0	5.0	9.7	9.7	9.7
WA	-0.1	7.3	0.0	7.4	9.7	9.7	9.7	9.6	9.6	9.6
WV	6.6	13.0	6.6	13.0	6.6	9.8	7.0	6.3	6.3	6.3
WI	0.0	0.0	0.0	5.2	-0.1	-1.4	3.8	-0.1	-1.3	3.8
WY	0.0	4.8	0.0	4.8	5.2	0.4	5.2	5.0	0.2	5.0

* Percent of pre-tax retail price; net energy tax plus applicable sales tax

Are energy taxes too high or too low?

Tax rates in themselves provide little insight as to whether taxes on energy products are too high or too low. The final step in our analysis is to compare the taxes on the 10 energy products to an equivalent tax on non-energy products — the general sales tax. Comparing tax rates on energy with combined state and local general sales tax rates provides an idea of the extent to which end-use energy products are taxed at higher or lower rates than other products. More precisely, we compare tax rates on energy to the general sales tax rate on products that receive no exemptions or special rates.[66] Importantly, those products often include insulation, solar panels and other products used to improve energy efficiency, not to mention a new pair of shoes, a bicycle, or a garden rake.

Based on this comparison, we find that taxes on energy products are 30 percent lower than the average general sales tax.

Where state and local governments tax energy at rates higher than their general sales tax rates, it usually is by a small amount. In a few instances, however, the energy rate is substantially higher. In New York , tax rates on highway petroleum are 11.2 percentage points higher than the state's general sales tax rate, and rates on non-highway petroleum are 5.1 percentage points higher. Taxes on electricity and natural gas are highest relative to sales taxes in New Jersey. Energy used to heat and power offices is seldom provided preferential treatment, and in fact is usually taxed at rates higher than those on non-energy products.

Table 21. Combined State and Local Tax Rates on End-Use Energy Products

ST	Energy Tax Rate (percent of pre-tax retail prices)	General Sales Tax Rate (percent of pre-tax retail prices)	Percentage Point Difference	Percentage Difference
States that "Undertax" Energy				
ND	-0.1	5.3	-5.4	3907%
CT	-0.6	6	-6.6	1171%
NV	0.5	6.6	-6	1163%
ID	0.4	5	-4.6	1104%
WI	0.5	5.3	-4.8	1051%
MA	0.9	5	-4.1	454%
ME	1.2	6	-4.8	399%
SC	1.1	5	-3.9	349%
KS	-2.5	5.9	-8.4	335%
AK	-0.4	0.4	-0.8	219%
CO	2.1	6.1	-3.9	184%
PA	2.3	6	-3.7	165%
MO	2.1	5.7	-3.5	164%
UT	2.5	6.3	-3.7	150%
NE	2.4	5.9	-3.5	147%
MN	2.9	7.1	-4.2	146%
WY	2.0	4.8	-2.8	143%
TN	3.6	7.9	-4.3	121%
VT	2.3	5	-2.7	120%
KY	2.8	6	-3.2	115%
NH	-0.4	0	-0.4	100%
OK	3.6	7.3	-3.6	99%
IA	2.7	5.1	-2.5	92%
CA	4.1	7.5	-3.5	85%
LA	4.3	7.8	-3.5	81%
MS	4	7	-3	77%
MI	2.3	4	-1.7	72%
OH	3.8	5.8	-2	53%
FL	3.9	6	-2.1	53%
IN	3.4	5	-1.6	49%
TX	5.2	7.6	-2.4	45%
NC	4.4	6	-1.6	36%
NM	4.5	6.1	-1.6	35%
MD	3.7	5	-1.3	34%
AR	4.2	5.2	-1	25%
VA	3.9	4.8	-0.9	23%
WA	6.3	7.4	-1.1	17%
SD	4.5	5.3	-0.7	16%
RI	6.5	7	-0.5	7%
AZ	5.7	6.1	-0.3	6%
States that "Overtax" Energy				
GA	5.5	5.3	0.1	2%
AL	7.2	6.3	1	14%
WV	7.2	6	1.2	16%
IL	10.7	8.6	2	19%
NY	9.2	7.4	1.8	19%
HI	5.1	4	1.1	21%
DC	7.7	6	1.7	23%
NJ	7.8	6	1.8	23%
DE	1.4	0	1.4	100%
MT	1.6	0	1.6	100%
OR	2.1	0	2.1	100%
US	**4.3**	**6.2**	**-1.9**	**44%**

Table 22. Difference Between General Sales Tax Rate and Energy Tax Rate*

	Petroleum				Electricity			Natural Gas		
ST	Hwy	Home	Indust	Office	Home	Indust	Office	Home	Indust	Office
AL	-5.8	0.5	0.5	0.5	3.7	3.7	3.7	3.0	3.0	3.0
AK	0.0	0.0	0.0	0.0	-2.0	-1.9	-1.9	0.0	0.0	0.0
AZ	-6.1	0.0	0.0	0.0	1.7	1.7	1.7	0.9	0.9	0.9
AR	-5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CA	1.6	0.0	0.0	0.0	-5.3	-5.2	-5.3	-5.5	-5.5	-5.5
CO	-6.1	-3.0	-3.0	0.0	-6.1	-3.0	0.0	-6.1	-3.0	0.0
CT	-1.8	-6.0	-1.8	-1.2	-10.	-9.2	-8.5	-6.1	-5.1	-4.4
DE	0.2	0.2	0.2	0.2	0.0	3.8	4.3	0.0	3.8	4.3
DC	-6.0	0.0	-6.0	0.0	-0.6	-0.6	5.9	1.5	1.5	8.1
FL	-6.0	-6.0	-6.0	0.2	-3.5	3.7	3.7	-3.5	2.7	2.7
GA	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HI	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.8	1.8	1.8
ID	-5.0	-5.0	-5.0	-5.0	-4.0	-5.0	-3.8	-5.0	-5.0	-5.0
IL	2.6	0.0	0.0	0.0	2.1	2.1	2.1	2.1	2.1	2.1
IN	0.0	0.0	-5.0	0.0	0.0	-5.0	0.0	0.0	-5.0	0.0
IA	-5.1	0.0	-5.1	0.0	0.0	-5.1	0.0	0.0	-5.1	0.0
KS	-5.9	-4.9	-4.9	0.1	-13.	-11.	-8.1	-9.0	-7.5	-4.0
KY	-6.0	-6.0	0.0	0.0	-6.0	0.0	0.0	-6.0	0.0	0.0
LA	-7.8	0.0	-7.8	0.0	2.2	2.2	2.2	-5.8	-5.8	-5.8
ME	-6.0	-6.0	-5.7	0.1	-5.9	-5.7	0.0	-6.0	-5.7	0.0
MD	-5.0	-2.6	-2.5	2.6	-1.0	-0.9	4.4	-0.9	-0.9	4.3
MA	-5.0	-5.0	-5.0	0.0	-5.9	-5.9	-0.9	-5.1	-5.1	-0.1
MI	-4.0	0.0	-4.0	0.1	0.2	-3.8	0.2	0.4	-3.6	0.4
MN	-7.1	-7.1	-7.1	0.1	-2.4	-6.0	1.2	-2.4	-6.0	1.2
MS	-7.0	-7.0	-5.5	0.0	-3.1	-1.6	4.0	-5.0	-3.5	2.0
MO	-5.7	-4.3	-5.7	0.0	-4.3	0.0	0.0	-4.3	-5.7	0.0
MT	0.0	0.0	0.0	0.0	3.1	3.4	3.1	1.3	1.3	1.3
NE	-5.9	0.0	-5.9	0.0	-1.8	-8.0	-1.8	0.0	-5.9	0.0
NV	-6.6	-6.6	0.0	0.1	-6.6	-6.6	-6.6	-6.6	-6.6	-6.6
NH	0.0	0.0	0.0	0.0	-0.8	-0.8	-0.8	0.5	0.5	0.5
NJ	-3.8	-6.0	-3.8	-3.8	4.7	4.7	4.7	7.2	7.2	7.2
NM	-6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NY	11.2	-5.7	6.0	21.0	-3.8	-3.8	2.1	-1.6	-1.6	4.3
NC	-6.0	0.0	-5.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2
ND	-5.3	-3.3	-3.3	-3.3	-7.6	-7.5	-7.7	-1.0	-1.0	-1.0
OH	-5.8	0.0	-5.8	0.0	-1.0	-1.0	-1.0	-0.2	-0.2	-0.2
OK	-2.3	0.0	-7.3	0.0	-4.5	-7.3	0.0	-4.6	-7.3	0.0
OR	0.0	0.0	0.0	0.0	3.5	3.5	3.5	3.0	3.0	3.0
PA	-6.0	-6.0	-6.0	0.0	-5.2	-5.2	1.1	-2.8	-2.8	3.5
RI	8.4	-7.0	-7.0	0.0	-4.2	-4.2	3.0	-4.3	-4.3	2.9
SC	-5.0	-5.0	-5.0	0.0	-4.3	-5.0	0.8	-5.0	-5.0	0.0
SD	-2.7	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
TN	-7.9	-6.5	-4.8	1.8	-5.0	-3.4	3.1	-6.4	-4.9	1.6
TX	-7.6	0.1	0.1	0.1	-6.2	-1.5	5.1	-1.5	-1.5	5.1
UT	-6.3	-3.0	-6.3	0.0	-3.0	-6.3	0.0	-3.0	-6.3	0.0
VT	-4.5	-4.5	0.5	0.5	-4.3	0.7	0.7	-4.5	0.6	0.6
VA	-3.9	-4.8	-4.8	0.0	0.2	0.2	0.2	4.9	4.9	4.9
WA	-7.4	0.0	-7.3	0.0	2.3	2.3	2.3	2.2	2.2	2.2
WV	0.6	7.0	0.6	7.0	0.6	3.8	1.0	0.3	0.3	0.3
WI	-5.3	-5.3	-5.3	-0.1	-5.4	-6.7	-1.5	-5.4	-6.6	-1.5
WY	-4.8	0.0	-4.8	0.0	0.4	-4.4	0.4	0.2	-4.6	0.2

* Percentage point difference; negative numbers indicate undertaxation of energy

Highway Gasoline

Fully three-quarters of the states undertax gasoline, primarily because the bulk of state taxes on gasoline are used to pay for roads and are collected only from people who use those roads. Other user fees associated with gasoline products include inspection fees and environmental assurance taxes. As discussed earlier, user fees are fundamentally different from sales, income and property taxes, which are used to support general government functions — such as police protection, health and social services, and education.

Highway user fees represent two-thirds of the overall tax burden on motor gasoline. When highway user fees are subtracted from taxes on gasoline, only 13 states are shown to impose *any* taxes on gasoline, and in four of those states the tax rate we calculated is just fractions of a percent of the pre-tax price. Even when state and local sales taxes are included — they are applicable in eight states — only 18 states are found to impose taxes on motor gasoline. These tax rates vary widely, ranging from 0.22 percent of pre-tax prices in Delaware to 15.4 percent in Rhode Island. Nationally (on a weighted average basis), gasoline is taxed at just 3 percent of the pre-tax price, equal to less than half of the average general sales tax rate.

Non-Highway Petroleum

Thirty-four states tax non-highway uses of petroleum at rates below their general sales tax rates. The low rates are driven by exemptions from both energy taxes and general taxes for energy used in homes and industry. Nationally, non-highway petroleum is taxed at a rate that is 2.2 percentage points (or 36 percent) less than the average general sales tax rate. The greatest disparity between non-highway petroleum taxes and general sales taxes is found in Louisiana, where the spread equals 7.8 percentage points for both home and commercial use. Louisiana is by no means alone, however; the spread between tax rates on non-highway petroleum products and general sales tax rates exceeds 3 percentage points in 26 states.

Electricity and Natural Gas

Sales of electricity and natural gas receive relatively few tax breaks compared to petroleum products, but they still are taxed at rates lower than the rates levied on most other non-energy products. Thirty-two states undertax electricity relative to non-energy products, and 30 states undertax natural gas. Nationally, electricity and natural gas are taxed at rates that are 1.2 percentage points and 1.4 percentage points less, respectively, than the average general sales tax rate. Kansas and Connecticut stand out here, but they are not alone; only 15 states tax electricity and natural gas at rates higher than their general sales tax.

Table 23. Revenue Impacts by State (million$)

ST	Energy Tax Revenues	User Fee Revenues	Impact of Property & Income Tax Provisions	General Sales Tax Revenues	Net Energy Tax Rev. Plus Sales Tax Rev.	Net Energy Tax Subsidies	ST	Energy Tax Revenues	User Fee Revenues	Impacts of Property & Income Tax Provisions	General Sales Tax Revenues	Net Energy Tax Rev. Plus Sales Tax Rev.	Net Energy Tax Subsidies
AL	705	427	46	143	467	63	MT	91	88	18	0	21	21
AK	21	19	-11	5	-4	-9	NE	236	185	-73	78	56	-83
AZ	305	305	61	251	312	-19	NV	172	172	0	10	10	-113
AR	247	247	0	186	186	-47	NH	110	100	-17	0	-6	-6
CA	2,500	1,898	0	1,096	1,583	-1,353	NJ	1,557	366	-203	0	987	227
CO	325	325	0	93	93	-171	NM	170	170	0	104	104	-37
CT	574	365	-249	9	-30	-355	NY	2,326	930	-397	1,263	2,208	428
DE	98	80	0	0	17	17	NC	1,000	781	-12	251	459	-165
DC	119	43	-29	29	75	17	ND	62	56	-12	5	-1	-57
FL	1,685	1,396	0	380	669	-353	OH	1,699	1,088	34	33	677	-359
GA	269	269	0	605	578	14	OK	299	237	0	123	185	-184
HI	154	106	-1	26	67	14	OR	406	324	0	0	83	83
ID	117	111	0	0	6	-67	PA	1,696	1,103	-395	227	425	-701
IL	2,518	1,112	0	586	1,932	369	RI	138	62	-8	23	91	-7
IN	404	404	0	352	314	-153	SC	346	329	0	49	66	-229
IA	291	291	0	113	113	-104	SD	80	73	0	40	47	-8
KS	245	245	-172	72	-100	-335	TN	714	561	-5	126	274	-332
KY	313	313	0	160	160	-183	TX	2,495	1,884	0	1,115	1,726	-778
LA	425	402	108	314	444	-359	UT	145	145	0	52	52	-78
ME	135	135	0	25	25	-100	VT	52	47	1	16	21	-26
MD	785	523	-74	53	241	-83	VA	1,002	575	-94	14	346	-79
MA	532	532	-41	128	87	-395	WA	914	571	18	21	382	-64
MI	789	732	-28	320	349	-251	WV	350	141	0	6	215	35
MN	459	416	0	137	180	-263	WI	650	545	-167	93	31	-329
MS	242	242	93	64	157	-121	WY	28	28	2	19	21	-30
MO	382	382	0	171	171	-281	**US**	**31,375**	**21,881**	**-1,605**	**8,984**	**16,572**	**-7,377**

Note: Rows do not add up because of the different expenditure bases used to calculate revenues for each tax category. In particular, "energy tax revenues," "user fee revenues" and "impact of property an income tax provisions" are based on energy expenditures that include both energy and general sales taxes; "general sales tax revenues" are based on energy expenditures excluding sales taxes, but including energy taxes; "net energy tax revenues plus sales tax revenues" are based on energy expenditures including sales taxes, but excluding energy taxes.

Revenue impacts

Our analysis indicates that state and local governments are subsidizing the consumption of energy by drivers, households and businesses. At the same time, governments are sacrificing billions of dollars that could be used to reduce income and property tax burdens, fund energy efficiency improvements in government buildings, finance low-income weatherization programs, support the development and commercialization of energy-efficient and clean energy technologies, or support job training programs.

While state and local governments collect $31.5 billion in taxes each year on the 10 end-use energy products examined in this report, two-thirds of those revenues are user fees, providing services that directly benefit consumers of those products, such as road construction and maintenance and utility regulation, or are used to cover the costs incurred by government for mitigation of environmental damages. An additional $1.6 billion is offset by tax breaks found in property and income tax codes.

State and local governments would collect an additional $7 billion a year if they taxed the 10 end-use energy products the same as other goods.[67] The cost to governments of exemptions just for electricity and gasoline amounts to $4.4 billion.

The combined revenue losses of states that undertax energy products is nearly $13 billion annually. California is the biggest loser (not surprising given that state's large population and the volume of energy consumed), sacrificing well over $1 billion annually from special tax treatment of end-use energy products. Other big revenue losers include (forgoing more than $300 million annually, from highest to lowest): Texas, Pennsylvania, Massachusetts, Louisiana, Ohio, Connecticut, Florida, Kansas, Tennessee and Wisconsin. Twenty additional states sacrifice $50 million or more in revenues from undertaxing energy. Eleven

Category	Petroleum				Electricity			Natural Gas			Total
	Hwy. Gasoline	Home	Indust.	Office	Home	Indust.	Office	Home	Indust.	Office	
Energy Tax Revenues	22,003	51	251	236	2,559	1,544	2,306	1,188	665	571	31,375
User Fee Revenues	21,368	36	110	26	109	57	84	44	25	23	21,881
Impact of Property & Income Tax Provisions	0	0	0	0	612	299	521	102	22	48	1,605
General Sales Tax Revenues	2,168	232	861	339	1,148	589	2,457	409	194	589	8,984
Net Energy Tax Revenues Plus Sales Tax Revenues	2,504	247	1,002	550	2,986	1,777	4,158	1,451	811	1,088	16,572
Net Energy Tax Subsidies	**-2,677**	**-467**	**-733**	**-190**	**-2,126**	**-937**	**264**	**-509**	**-494**	**112**	**-7,377**

Table 24. Revenues (million$)

Note: Columns do not add up because of the different expenditure bases used to calculate revenues for each tax category. In particular, "energy tax revenues," "user fee revenues" and "impact of property and income tax provisions" are based on energy expenditures that exclude both energy and general sales taxes; "general sales tax revenues" are based on energy expenditures excluding sales taxes, but including energy taxes; "net energy tax revenues plus sales tax revenues" are based on energy expenditures including sales taxes but excluding energy taxes.

states tax energy at rates higher than non-energy goods, collecting $1.3 billion more in revenues than if they taxed end-use energy the same as other non-energy products. New York, New Jersey and Illinois comprise the bulk of those revenues, together accounting for 86 percent of the total.

Looking at overall revenue impacts masks at least one feature of state and local energy taxation. Many more states would be shown to undertax energy if it were not for their tax treatment of commercial energy purchases; as noted previously, these purchases usually are taxed at rates the same as or higher than residential, industrial and highway energy purchases. Thus, the excess revenues collected from commercial energy consumers partially offset the subsidies to residential, industrial and highway energy consumers.

Opportunities for tax reform

Few of the energy-related taxes and tax breaks identified in this report are directly (or even indirectly) linked to any stated energy or environmental policies. They usually are the product of other fiscal and social objectives, such as tax fairness and interstate competitiveness. They have become energy policies only by accident, and consequently, they are ignored in energy and environmental debates.

Still, the tax policies of state and local governments matter a great deal. The special tax treatment granted to the 10 end-use energy products examined in our analysis result in consumption levels that are 1.7 percent higher than if those products were simply subject to the general sales tax rates levied on other products.[68] Preferential tax treatment of energy thus frustrates the nation's efforts to meet its clean air objectives and goals for greenhouse gas reductions, and discourages investments in efficiency and renewable energy resources. To illustrate, taxing energy products the same as other products would reduce annual carbon dioxide emissions by some 16 million metric tons, approximately 15 percent of President Clinton's carbon emissions reduction goal for the year 2000.[69]

From a fiscal perspective, the 30-percent difference between taxes on energy and non-energy products means that $7 billion a year is not available to states for reducing other tax burdens or for providing critical government services. With that $7 billion, states could more than double the size of their state police forces, expand the capacity of their state and local judicial system by one-half, or increase local police force budgets by one-fourth. That $7 billion would double state and local spending for libraries, leaving more than enough money to house every homeless person in the country. As state and local governments struggle to address crime problems, maintain and rebuild infrastructure, improve educational opportunities, and maintain competitive overall tax rates, these dollars are nothing less than lost opportunities.

This is not to suggest that states should ignore the original motives behind their energy tax breaks. Attempts to promote tax fairness and interstate competitiveness should not, and need not, be abandoned or undermined as part of efforts to reform energy tax codes. Rather, states should explore alternative means for achieving those important objectives. By the same token, measures used to offset the adverse effects of higher taxes on energy should not be allowed to neutralize incentives to reduce energy consumption. For example, eliminating an energy-related sales tax exemption and compensating all taxpayers through an income tax credit for sales taxes paid on energy would probably have little net impact on energy consumption.

In sum, carefully constructed tax reform strategies that include elimination of energy related tax breaks can increase tax revenues and help states achieve their energy and environmental goals, while continuing to address concerns about tax equity and competitiveness.

Recommendation 1

Tax energy products at rates that are at least as high as those on non-energy products.

Energy products should be taxed at rates at least as high as rates on other products, unless there are clearly stated reasons for doing otherwise, and unless alternative means for achieving the stated objectives of a given tax break have been fully explored.

Economic theory suggests the most efficient tax system is the one with the least impact on consumer choices — one in which tax rates are set so that the percentage reduction in quantity demanded is the same for every commodity. The most efficient tax system would thus require taxation of every economic activity according to complicated formulas based on price and income elasticities, investment functions, tax incidence and numerous other indicators of behavioral response.

In the real world, however, we limit economic efficiency to a guiding role and pursue second-best solutions that take into account concerns about tax equity, competitiveness, revenues and other non-tax policy goals. If economic efficiency was the sole guiding force of fiscal policy, governments would, for instance, impose the greatest tax burdens on inelastic goods — food, medicine and energy — and impose the lowest tax burdens on luxury items. This clearly is not characteristic of most tax systems.

Nevertheless, tax laws that distort consumer and producer choices should be justified by policymakers. Just as important, governments should ensure that a given set of tax policies is the most cost-effective means for achieving their stated goals.

Recommendation 2

Eliminate subsidies to highway users.

Our analysis included an examination of state and local revenues and spending related to highway construction and maintenance. We found that highway user revenues in 1991 were some $13 billion short of paying for highway construction and maintenance; total receipts for highways that year were $75 billion. Thus, states required general taxpayers to foot more than 17 percent of the highway bill.[70] We recommend that these subsidies be eliminated.

Highway users pay for roads in a variety of ways, including highway fuel taxes, tolls, vehicle registrations, weight fees and axle fees. The degree to which state and local governments rely on any one or more of these levies varies. For example, New York in 1991 relied on tolls for two-thirds of its highway user revenues; California collected more revenues from vehicle license fees than from all other highway user fees combined.[71]

Some combinations of fees are more likely than others to mirror highway damage and other costs associated with highway use. For example, highway fuel taxes, often imposed on diesel and gasoline at the same rates, don't reflect the greater wear and tear caused by heavy trucks relative to passenger automobiles. Therefore, an increase in highway fuel taxes (for both gasoline and diesel) is not necessarily the best option for closing the gap between highway user revenues and costs. In some states, weight and axle fees may be more appropriate.

Nonetheless, closing the gap between highway user revenues and costs is important. By doing so, state and local governments can discourage the wasteful use of government services, obtain information regarding consumer preferences necessary for long-term decision making, and strengthen political accountability.[72]

In addition, if highway fuel taxes are employed by states as user fees, then motor fuels should not be excluded from general sales taxes. As noted earlier, only eight states levy general sales taxes on motor fuels, and at least two of those states dedicate sales tax revenues collected on motor fuels to highway or transportation funds.

Exemptions for residential energy consumption are found throughout state and local tax codes in general sales taxes, utility gross receipts taxes, petroleum taxes and others. These exemptions are intended to reduce the regressivity of the overall tax system, an appropriate goal. But states must ask themselves whether residential energy exemptions are the most cost-effective way to achieve that goal.

There is no question that sales taxes imposed on energy contribute to the regressivity of tax systems. As a percent of income, the poor spend six times as much for fuel and utilities as the rich. Middle-income families spend one-and-a-half to three times as much on these products and services as families in the highest income group. Consequently, higher-income groups will pay less taxes as a percent of income than lower-income groups. By providing sales tax exemptions for basic necessities — food, medicine and energy — states can reduce this disparity.

Most states' residential exemptions are not limited to necessities consumed by the poor, since states generally do not base these exemptions on household income. In other words, everyone is exempted from a given tax, regardless of need. Consequently, undertaxation of home energy is expensive, costing state and local governments around $3.1 billion nationally. Only one-third of the tax relief goes to the poorest half of the population, while the richest 20 percent of households receives nearly 30 percent of the tax relief because they spend more per capita for food, clothing and energy.

There are more cost-effective ways to ease tax burdens on the poor. The regressivity of sales taxes on energy can be mitigated by transferring revenues back to the poor through a variety of measures, including refundable personal income tax credits, property tax relief, increased spending on social services, and income-based caps on utility bills, among others.[73]

Another alternative is to use tax revenues to help poorer households become more energy efficient, or to assist them with their energy bills. Low-income weatherization assistance programs have proved effective at cutting the fuel and utility bills of low-income households.[74] From 1978 through 1989, federal, state and utility-sponsored weatherization programs reached 3.9 million households.

Unfortunately, roughly 85 percent of the approximately 18 million households that were eligible for federal assistance had yet to be reached.[75] If exemptions for residential energy use were eliminated, state and local governments would free up enough revenues to fund the weatherization of two million homes each year. In this way, states could achieve their fairness objectives without unnecessarily sacrificing revenues, and without unnecessarily encouraging energy consumption.

Note finally that offsets to energy tax increases should be carefully constructed and will often require multiple approaches. For example, many poor people do not pay (or even file) income taxes; thus refundable income tax credits will not benefit all low-income households adversely affected by elimination of a state's residential energy exemption. Income tax credits would therefore need to be combined with other measures, such as home energy assistance programs or weatherization programs.

Recommendation 3

Target energy tax breaks to people who need them.

Recommendation 4

Eliminate industrial energy exemptions and use the resulting revenues to promote industrial competitiveness.

State and local governments sacrifice $2.2 billion each year as a result of undertaxing industrial process energy. To the extent that governments make up for these exemptions through higher income or property taxes, the least energy-intensive businesses are penalized through higher income and property taxes without offsetting sales tax liabilities.

States should reconsider exemptions that provide the greatest tax benefits to the most energy-intensive industries. Subsidizing industrial energy use — rather than improved efficiency — is inconsistent with the federal and state governments' expressed desires to lower energy bills and clean up the environment.

There are at least three ways that revenues from general sales taxes on industrial process energy could be used to promote industrial competitiveness. For one, states can reduce the marginal rate for an existing tax on businesses. Whereas energy tax breaks encourage energy-intensive firms to locate in a state, a lower corporate income tax rate or other general tax break encourages firms of all types to locate (or remain) in the state. This approach provides an energy bonus as well, since any tax break which encourages new capital investment helps bring newer and more efficient equipment into the state.

Second, states can directly assist businesses in making energy efficiency investments. What matters to firms is not the energy prices they face, but rather their overall energy bills. Governments can help companies lower their energy bills through programs that help them identify efficiency improvements for their operations

Third, states can help companies lower their energy bills by offering tax incentives for energy efficiency investments. Five states — Hawaii, Louisiana, Massachusetts, Oregon and Rhode Island — offer property or income tax incentives for investments in energy efficiency (including cogeneration). Oregon's income tax credits are the broadest and most comprehensive of those incentives, and may serve as a model for states considering this option.

Recommendations for Further Analysis

The analysis in this report represents the first attempt at comprehensively analyzing state and local energy tax codes. States interested in pursuing the energy tax reforms discussed here can and should expand upon our analysis. The data available to us are not as complete as that available to state officials. We encourage states to experiment with different analytical assumptions. In particular, this type of analysis would be strengthened by considering the following:

Targeted tax breaks

There are a number of narrowly based tax breaks — given to individual firms or small groups of taxpayers — not considered in our analysis. They include everything from propane consumed in poultry production to electricity used in the manufacture of aluminum.

Tax provisions passed through from federal tax codes

Many states base their income tax liabilities on federal taxable income and thus automatically pass through some federal energy tax preferences. These are not included in our analysis.

Tax treatment of municipal utilities and rural electric cooperatives

Our analysis focuses only on the dominant type of utility in each state, usually investor-owned utilities. Incorporating municipal utilities and rural electric cooperatives raises questions regarding the analytical treatment of income tax exemptions for public utilities, which are also available to most nonprofit businesses and organizations. Assumptions also will have to be made with respect to the "real" price of electricity sold by power suppliers who operate outside a competitive market. In other words, whether public utility rates reflect the actual costs of producing and distributing the power.

Effective tax rate comparisons

Due to lack of reliable revenue and sales data, we did not calculate effective energy and non-energy tax rates. Even if all the necessary data is available to individual states, at least two issues must be resolved: 1) What is the reference tax base? Personal consumption expenditures? If so, should expenditures for services (which usually are not taxed) be included? What about intermediate goods? 2) What taxes should be included as part of general sales tax revenues? For example, should taxes on cigarettes and alcohol be included?

General sales taxes as a reference for comparison

As part of our analysis, we have used general sales tax rates as the norm for determining whether states undertax or overtax energy. Several questions emerge: Is the general sales tax the appropriate norm for all sectors — residential, commercial and industrial? For example, one in three states do not tax any consumable items used in industrial processes. And if the norm is consumable supplies, how do we reconcile the fact that non-industrial commercial energy and supply purchases are typically taxed. Is there some reason to believe that taxes on non-industrial energy and supplies more likely to passed through in the final prices of manufactured products than services?

Tax Incidence

In our analysis, we have assumed that any taxes based on sales of end-use energy products, and special taxes or tax breaks applicable to energy utilities, are reflected in end-use energy prices. All other taxes are assumed to be paid by energy businesses, land owners, and labor. Future research would benefit from a closer look this issue.

End notes

[1] Taxing end-use energy products the same as other non-energy products would mean that some states would have to increase their energy taxes, while a few actually would have to decrease theirs.

[2] In the past several years at least three states — Maryland, Minnesota and California — have considered implementing carbon taxes to fund a variety of energy and environmental programs (although at this time none have been implemented). Frank Muller and Andrew Hoerner, "The Promise of State Carbon Taxes: Opportunities and Policy Issues," *State Tax Notes,* March 8, 1993, p.530.

[3] A review of roughly 30 state energy plans found no references to reform of existing tax laws to ensure their consistency with stated energy policy objectives. New York State devotes several pages to discussing existing taxes on energy but has not established the issue as a priority. See New York State Energy Office, *Draft New York State Energy Plan, Volume II: Issue Reports*, Albany, NY, 1994, pp. 23-26.

[4] U.S. Bureau of the Census, *Statistical Abstract of the United States: 1992* (112th edition), Washington, D.C., 1992, p. 429; U.S. Bureau of the Census, *Government Finances: 1990-91*, Series GF/91-5, U.S. Government Printing Office, Washington, D.C., 1993.

[5] Energy Information Administration, State Energy Price and Expenditure Report 1991, U.S. Department of Energy, Washington, D.C., 1993, p. 5; Energy Information Administration, *Financial Statistics of Selected Investor Owned Utilities 1990*, U.S. Department of Energy, Washington, D.C., 1991, p.16; and American Gas Association, *1992 Gas Facts*, Arlington, VA, 1992, p. 155.

[6] Research conducted by the National Research Council in the late 1970s, while an excellent overview, was more limited in scope and provided no analytical construct in which to base policy conclusions. See National Research Council, *A Taxonomy of Energy Taxes*, National Academy of Sciences, Washington, D.C., 1979.

[7] In gathering information from this report, we relied on thousands of sources. We have chosen not to overwhelm the reader with legal citations from each state's tax codes, nor do we acknowledge each phone and mail correspondence that we have had with state and local tax administrators. Rather, the citations in this report are limited to secondary sources, and to state reports in which other states are referred to.

[8] For ease of presentation, the District of Columbia is treated in this report as if it were a state.

[9] U.S. Bureau of the Census, *Government Finances: 1990-91*, Series GF/91-5, U.S. Government Printing Office, Washington, D.C., 1993, Table 2.

[10] The number of local tax jurisdictions is from Advisory Commission of Intergovernmental Relations, *Significant Features of Fiscal Federalism: Budget Processes and Tax Systems*, Vol. 1, Washington, D.C., February 1992. It includes school, transportation and other special districts.

[11] See U.S. Department of Energy, *Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets*, Energy Information Administration, November 1992, p. 94.

[12] Edward T. Howe and Donald J. Reeb, "Major State and Local Taxes Imposed on U.S. Electric Utilities," *Journal of State Taxation*, 1990, pp. 3-27. In some states (including New York) gross receipts taxes are prohibited from appearing on customer bills. The results of Howe and Reeb's excellent study should be interpreted with caution. In their comparison of state and local taxes paid by electric utilities versus other industry groups, they rely on corporate income tax returns as reported by the IRS. Businesses do not report sales taxes and other taxes levied on consumers as "taxes paid," however. Given that electric utility sales are usually subject to gross receipts taxes but not sales taxes (and that gross receipts are effectively paid by consumers as even the authors point out), this comparison will tend to overestimate the relative tax burden on electric utilities compared to other industries.

[13] Vermont's gross receipts tax was scheduled to expire in 1993.

[14] West Virginia Department of Tax and Revenue, *West Virginia Tax Laws 1991*, Richmond, VA, 1991, p. 21.

[15] American Petroleum Institute, *Tax Manual*, New York, NY, 1938. Local governments still use property taxes as primary source of road funding.

[16] Highway fuel taxes in most states are imposed on a cents-per-gallon basis; however, a few states levy their tax as a percentage of price, thus ensuring that tax rates (and revenues) increase with gasoline prices.

[17] In some cases, off-road fuels are taxed but purchasers obtain refunds from tax departments.

[18] The Road Information Program, *1991 State Highway Funding Methods*, Washington, D.C., May 1991, pp. 17-18.

[19] Alcohol fuels are regarded as a potentially important source of income for farm state economies, and in the past were widely regarded as clean alternatives to gasoline and diesel fuel. In recent years, however, there has been a growing debate over the environmental benefits of these fuels arising from concerns about their impact on ozone layer depletion and the energy and environmental impacts from agriculture.

[20] By the close of this decade, the number of natural gas vehicles on the nation's roads is expected to increase dramatically, by one estimate from 35,000 to 1.2 million. Electric vehicles also are expected to grow in popularity, especially as states (in particular California) wrestle with urban air quality problems.

[21] Ironically, revenues from New York's motor fuel tax are not legally dedicated to highways.

[22] Some petroleum inspection fees may also be used to fund environmental mitigation activities. Alabama also levies a two-cent per gallon inspection fee, but consistent with the U.S. Federal Highway Administration, which points out that the revenues go into highway funds, we have included these in the state's motor fuel excise tax rate.

[23] U.S. Bureau of the Census, *Government Finances: 1990-91*, Series GF/91-5, U.S. Government Printing Office, Washington, D.C., 1993, p.7.

[24] Charles P. Zlatkovich, "Severance Taxes: A Review of Recent Trends," *Oil & Gas Tax Quarterly*, pp. 779-790.

[25] U.S. Bureau of the Census, *Government Finances: 1990-91*, Series GF/91-5, U.S. Government Printing Office, Washington, D.C., 1993, p.13.

[26] Technically, severance taxes are taxes levied on natural resources extraction on a per-unit of volume basis; production taxes are based on the value of the resource. See American Petroleum Institute, *State Taxation of Oil and Gas Production*, Washington, D.C., August 1985, p. 3. For purposes of this discussion, all taxes on natural resources production are referred to as severance taxes.

[27] U.S. General Accounting Office, "Comments from Department of Energy," *Tax Policy: Additional Petroleum Production Tax Incentives Are of Questionable Merit*, Washington, D.C., July 1990, p.105. According to the U.S. Department of Energy, 18,000 stripper wells are abandoned each year. Once abandoned, the remaining oil reserves are difficult to recover. DOE estimates that two-thirds of original oil in place will not be recovered, equal to about 76 billion barrels.

[28] As many as 10,000 underground storage tanks may be leaking petroleum products into the surrounding soil. See World Resources Institute, *1992 Environmental Almanac*, New York, NY: Houghton Mifflin Company, 1992, p. 93.

[29] Personal correspondence with Lynn Wright at Texas Air Control Board, May 1992.

[30] Richard L. Ottinger, David R. Wooley, Nicholas A. Robinson, David R. Hodas, Susan E. Babb, *Environmental Costs of Electricity*, Pace University Center for Environmental Legal Studies, New York, NY, 1990, p. 601.

[31] Exceptions are New Jersey, which levies fees on discharges into waterways based on the quantity of contaminants and their relative risk to public health, and California, which levies a wastewater permit fee based on the type and volume of discharged pollutants. See W.E. Oates, "Environment and Taxation: The Case of the United States," in *Environment and Taxation: The Cases of the Netherlands, Sweden and the United States*, Organization of Economic Co-Operation and Development, Paris, 1993, pp.103-138.

[32] 1990 Clean Air Act, Title V, Section 502.

[33] R. Padullo, G. McCutchen, J. Buzen, L. Sutton, "Status of Title V Permit Program Development: A State/Local Agency Survey," Radian Corporation, presented at Air and Waste Management Association 1993 Conference, June 1993, Table 1.

[34] R. Padullo, G. McCutchen, J. Buzen, L. Sutton, "Status of Title V Permit Program Development: A State/Local Agency Survey," Radian Corporation, presented at Air and Waste Management Association 1993 Conference, June 1993, Table 1.

[35] Combined state and local rates in New York City and New Orleans are upwards of 9 percent.

[36] Average is weighted by income and includes states with no tax.

[37] Process energy represents some 95 percent of the non-feedstock energy consumption of manufacturers. Energy Information Administration, "Manufacturing Energy Consumption Survey: Preliminary Estimates 1991," *Monthly Energy Review*, September 1993, pp. 1-4.

[38] Equipment and machinery used for pollution abatement and cogeneration typically do not qualify under a state's "direct use" exemption for machinery and equipment; these items are taxed unless specifically referred to in a state's tax code. The same is true for renewable energy devices like solar collectors and wind machines.

[39] See Advisory Commission of Intergovernmental Relations, *Significant Features of Fiscal Federalism: Budget Processes and Tax Systems*, Vol. 1, Washington, D.C., February 1992, Tables 18-28, pp. 56-72.

[40] See Advisory Commission of Intergovernmental Relations, *Significant Features of Fiscal Federalism: Budget Processes and Tax Systems*, Vol. 1, Washington, D.C., February 1992, Tables 18-28, pp. 56-72.

[41] Douglas Koplow, *Federal Energy Subsidies: Energy, Environmental, and Fiscal Impacts*, Alliance to Save Energy, Washington, D.C., April 1993, Table 15.

[42] See Advisory Commission of Intergovernmental Relations, *Significant Features of Fiscal Federalism: Budget Processes and Tax Systems*, Vol. 1, Washington, D.C., February 1992, Tables 19-22, pp. 56-72.

[43] Douglas Koplow, *Federal Energy Subsidies: Energy, Environmental, and Fiscal Impacts*, Alliance to Save Energy, Washington, D.C., April 1993, Table 4.

[44] New York State Division of the Budget, *Annual Report on New York State Tax Expenditures*, Albany, NY, February 1992, Tables 1 and 2.

[45] Montana Department of Revenue, *Tax Expenditure Report for the State of Montana: Fiscal Years 1992 and 1993*, Helena, MT, January 1991, pp. 25-26.

[46] National Conference of State Legislatures, *How States Limit City and County Property Taxes and Spending*, Legislative Finance Paper # 67, Washington, D.C., March 1989.

[47] Advisory Commission on Intergovernmental Relations, *Local Revenue Diversification: Local Income Taxes*, Washington, D.C., August 1988, p. 3

[48] Real property is land. Personal property is property other than land.

[49] Advisory Commission of Intergovernmental Relations, *Significant Features of Fiscal Federalism: Budget Processes and Tax Systems*, Vol. 1, Washington, D.C., February 1992, Table 56, p. 173.

[50] Leonard Gerzon, "Property Tax Bias Against Public Utilities — Aberration or Epidemic?", *Public Utilities Fortnightly*, February 15, 1991, pp. 29-33.

[51] William Morgan and Dennis Olson, "Nonneutral Features of Energy Taxation," *Natural Resources Journal*, Vol. 20, October 1980, pp. 853-876.

[52] The data required to construct a formal analysis of utility property valuation versus non-utility property valuation is not available. An informal survey of property assessors throughout the country drew mixed results, with most saying that the property of utilities is under-assessed, one saying that it is over-assessed. See also Dick Netzer, *Property Taxes: Their Past, Present and Future Place in Government Finance*, New York University, New York, NY, April 1992, p. 10.

[53] National Conference of State Legislatures, *How States Limit City and County Property Taxes and Spending*, Legislative Finance Paper # 67, Washington, D.C., March 1989. "Full disclosure" requires special notification to taxpayers of proposed tax increases through advertisements, mail, and/or special hearings.

[54] The 4-R Act stands for the Railroad Revitalization & Regulatory Reform Act which can be found in section 11503 of the Interstate Commerce Law, Title 49 of the United States Code. See Census of Governments, *Taxable Property Values*, Bureau of Commerce, Washington, D.C., 1982, pp. XVIII-XIX; and Dick Netzer, *Property Taxes: Their Past, Present and Future Place in Government Finance*, New York University, New York, NY, April 1992, p. 11.

[55] This trend was suggested by Michael Goodwin, President of Michael W. Goodwin & Associates in personal correspondence, April 9, 1993.

[56] Electricity comprises 37.3 percent of expenditures; natural gas, 12.2 percent; non-transportation petroleum, 11.0 percent; motor gasoline, 26.2 percent. Not included are coal (1.1 percent) and transportation fuels other than gasoline (12.2 percent).

[57] Severance taxes are problematic in a several ways. First, the incidence of severance taxes will vary according to each fuel and each state, depending on a number of market factors. For a discussion of these factors, see Dennis Zimmerman, *Montana Coal and the Electricity Generated by Coal: Incidence Analysis of State Taxation and Estimates of Tax per Kwh and Million Btus*, U.S. Congressional Research Service, June 15, 1981. Second, the majority of the tax burdens likely fall on energy producers, land owners, and laborers. The Congressional Research Service estimated, for example, that some 88 percent of Alaska's oil severance taxes were paid by producers, resource owners and labor. See Dennis Zimmerman, *The Incidence of the Alaska Oil Severance Tax in an Economy with Widespread Interstate Tax Exportation*, U.S. Congressional Research Service, October 4, 1982, p.14. Third, taxes on natural resources are attractive to energy producing states in part because much of the tax burden is thought

to be placed on consumers and businesses in other states. Even if we assumed that the entire severance tax burden falls totally on consumers, it would require a considerable research effort to determine the allocation of tax burdens among states and countries. Fourth, severance taxes are often viewed as compensation for costs associated with resource production (see Tables 11a-c). In a survey of states conducted in the mid-1980s, 17 of 19 coal severance states listed "offsetting of economic costs" as a main justification for their tax. These costs included the costs of services provided by state and local governments in mining areas, including schools and hospitals, police and fire protection, highways, and the regulation of water and air pollution at the production site. According to that survey, costs related to the present and future losses of aesthetic value and environmental quality and depletion of "natural heritage" also were considered by states when they set severance tax rates. Thus, we face the problem of allocating revenues among various production-related costs and expenditures. See Ronald A. Kaiser and James E. Fletcher, "State Policies and Practices in Coal and Severance Taxation," *Natural Resources Journal*, Vol. 27, Summer 1987, pp. 591-604. Finally, given that much of the tax burdens are exported to businesses and consumers that reside outside the state, it is unclear how including severance taxes would affect recommendations for state tax reforms. Policymakers in an energy-consuming state have little say over how energy-producing states tax their natural resources. And from the perspective of the oil-burning utility in Illinois, it makes little difference whether oil prices increase as a result of a severance tax in Texas or an international oil cartel. Nevertheless, this is an issue which should be taken up by states as they examine their energy tax codes and develop their individual reform agendas.

[58] See Advisory Commission on Intergovernmental Relations, *Local Revenue Diversification: User Charges*, Washington, D.C., October 1987, p. 4, for an excellent overview of theoretical and practical issues associated with user fees.

[59] Gary R. Allen, "Highway User Fees: Are These Old Taxes Still Good Taxes," *Understanding the Highway Finance Evolution/ Revolution*, American Association of State Highway and Transportation Officials, Washington, D.C., January 1987, p. 28.

[60] Our analysis compared only current receipts with current expenditures. A full estimate of the stream of future receipts and expenditures would provide a better basis for assessing the contribution of motor fuel taxes to roadway costs. Also, according to the Federal Highway Administration (FHWA), three states — California, Georgia and Hawaii — dedicate revenues from general sales taxes imposed on motor fuels to their highway or transportation funds. We were unable to determine how these revenues are treated in the FHWA's statistics, however. By not treating these taxes as highway user fees in our analysis, we likely have overstated the true tax burden on highway gasoline for those states. See Federal Highway Administration, *Highway Taxes and Fees*, U.S. Department of Transportation, Washington, D.C., 1991, Table S-106; and Federal Highway Administration, *Highway Statistics 1991*, U.S. Department of Transportation, Washington, D.C., 1992, Table SF-21. California and Washington impose vehicle registration fees in lieu of personal property taxes imposed in the past. The two states thus do not consider their vehicle registration fees to be user fees, and provide revenues to local governments for general purposes. We have therefore not treated vehicle registration fees as user fees in those states.

[61] Energy Information Administration, *Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets*, U.S. Department of Energy, Washington, D.C., November 1992, p.33.

[62] The Road Information Program, *1991 State Highway Funding Methods*, Washington, D.C., May 1991, pp. 17-18. The general fund states include: Alaska, District of Columbia, Florida, Louisiana, Maryland, Massachusetts, New Jersey, New Mexico, New York, Oklahoma, Rhode Island and Vermont.

[63] The data used to make those calculations was from Energy Information Administration, *Financial Statistics of Selected Investor-Owned Electric Utilities 1989*, U.S. Department of Energy, Washington, D.C., January 1991; Energy Information Administration, *Financial Statistics of Selected Publicly Owned Electric Utilities 1989*, U.S. Department of Energy, Washington, D.C., February 1991; Rural Electrification Administration, *1991 Statistical Report, Rural Electric Borrowers*, U.S. Department of Agriculture, Washington, D.C., July 1992; American Gas Association, *1992 Gas Facts*, Washington, D.C., 1992; and Energy Information Administration, *Natural Gas Annual 1990*, Department of Energy, Washington, D.C., December 1991.

[64] Overall state and sector tax rates are weighted averages based on 1991 energy expenditures reported in Energy Information Administration, *State Energy Price and Expenditure Report 1991*, U.S. Department of Energy, Washington, D.C., September 1992.

[65] Note that the rates reported for electricity and natural gas are in a few cases negative due to our adjustments for property and income tax provisions provided by those states.

[66] Each state's general sales tax rate includes both state and local levies. In calculating the national average sales tax rate, each state's rate is weighted using 1990 personal income for each state, as reported in Wallace K. Bailey, "Comprehensive Revision of Local Area Personal Income Estimates, 1969-90," *Survey of Current Business*, Bureau of Economic Analysis, U.S. Department of Commerce, Volume 73, Number 5, May 1993, pp. 63-87.

[67] This would require some states to increase their taxes on energy and some to actually lower theirs.

[68] These calculations are based on a long-run price elasticity of 0.8 percent for all ten types of energy products. These are consistent with the wide range of elasticity estimates, as reported in Carol Dahl, "A Survey of Energy Demand Elasticities in Support of the Development of the NEMS," an unpublished report for the Department of Energy, October 1993. Energy consumption numbers are for 1992 as reported in Energy Information Administration, *Annual Energy Outlook 1994*, U.S. Department of Energy, Washington, DC, 1994, Table A2.

[69] Carbon conversion factors are from James Poterba, "Global Warming Policy: A Public Finance Perspective," *The Journal of Economic Perspectives*, Fall 1993, Table 1. The Clinton Administration has called for a reduction in carbon dioxide emissions to 1990 levels by the year 2000, a reduction of 106 million metric tons below forecasted emissions in the year 2000. See President William J. Clinton and Vice President Albert Gore, Jr., *The Climate Change Action Plan*, October 1993, p.5.

[70] Federal Highway Administration, *Highway Statistics 1991*, U.S. Department of Transportation, Washington, D.C., 1992, Table HF-1.

[71] Federal Highway Administration, *Highway Statistics 1991*, U.S. Department of Transportation, Washington, D.C., 1992, Tables MF-2, SF-1 and SF-2.

[72] Advisory Commission on Intergovernmental Relations, Local Revenue Diversification: User Charges, Washington, D.C., October 1987, p. 1.

[73] Nine states target tax relief to low-income, elderly or disabled households. Arkansas exempts electricity consumed by households with annual incomes less than $12,000. Michigan exempts energy sales to households receiving public assistance. Seven other states tax residential energy purchases but allow elderly or disabled taxpayers to obtain refunds or take credits on their personal income taxes.

[74] In 1989, the U.S. Department of Energy's low-income weatherization programs weatherized nearly 200 thousand low-income single-family and small (two to three units) multi-family homes at an average per unit cost of $1,550 (including materials, installation-related labor, installation-related overhead, and program management), and resulting in an average per-unit energy savings of $116. Over the 20-year life of the weatherization measures installed in 1989, an estimated 2 million barrels of oil will be saved, approximately equal to the amount of oil added to the Strategic Petroleum Reserve in 1992. See Marilyn A. Brown, Linda G. Berry, Richard A. Balzer, and Ellen Faby, *National Impacts of the Weatherization Assistance Program in Single-Family and Small Multifamily Dwellings*, Oak Ridge National Laboratory, U.S. Department of Energy, May 1993.

[75] See Economic Opportunity Research Institute, *Fast Facts: Energy and Low-Income Housing*, Washington, DC, July 1992, p.3; and Energy Information Administration, *Household Energy Consumption and Expenditures 1990*, U.S. Department of Energy, Washington, DC, February 1993, Table 18.

Appendix: Energy-related tax provisions

ALABAMA

Taxes on Energy

Motor Fuel Excise Tax: Imposed on gasoline at rate of 16 cents per gallon; diesel at 17 cents per gallon; gasohol at 16 cents per gallon; LPG at 16 cents per gallon. See also "Petroleum Inspection Fees." Tax is imposed on fuels for both highway and non- highway use. Agricultural users of motor fuels receive 6 cents per gallon refund. Aviation use is taxed at reduced rate of 7.8 cents per gallon. Federal government use is exempt. State and local government highway use is taxed at full rate; state and local government non-highway use is taxed at 7 cents per gallon. Revenues are dedicated to transportation spending. Local governments may impose additional tax on gasoline up to 5 percent of sales value. Local average rate is 2.15 cents per gallon. A petroleum products "inspection fee" is also imposed by state on a per gallon basis: gasoline at rate of 2 cents per gallon; kerosene and diesel for aircraft, water vessels, agriculture and rail at rate of 0.025 cents per gallon; other kerosene at rate of 1 cent per gallon; other diesel at rate of 2 cents per gallon; and lubricating oil at rate of 15 cents per gallon. The first $175,000 of petroleum products inspection fee revenue each month is used for operation of the state agriculture department; the balance is dedicated to state and local highways spending.

Petroleum Business Tax: Wholesaler's tax imposed on gross sales of illuminating, lubricating and fuel oils in quantities of 25 gallons or more at rate of 0.5 percent.

Utility Gross Receipts Taxes: (1) Public utility privilege tax based on monthly utility gross receipts from sales to each customer: $0 to $40,000 taxed at rate of 4 percent; $40,000 to $60,000 at rate of $1,600 plus 3 percent of excess over $40,000; $60,000 and over at rate of $2,200 plus 2 percent of excess over $60,000. Exemptions include electricity for use in electrolytic processes. (2) Business license fees are imposed on utility gross receipts at rate of 2.2 percent. Credits are available for sales to residences where the head of household is over 62 years of age or totally and permanently disabled, and household annual income does not exceed $12,000.

Utility Excise Tax: Privilege tax imposed on the manufacture and sale of hydroelectric power at rate of four-tenths mill per kilowatt-hour.

Utility Regulatory Fee: Utility inspection fee is imposed on utility gross receipts at rate of $2.50 per $1,000 for gross receipts up to $100,000; $2 per $1,000 for gross receipts of $100,000 to $1 million; $1.50 per $1,000 for gross receipts in excess of $1 million.

Taxes on Oil and Gas Production: (1) Privilege tax on the production of oil and natural gas is generally imposed at 8 percent of gross value. Wells initially permitted after July 1988 are taxed at reduced rate of 6 percent. Enhanced recovery and small wells (less than 25 barrels per day) are taxed at reduced rate of 4 percent. (2) Conservation tax imposed on the production of oil and gas at 2 percent of gross value. (3) Local taxes on oil and gas production, processing, transportation and sales are prohibited, but local governments may impose ad valorem taxes on oil and gas property.

Taxes on Coal Production: (1) Severance tax imposed on coal at rate of $0.335 per ton; lignite is taxed at rate of $0.20 per ton. (2) In general, local governments are prohibited from imposing severance taxes; however, local coal severance taxes are imposed by three counties at rate of $0.50 per ton, with approval of the state legislature. Revenues from local severance taxes must be used exclusively for county highway maintenance.

General Taxes

Sales Tax: Variable state tax rate. Most sales are taxed at 4 percent. Exemptions include: highway gasoline, motor fuel and lubricating oil; diesel fuel used for off-highway agricultural purposes; electricity and natural gas subject to public utility tax; wood, coal or coke sold to manufacturers and transport companies; fuel oil for kiln use (used in production of bricks, lime, lumber and cement) by manufacturing companies; nuclear fuel assemblies; LPG used for commercial farming; equipment, food and supplies used for off-shore drilling; fuels purchased by electric and gas utilities if fuel is to be used to generate electricity or resold at retail; and pollution control equipment. Local sales tax rates average 2.26 percent.

Corporate Income Tax: Imposed at rate of 5 percent of net income. Deduction allowed for depletion of oil and gas at 27.5 percent of the value of the year's production.

Personal Income Tax: Imposed at rate of 5 percent of income over $3,000. Deduction allowed for conversion to wood as a primary heating source.

Property Tax: Utility real and personal property is assessed at 30 percent of market value compared with most other commercial property, which is assessed at 20 percent. Exemptions include pollution control equipment and nuclear fuel assemblies. Local tax rates average 4.9 percent of assessed value. State imposes additional tax of 0.65 percent of assessed value.

ALASKA

Taxes on Energy

Motor Fuel Excise Tax: Imposed on gasoline at rate of 8 cents per gallon; diesel at 8 cents per gallon. Gasohol and LPG are exempt. Off-highway users may claim refund of 6 cents per gallon. Excise tax on aviation gasoline is 4 cents per gallon; aviation jet fuel is taxed at 2.5 cents per gallon; marine fuel is taxed at 5 cents per gallon. Federal, state and local government use is exempt. Use by public utility plants and charitable organizations is also exempt. Excise tax is not dedicated to highways, but highway spending exceeds revenues from taxes on highway users.

Electric Cooperative Tax: Nonprofit electric cooperatives pay tax equal to: one-fourth mill per kilowatt hour if in operation less than 5 years; one-half mill per kilowatt hour if in operation 5 years or more. Tax is in lieu of corporate income, sales and property taxes.

Utility Regulatory Fee: Administrative assessment imposed on utility gross receipts. Current rate not available.

Taxes on Oil Production: (1) Production tax on oil is equal to the greater of 12.25 percent of gross value multiplied by "economic limit factor" for first five years of production (after five years, the rate increases to 15 percent of gross value) or $0.80 per barrel. According to State Tax Department, the economic limit factor "essentially gives a field 300 barrels per well per day tax-free." (2) Conservation tax imposed at rate of $0.004 per barrel of oil produced.

Taxes on Gas Production: (1) Production tax on natural gas is equal to the greater of 10 percent of gross value multiplied by "economic limit factor" or $0.064 per thousand cubic feet. According to State Tax Department, the economic limit factor is equivalent to allowing 3,000 Mcf per day to be produced tax-free. (2) Conservation tax imposed at rate of $0.004 per 50 Mcf of natural gas produced.

Environmental Fees and Assurances: Oil and Hazardous Release Tax imposed at rate of $0.05 per barrel of crude oil.

General Taxes

Sales Tax: There is no state general sales tax. Local sales taxes average 0.42 percent, but may be as high as 6 percent.

Corporate Income Tax: Graduated rate up to $4,500 plus 9.4 percent of net income over $90,000. Investment credit (up to $250 million or 60 percent of tax liability) is available for gas and mineral development.

Property Tax: Utilities assessed at full market value same as most other businesses. Regional electrical authorities are exempt from payment of taxes or assessments on property that is used for generation and transportation of electricity for a period of 20 years from June 5, 1975. Oil and gas reserves (in the ground) are exempt from taxation by state and local governments. Personal property of oil and gas companies is also excluded from local property taxes. The State taxes oil and gas exploration, production and pipeline equipment at a rate of 2 mills per dollar of depreciated value. The State's valuation of oil and gas equipment is based on the value of proven reserves that are economically, technically and legally deliverable into a transportation facility. The State reimburses local governments for oil and gas property located in their jurisdictions according to the local property tax rate. Local property taxes average 1 percent of assessed value.

ARIZONA

Taxes on Energy

Motor Fuel Excise Tax: Imposed on gasoline at rate of 18 cents per gallon; diesel at 18 cents per gallon; gasohol at 18 cents per gallon. Non-highway (except watercraft) and agricultural users may claim refund. Aviation users may claim 11 cents per gallon refund. Federal military highway use is taxed; non-highway use is refunded. Motor fuels subject to motor fuel excise tax are exempt from state sales tax. Revenues from excise tax is dedicated to highway spending. There are no local motor fuel excise taxes.

Aviation Fuel Tax: In addition to all other taxes, aviation fuel distributors pay tax of 5 cents per gallon of aviation fuel imported, possessed or processed in the state.

Utility Regulatory Fee: Imposed on gross receipts of electric and gas utilities at rate of 0.2 percent.

Tax on Uranium Production: Metalliferous minerals (including uranium) are taxed at rate of 2.5 percent of the "net severance base." The net severance base is equal to the greater of: a) mining costs divided by production costs and multiplied by gross value of production; or b) the 50 percent of the difference between the gross value of production and out-of-state processing costs.

Environmental Fees and Assurances: (1) Underground storage tank fee imposed on motor fuels at rate of 1 cent per gallon. (2) Hazardous waste fuel penalty imposed at 40 cents per gallon of hazardous waste burned for energy recovery that is not generated by the operation of the business of the burner. (3) Used oil fee imposed at 6 cents per gallon for on-spec oil (containing less-than-specified levels of heavy metals and having flash point less than 100 degrees Fahrenheit); 20 cents per gallon rate imposed on non-spec oil.

General Taxes

General Sales Tax: "Transaction privilege" tax imposed on seller. State tax rate on most sales is 5 percent. Exemptions include: fuels subject to motor fuels tax; sales of electricity and gas to municipal utilities; solar and wind systems (not to exceed $5,000 per device); oil and gas drilling and extraction machinery and equipment; mining machinery and equipment; pipes or valves four or more inches in diameter used to transport oil, gas, water or coal slurry; machinery, equipment and transmission lines used in producing or transmitting (but not distributing) electrical power. Industrial machinery and equipment is generally exempt. Local sales tax rates average 1.09 percent.

Personal Income Tax: Taxpayers may contribute a portion of their tax refund to fund low-income weatherization programs.

Property Tax: Real and tangible personal property of electric utilities, pipelines and producing mines is assessed at 30 percent of market value, compared to 25 percent for most commercial and industrial property. Producing oil, gas and geothermal property is valued according to the gross yield in the previous year. Exemptions include property of the Arizona Power Authority. There is no state property tax. Local property taxes average 10.5 percent of assessed value.

ARKANSAS

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 18.5 cents per gallon; diesel at 18.5 cents per gallon; gasohol at 18.5 cents per gallon. Non-highway use is generally taxed at the full rate. Agricultural users may claim partial refund. Aviation use is exempt when supported by aviation exemption certificate. Federal government use in federal government vehicles is exempt. Other federal government use, and state and local government use, is taxed at full rate. Use by local buses is subject to full refund. Motor fuels are exempt from state sales tax if otherwise taxed as motor fuel for highway use. Excise revenues are dedicated to highway spending. Local motor fuel excise taxes average 0.0275 cents per gallon.

Utility Regulatory Fees: Administrative assessment not to exceed 0.4 percent of utility gross receipts. Assessments levied on pipeline companies are based on pipeline mileage in state.

Environmental Charges: Petroleum environmental assurance fee assessed at rate of 0.2 cents per gallon of gasoline and diesel until Petroleum Storage Tank Trust Fund reaches $15 million.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed at 5 percent of market value, plus 4.5 cents per barrel, on wells producing more than 10 barrels per day; wells producing 10 or fewer barrels per day are taxed at 4 percent of market value, plus 4.5 cents per barrel. Credit allowed to person who discovers a commercial oil pool in the process of exploration, if the person is the owner of the land upon which the pool is discovered. The allowable credit is 75 percent of the severance tax due for 5 or 10 years, depending on the depth of the well. Oil producers who operate an underground salt water disposal system are allowed a credit against severance taxes due on all oil produced by injection of salt water into production well. Total salt water credit claimed by all producers collectively cannot exceed $370,000. (2) Conservation tax not to exceed 25 mills per barrel of oil produced.

Natural Gas: (1) Severance tax imposed at rate of 0.3 cents per Mcf natural gas produced. (2) Conservation tax not to exceed 5 mills per Mcf.

Coal: Severance tax imposed on coal at rate of 10 cents per ton; lignite at 2 cents per ton.

General Taxes

General Sales Taxes: State rate is 4.5 percent of gross receipts from sales. Exemptions include sales of: motor fuels, on which motor fuel excise tax is paid; first 500 kilowatt-hours of electricity per month to households with annual income less than $12,000; gas and electricity to steel producers beginning production after February 16, 1987, and investing more than $120 million in steel plant since February 15, 1987; electricity to aluminum manufactures using electrolytic reduction process (no aluminum manufacturers remain in state); unprocessed crude oil; fuels to rail and commercial watercraft; pollution control equipment; fuels to municipal bus services. Fuel sales to manufacturers and electric utilities are generally taxable, as are sales to and by municipal governments and electric cooperatives. The state grants a 7 percent credit to "qualified" manufacturing operations investing more than $5 million in "eligible" items associated with construction or expansion of manufacturing operations. Qualified expenditures include, but are not limited to, energy saving and pollution control installations. Two-hundred and seventy-one cities and counties impose sales taxes ranging from 0.25 percent to 2 percent. Local sales tax rates average 0.7 percent. Local provisions generally conform with state provisions.

Corporate Income Taxes: Graduated rate up to 6.5 percent of net income over $100,000. Depletion allowance is allowed for all natural resources.

Property Taxes: Utility real and personal property is assessed at 20 percent of market value, same as other businesses. Exemptions include: bonds and notes issued under Arkansas Capital Development Corporation. Local taxes average 3.92 percent of assessed value.

CALIFORNIA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 17 cents per gallon; diesel at 17 cents per gallon; gasohol at 17 cents per gallon. Alcohol fuels (10 percent gasoline and 90 percent alcohol) are taxed at 8.5 cents per gallon. General non-highway users may claim refund. Agricultural use is exempt. Military use in aircraft, ships and for out-of-state use is exempt. Other federal government highway use is taxed. Federal, state and local government highway use is taxed; non-highway government use may claim refund. Use in boats on public waters is not refunded. Use by off-highway recreational vehicles is taxed. Commercial and private aircraft jet fuel is taxed at 2 cents per gallon. Tax on diesel fuels used for public transportation and school buses is 1 cent per gallon. Motor fuels subject to excise tax are not exempt from state general sales tax. Excise revenues are dedicated to highway spending; state sales taxes collected on motor fuels are also dedicated mostly to highways. There are no local fuel excise taxes.

Electric and Gas Utilities: (1) Local franchise tax on electric and natural gas utilities and oil pipeline companies imposed at various rates, but mostly 2 percent of gross receipts. (2) Electric utility surcharge imposed on electricity consumers at rate of two-tenths of one mill per kilowatt hour. Revenues are submitted to an account in the state's general fund to be used for "ongoing energy programs and energy projects deemed appropriate by the legislature . . ."

Environmental Charges: (1) Underground storage tank maintenance fee imposed on motor fuels at rate of 0.6 cents per gallon. (2) Oil spill response prevention and maintenance fee is collected from persons owning petroleum products at time those products are received at a marine terminal, operators of pipelines, and operators of refineries. Revenues submitted to fund managed by Department of Fish and Game to be used to clean up oil spills. Size of fund is limited to $50 million. (3) Environmental fee in which corporations employing 50 or more persons pay from $100 to $1,000 based on the number of persons employed more than 500 hours during the previous year. (4) Hazardous waste facility fee collected from facility operators. (5) Hazardous waste generator fee based on amount generated, regardless of final disposition. (6) Disposal fee imposed at rate of $105 per ton of hazardous waste disposed of in landfill. Rates vary depending on waste category and disposal method.

Taxes on Energy Natural Resources Producers

Environmental Charges: An assessment for oversight and regulation of oil and gas production sites is levied based on production. Tax rate is determined annually. Current rate is 2.61 cents per barrel for oil and 2.61 cents per Mcf for gas.

General Taxes

General Sales Taxes: State rate is 6 percent. Exemptions include sales of: electricity and natural gas delivered through pipelines; power produced from cogeneration and biofuels; new low-emission motor vehicles and retrofit devices; motor fuels used in propelling aircraft (except aircraft jet fuel taxed at 2 cents per gallon); diesel fuel used in operating watercraft in certain commercial deep sea fishing operations. Fuels for manufacturing are generally taxable. Sales of fuels (except natural gas) to electric and gas utilities are subject to tax. Sales to and by municipal utilities and electric cooperatives are taxable unless specifically exempted. A majority of revenues collected on sales of motor fuels are dedicated to highway spending. Local rates average 1.52 percent. Combined state, local and special district tax may not exceed 8.75 percent; highest combined state and local rate is 8.5 percent (in the San Francisco Bay area). Local provisions conform with state provisions.

Corporate Income Taxes: State rate is 9.3 percent of net income; alternative minimum tax rate is 7 percent. Credits include: 10 percent of cost of solar energy system on commercial property (scheduled to expire in 1994); 55 percent of cost of low-emissions fuel conversion devices, up to $1,000 per vehicle; 20 percent of cost of purchased commuter vans, shuttle buses, etc. (if business employs less than 200 persons, the allowable credit is 30 percent; if vehicles are leased, the allowable credit is 15 percent); 40 percent of cost of subsidized public transit passes for employees (20 percent credit if employee parking is also subsidized, 10 percent credit if employee parking is free). Solar tax credit may not be claimed for solar energy systems with generating capacity greater than 30 megawatts unless Internal Revenue Code allows similar credit for at least 10 percent. Deductions include: employer's expenses incurred in sponsoring an employee ride-sharing incentive program.

Personal Income Taxes: Most corporate income tax credits are also available to individual tax payers.

Property Taxes: Utility real and personal property is assessed at full market value, the same assessment rate as other businesses. Under Proposition 13, property is assessed at 1975 market value (plus 2 percent annual increase for inflation) until sold, at which time assessment increases to full market value. Most property improvements result in an immediate increase in assessed property value; however, the increased value of property due to installation of solar energy systems (except pool and hot tub heaters) is excluded from assessment until the property is sold. Proposition 13 prohibits increased valuation of existing oil and gas reserves due to increased oil prices; however, additions to reserves resulting from increased oil prices (i.e., previously uneconomical deposits becoming economical), are assessed at full market value. Similarly, if oil and gas prices decrease, economic reserves decline, resulting in a lower assessment. Oil and gas prices, as with other property, is set at 1975 level or price on date of acquisition, adjusted annually. Local tax rates average 1 percent of assessed value.

Under Consideration: Legislation entitled the Zero Emission Vehicle Development Incentive Program (S.B. 668) would exempt electric vehicles (EVs) from sales taxes *and* provide business tax credits for job creation in the field of EV technology. The program would be funded by a $1 increase in the state's vehicle registration fee. [*Alternative Energy Network Online Today*, July 29, 1993]

COLORADO

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 22 cents per gallon; diesel at 20.5 cents per gallon; gasohol at 22 cents per gallon; LPG at 18 cents per gallon (or annual fee). Gasoline is exempt if purchased in bulk lots of over 300 gallons. Non-highway uses, including agriculture and aviation, are either exempt or allowed full refund. All federal, state and local government use is exempt or allowed refund. Fuels subject to excise tax are exempt from state general sales tax. Excise tax revenues are dedicated to highway spending. There are no local motor fuel excise taxes.

Utility Regulatory Fees: Administrative assessment imposed on utilities not to exceed 0.2 percent of gross receipts.

Taxes on Energy Natural Resources Producers

Oil: (1) Severance tax imposed on annual gross income of oil producers: under $25,000 taxed at rate of 2 percent; between $25,000 and $100,000 at 3 percent; between $100,000 and $300,000 at 4 percent; $300,000 and over at 5 percent. Wells producing 10 barrels or less per day are exempt. Credit allowed against 87.5 percent of all *ad valorem* taxes assessed or paid during year on leaseholds and leasehold interests, royalty and royalty interests. Credit does not include *ad valorem* taxes on equipment and facilities. (2) Conservation tax not to exceed 1.5 mills (currently 1.3 mills) per $1 of market value at the well. Additional surcharge not to exceed 0.2 mills per $1 is imposed. A credit allowed against the surcharge equal to the value of approved contributions to mitigate adverse environmental impacts at an oil or gas well where owner cannot be identified.

Gas: (1) Severance tax imposed on annual gross income of natural gas producers: under $25,000 taxed at rate of 2 percent; $25,000 to $100,000 at 3 percent; $100,000 to $300,000 at 4 percent; $300,000 and over at 5 percent. Credit allowed against 87.5 percent of all *ad valorem* taxes assessed or paid during year on leaseholds and leasehold interests, royalty and royalty interests. Credit does not include *ad valorem* taxes on equipment and facilities. (2) Conservation tax not to exceed 1.5 mills (currently 1.3 mills) per $1 of market value at the well. Additional surcharge not to exceed 0.2 mills per $1 is imposed. A credit allowed against the surcharge equal to the value of approved contributions to mitigate adverse environmental impacts at an oil or gas well where owner cannot be identified.

Coal: Severance tax imposed. Base tax rate is 36 cents per ton (reduced from 60 cents per ton in 1988; will revert to 60 cents per ton effective July 1, 1994). Indexed annually to Producer Price Index. Actual rates were roughly 54 cents per ton in 1991. No tax imposed on first 25,000 tons produced in each quarter of the year (on July 1, 2000, the exemption reverts to pre-July 1,1984, level of 8,000 tons per quarter).

Oil Shale: Severance tax imposed on gross proceeds (sales price less costs and royalties) from production of oil from shale: in first year of production at rate of 1 percent; in second year at 2 percent; in third year at 3 percent; in fourth year and after at 4 percent. The first 15,000 tons per day of oil shale or 10,000 barrels of shale oil (whichever is greater) is exempt.

Uranium: Production tax imposed at rate of 2.5 percent of value.

General Taxes

General Sales Taxes: State rate is 3 percent. Exemptions include: gasoline and special fuels (subject to motor fuels tax); special fuels used in farm vehicles; electricity, natural gas and other fuel sales to residential energy users; purchases (including fuels) by manufacturers. Local rates average 3.06 percent. All but roughly 42 local governments exempt residential gas and electricity; otherwise, local provisions conform with state.

Corporate Income Taxes: Graduated rate up to 5.1 percent of net income over $50,000. Credits include: residential energy-related loans (none has ever been claimed); $1 per ton of Colorado coal purchased over and above the number of tons purchased in tax year beginning on or after January 1, 1988; 20 percent of cost of equipment which utilizes post-consumer waste in the manufacture of a new product or energy for sale.

Property Taxes: Utility real and personal property assessed at 29 percent of market value same as most other businesses. Local tax rates average 8.21 percent of assessed value.

CONNECTICUT

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 29 cents per gallon; diesel at 18 cents per gallon; gasohol at 28 cents per gallon; LPG at 29 cents per gallon. Rates increase to 30 cents January 1, 1994; 31 cents July 1, 1994; 32 cents January 1, 1995; 33 cents July 1, 1995; and 34 cents January 1, 1996. All non-highway uses, including agriculture and aviation, are exempt or subject to full refund. Federal, state and local government use is exempt or subject to refund. Use in taxicabs is subject to 50 percent refund. Local bus use and approved emergency vehicle service use is subject to full refund. Motor fuels are also subject to 5 percent gross receipts tax imposed on oil companies (described above). Motor fuels subject to motor fuel excise tax are exempt from the state general sales tax. Motor fuel excise tax revenues are dedicated to a special transportation fund. There are no local motor fuel excise taxes.

Petroleum Business Gross Receipts Taxes: Petroleum company gross receipts are taxed at rate of 5 percent in lieu of all taxes on tangible personal property. Exemptions include no. 2 heating oil and propane for residential uses.

Utility Gross Receipts Taxes: Public service corporation tax imposed on utility gross receipts. Rates are variable: non-residential electric and natural gas sales taxed at 5 percent; residential electric and natural gas sales taxed at 4 percent; sales to municipal utilities are taxed at 4 percent. Tax on industrial sales is being phased out; it will fall to 4 percent in 1994 and drop by one percentage point each following year until it is zero. Deductions include: gross earnings from low-interest conservation loans and sales of appliances at invoice plus transportation costs. Credits include: 5 percent of cost of pollution control equipment installed after January 1, 1967.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

Sales Taxes: State rate is 6 percent. Exemptions include: electricity and natural gas; motor fuels; natural gas vehicles and equipment to convert vehicles to natural gas; natural gas filling station equipment; energy sold to residential consumers; energy sold to agricultural and industrial customers; first $150 per month of energy sold to commercial customers; heating fuels; high-occupancy vehicle fuel; pollution abatement equipment; aviation fuel. Fuel purchases by electric and gas utilities are not taxable. Sales to and by municipal governments are not taxable. Aviation fuels, exempt from motor fuels tax, are taxed at rate of 2.5 percent. There are no local sales taxes.

Corporate Income Taxes: State rate is 11.5 percent of net income (plus 10 percent surtax). Exemptions include: certain alternative energy system companies; electric cooperatives. Credits include: 5 percent of expenditures for pollution abatement; up to 60 percent of business contribution to municipal and nonprofit organizations, including certain energy conservation programs; 10 percent of cost of equipment associated with natural gas vehicles.

Property Taxes: Utility real and tangible property is assessed at full value same as other businesses. Utilities and petroleum businesses paying gross receipts tax are exempt from tax on tangible personal property. Pollution control equipment is also excluded from valuation. Local tax rates average 4.4 percent. Local governments may exempt: residential solar heating, cooling or electric installed after October 1, 1976, and before October 1991; solar non-residential electrical and cogeneration systems installed after July 1, 1981, and before July 1991; and residential passive solar in new buildings installed between April 20, 1977, and October 1, 1991.

DELAWARE

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 19 cents per gallon; diesel at 19 cents per gallon; gasohol at 19 cents per gallon; LPG at 19 cents per gallon. Non-highway uses, including agriculture and aviation, are allowed full refund. Federal, state and local government use is exempt. Petroleum business gross receipts tax also imposed on sales of motor fuels (see above). Motor fuel excise tax is dedicated to transportation. There are no local motor fuel excise taxes.

Petroleum Business Gross Receipts Taxes: Petroleum products taxes imposed on wholesale gross receipts from petroleum sales taxed at 0.4 percent; surtax imposed at 0.25 percent. Sales to residential consumers are exempt. Tax is imposed in place of normal business gross receipts at rate of 0.25 percent.

Environmental Charges: Petroleum tax imposed at 0.9 percent (dedicated to hazardous waste cleanup fund).

Utility Gross Receipts Taxes: Gross earnings tax (production tax) imposed at rate of 4.25 percent. Exemptions include residential electric and gas sales. A 10-percent rebate is given to purchases by manufacturers and wholesalers. An additional tax (license fee) is imposed at rate of $50 plus 1 mill per dollar of gross receipts. Producers of electricity and gas are exempted from license tax imposed on manufacturers generally at $75 plus 0.25 percent of gross receipts from sales (excluding monthly deduction of $600,000).

Utility Regulatory Fees: Administrative assessment imposed at 2 mills per dollar of utility gross receipts. A tax is also imposed on the basis of electric utility wire mileage in state.

Environmental Charges: See Petroleum Business Tax.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: There is no state or local general sales tax.

Corporate Income Taxes: State rate is 8.7 percent of net income. Credit is available for "mitigation of commuter traffic" based on number of participating employees.

Property Taxes: Utility real property is assessed at market value, the same assessment rate as other businesses. Local tax rates average 2.03 percent of assessed value.

DISTRICT OF COLUMBIA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 20 cents per gallon; diesel at 20 cents per gallon; gasohol at 20 cents per gallon; LPG at 20 cents per gallon. Non-highway uses, including agriculture and aviation, are taxed at full rate. Federal, state and local use is exempt. Use by publicly owned and operated local transit buses is exempt. Motor fuels subject to motor fuels excise tax are exempt from general sales tax. Motor fuel excise tax revenues go into general fund.

Utility Gross Receipts Taxes: Gross receipts of public utilities and toll telecommunications are taxed at rate of 9.7 percent. Receipts from sales to government are exempt. Utilities are exempt from personal property taxes.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: State rate is 6 percent. Exemptions include: sales of motor fuels subject to motor fuel tax; sales of residential public utility services and commodities by a gas or electric lighting company; sales of natural or artificial gas, oil, electricity, solid fuel or steam directly used in manufacturing, assembling, processing or refining. Fuel sales to electric utilities are also exempt.

Property Taxes: Real and tangible personal property of electric and gas utilities is assessed at fair market value, the same assessment rate as other businesses. Exemptions include: personal property of utilities paying gross receipts tax. In 1990-91 tax year, rates were $3.10 per $100 personal property; $2.15 per $100 commercial real property; $3.29 per $100 unoccupied land and buildings.

FLORIDA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Two-part state motor fuel tax based on gallonage and sales price. Total tax currently imposed on gasoline at rate of 11.8 cents per gallon; diesel - 11.8 cents per gallon; gasohol at 11.8 cents per gallon; LPG at 11.8 cents per gallon (or annual fee). Rate consists of 4 cent per gallon excise plus 6 percent of the total retail price, but not less than 10.9 cents per gallon total. Gasoline purchased in block of 500 gallons or more is exempt from tax. General non-highway use is taxed at full rate. Agriculture and commercial fishing subject to refund of most of tax. Aviation fuels are taxed at rate of 7.6 cents per gallon tax (exempted from excise portion of tax), but commercial air carriers are allowed a refund not to exceed 0.6 percent of the wages paid by the carrier to employees located or based in the state. Federal, state and local government use is taxed unless in blocks of 500 gallons or more. Use by city transit system is allowed refund for most tax. Department of Natural Resources receives $3.8 million of tax revenues each year; the remainder is dedicated to State transportation trust fund. Local taxes on motor gasoline include: the local option gas tax up to 6 cents per gallon; the State comprehensive enhanced transportation system tax at a rate equal to the lower of two-thirds of other local option gas taxes or 6 cents per gallon. Local taxes on special fuels include: the local option gas tax (Chapter 336), which is the higher of a) the tax rate levied by the county or b) a tax rate of 5 cents per gallon (increases to 6 cents per gallon effective 1993); the State comprehensive enhanced transportation system tax equal to 50 percent of the local option gas tax in 1992, 75 percent in 1993, and 100 percent thereafter. Local rates average 10.2 cents per gallon. All local revenues are dedicated to transportation.

Petroleum Inspection Fees: Inspection fee imposed on motor fuels at rate of 0.125 percent of sales.

Utility Gross Receipts Taxes: Gross receipts tax imposed on gas and electric utilities at 2.5 percent. Exemptions include: natural gas sales to electric and gas utilities; sales to electric cooperatives and municipal utilities. Cogenerated electricity not transmitted and distributed by an electric utility and not greater than the amount generated in during year ending June 30, 1990, is also exempt from tax.

Utility Regulatory Fees: An administrative assessment imposed on regulated public utilities at 0.125 percent of gross receipts.

Environmental Charges: (1) Inland protection tax imposed on petroleum products at 80 cents per barrel (increased from 30 cents in May 1992). Exemptions include: motor oil, lubricants, solvents and lead acid batteries. (2) Coastal protection tax imposed on motor fuel, special fuel, aviation fuel or other pollutants at 2 cents per barrel. Exemptions include: motor oil, lubricants, solvents and lead acid batteries. (3) Water quality tax imposed on motor oil at 2.5 cents per gallon; petroleum products at 5 cents per barrel; solvents and solvent mixtures at 5.9 cents per gallon. Solvents consumed in the manufacture or production of a material that is not itself a pollutant are exempt.

Taxes on Energy Natural Resources Producers

Oil: Production tax imposed on oil production at rate of 8 percent of gross value; oil production from small wells and tertiary oil taxed at rate of 5 percent of gross value. Additional 12.5 percent rate imposed on "escaped" oil.

Natural Gas: Severance tax imposed on natural gas production at rate of 12.8 cents per Mcf.

General Taxes

Sales Taxes: State rate is 6 percent. Exemptions include: residential energy sales; fuels purchased by utilities; heating fuels to poultry producers; cogenerated power; boiler fuels used in industry; resource recovery equipment operated by or for counties or cities; special fuels sold for agricultural use; fuels purchased for water and rail transport; machinery and equipment producing steam or electricity by burning boiler fuels; diesel fuel used in power take-off equipment; transmission of electricity; gas for certain agricultural purposes; electricity sold in enterprise zone. 1992 State legislature enacted additional 1 percent tax on electric power sold to commercial and industrial customers. Local rates average 0.02 percent. Local provisions conform with state.

Corporate Income Taxes: State rate is 5.5 percent of net income. Alternative minimum tax rate is 3.3 percent. Credits allowed for property taxes paid on gasohol production equipment.

Property Taxes: Utility real and personal property is assessed at full cash value same as other business. Pollution control equipment is assessed at salvage value. Exemptions include construction work in progress. There is no state real or tangible property tax.

GEORGIA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 7.5 cents per gallon; diesel at 7.5 cents per gallon; gasohol at 7.5 cents per gallon; LPG at 7.5 cents per gallon. General non-highway use is taxed at full rate. Agricultural use allowed refund of 6.5 cents per gallon. Aviation sales to licensed dealer are exempt from 6.5 cents of tax. Federal use is exempt. State and local government use is taxed at full rate. Motor fuels are also subject to state and local general sales taxes. Motor fuel excise tax is dedicated to transportation spending; 75 percent of state sales taxes collected on motor fuels is dedicated to the Department of Transportation; the remainder goes into general fund. There is an additional local option tax of 1 to 2 percent of sales price. Local governments are prohibited from imposing a gallonage tax. Local rates average about 2.5 cents per gallon.

Regulatory Fees: Administrative assessment imposed on public utilities based on property value.

Environmental Charges: Fee imposed on motor fuels at rate of 0.1 cents per gallon. Revenues are dedicated to the Department of Natural Resources.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

Sales Taxes: State rate is 4 percent. Exemptions include pollution control equipment. Fuels for manufacturing are generally taxable. Three-fourths of sales tax revenues collected on motor fuels are dedicated to highways. Local rates average 1.32 percent. Combined state and local rates not to exceed 6 percent. Local provisions generally conform with state provisions.

Property Taxes: Utility real and personal property assessed at 40 percent of market value, the same assessment rate as most other businesses. Pollution control equipment is exempt. There is no state property tax. Local rates average 5.92 percent of assessed value.

HAWAII

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 16 cents per gallon; diesel at 16 cents per gallon; gasohol at 16 cents per gallon; LPG at 11 cents per gallon. General non-highway use is taxed at full rate. Agricultural use may claim credit of 4 cents. Aviation use taxed at 1 cent. Federal government use is exempt. State and local government use is taxed at full rate. Motor fuels, except gasohol, are subject to the state general sales tax. Motor fuel excise tax revenues are dedicated to the state highway fund. Local motor fuel excise taxes range from 8.8 cents per gallon in the county of Hawaii to 16.5 cents in the city and county of Honolulu. The weighted average rate is 14.87 cent for gasoline and diesel; 9.91 cents for LPG.

Utility Gross Receipts Taxes: Public service company tax imposed on utilities at rate determined by ratio of net income to gross income: if ratio is 0.15 or less, tax rate is 5.885 percent of gross income; for each additional 0.01 in ratio, rate increases 0.2675 percent up, to a maximum of 8.2 percent. Tax is imposed in lieu of real property taxes and sales taxes.

Utility Regulatory Fees: Public service commission administrative assessment imposed on utilities at rate of 0.125 percent of gross receipts.

Environmental Charges: An environmental response fee is imposed on petroleum products at a rate of 5 cents per barrel.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: Imposed on gross receipts of seller. State rate is 4 percent. Exemptions include: utility sales subject to the public service company tax; motor fuel taxes; alcohol fuels not for resale; pollution control equipment. Fuels for manufacturing are generally taxable. Special rate of 0.5 percent imposed on electricity generated from non-fossil fuels and sold to utility for resale. Gross receipts from sales of fuels to electric and gas utilities is subject to the normal rate. Sales to municipal governments are taxable, since the excise tax is levied against the seller; sales by municipal governments are not taxable. Credit granted on state income tax to help offset sales and other excise taxes. Usually there are no local general sales taxes. A special county excise (optional) tax of 0.5 percent has been authorized to fund mass transit projects from January 1, 1993, to December 31, 2002. Provisions generally conform with the state.

Corporate Income Taxes: Graduated rate up to 6.4 percent of taxable net income over $100,000. Capital gains are taxed at rate of 4 percent. Credits allowed for fuel taxes paid by commercial fishers. Also, credits available for cost of solar and wind energy systems, heat pumps and ice storage systems installed and placed into service prior to January 1, 1999. Credit for solar energy systems installed on new and existing single-family residential building is the lesser of 35 percent or $1,750; new and existing multi-unit buildings used primarily for residential purposes is the lesser of 35 percent or $350 per building unit; new and existing hotel, commercial and industrial facilities is 35 percent. Credit for wind energy devices is 20 percent. Credit for heat pumps installed on new and existing single family residential buildings is the lesser of 20 percent or $4,000; new and existing multi-unit buildings used primarily for residential purposes is the lesser of 20 percent or $200 per building unit; new and existing hotel, commercial and industrial facilities is 20 percent. Credit for ice storage systems is 50 percent.

Personal Income Taxes: Graduated rate up to 10 percent of taxable income over $41,000 for married couple filing joint return. Credits allowed under corporate income tax are available to individual taxpayers.

Property Taxes: Utility real property assessed at fair market value, the same assessment rate as other businesses. Personal property tax repealed in 1947. Exemptions include: alternative energy improvements; air pollution control equipment installed after June 30, 1969, and in service by July 1, 1975; property owned or leased by a public utility. Local rates are $10 per $1,000 of assessed value for all non-residential land in Hawaii.

IDAHO

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 21 cents per gallon; diesel at 21 cents per gallon; gasohol at 21 cents per gallon; LPG at 21 cents per gallon. General non-highway use, including agricultural use, is allowed full refund (agricultural use may alternatively claim income tax credit). Aviation use is taxed at 3.5 cents per gallon. Federal, state and local government highway use is taxed at full rate; non-highway use is allowed refund. Motor fuels paying motor fuels excise tax are exempt from general state sales tax. Motor fuel excise revenues are dedicated to highway spending. There are no local motor fuel excise taxes.

Utility Gross Receipts Taxes: Rural electric associations pay tax on gross revenue at rate of 3.5 percent in lieu of property tax.

Miscellaneous Excise Taxes: Tax equal to one-half mill per kilowatt-hour is imposed on hydroelectric power produced in the state. Exemptions include electricity used for irrigation, manufacturing, milling, smelting, refining and processing.

Utility Regulatory Fees: Administrative assessment imposed on utilities not to exceed 0.3 percent of gross receipts.

Environmental Charges: Tax on petroleum imposed at rate of 1 cent per gallon dedicated to Petroleum Clean Water Trust Fund.

Taxes on Energy Natural Resources Producers

Oil: (1) Severance tax not to exceed 5 mills per barrel oil produced. (2) Production tax imposed at rate of 2 percent of market value.

Gas: (1) Severance tax not to exceed 5 mills per 50 Mcf. (2) Production tax imposed at rate of 2 percent of market value.

Coal: Production tax imposed at rate of 2 percent of net value (gross value less costs) less federal depletion deduction.

General Taxes

Sales Taxes: State rate is 5 percent. Exemptions include: motor fuels; electric and gas sales; any matter used to produce heat by burning, including wood, coal, petroleum and gas; pollution control equipment. Credit on personal income tax allowed for sales and excise taxes paid. There are no local sales taxes.

Corporate Income Taxes: State rate is 8 percent of net income. Credit allowed for 3 percent of investments qualifying for federal investment tax credit, up to 50 percent of state income tax liability. A gasohol production credit expired April 1992. Refunds available for excise taxes paid on special fuels (diesel, propane) used in heating or off-highway equipment.

Personal Income Taxes: Deductions for: benefits received from participation in utility demand-side management programs; full amount spent in year for insulation of existing residential buildings; total cost of alternative energy devices (wood, solar radiation, wind, geothermal), 40 percent in year completed, 20 percent for three following years, but not to exceed $5,000 in any one year. Also, credit allowed for sales and excise taxes paid.

Property Taxes: Utility real and tangible personal property assessed at 100 percent market value, the same assessment rate as other businesses. Exemptions include: property of electric and gas utilities and cooperatives to the extent that power is used for irrigation and drainage purposes; and pollution control facilities. There has been no state property tax (since 1965) while state sales tax in effect. Local rates average 2.01 percent of assessed value in urban areas, 1.39 percent in rural areas.

ILLINOIS

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 19 cents per gallon; diesel at 21.5 cents per gallon; gasohol at 19 cents per gallon; LPG at 19 cents per gallon. All non-highway use, including agriculture and aviation, is exempt or subject to refund. Federal use is exempt. State and local government highway use is taxed at full rate; non-highway use subject to refund. Sales to public utilities which own and operate buses as common carriers within a single municipality, contiguous municipalities or nearby are exempted. Motor fuels are also subject to the general state sales tax; only 70 percent of the sales price of gasohol is subject to sales tax. An additional 5 percent tax (currently 6.1 cents per gallon) is imposed on special fuels (mainly diesel) based on the average selling price as defined in the Retailer's Occupational Tax Act. Motor fuel excise tax revenues are dedicated to highway spending. Sales tax revenues from motor fuels are partially dedicated to highways. Local motor fuel excise tax rates average 3.1 cents per gallon.

Utility Gross Receipts Taxes: (1) Utility tax imposed at rate equal to lower of 32 cents per kilowatt-hour or 5 percent of gross receipts for electricity, and 2.4 cents per therm or 5 percent of gross receipts for natural gas. (2) Local utility gross receipts tax imposed at rate not to exceed 5 percent for electric and gas utilities, except cities of over 500,000 population may tax gas at rate of 8 percent (Chicago is only city with population over 500,000). Purchases by the city of Chicago are exempt from local tax. Weighted average rate for local gross receipts taxes across state is 5.72 percent.

Utility Regulatory Fees: Administrative assessment imposed on utilities at rate of 0.19 percent of gross receipts.

Environmental Charges: Leaky underground storage tank fee imposed on motor fuels (including diesel and aviation fuels, but excluding LPG) at rate of 0.3 cents per gallon, regardless of use.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

Sales Taxes: State rate is 6.25 percent imposed on seller ("Retailer's Occupation Tax"). Exemptions include: sales of electricity and natural gas; pollution control equipment; low-sulfur dioxide emission coal devices intended to use Illinois coal; oil and coal exploration equipment; 30 percent of price of gasohol. Utility fuel purchases are generally taxable, as are fuels used for manufacturing. Local rates average 2.37 percent.

Corporate Income Taxes: State rate is 4.8 percent of net income. Credits allowed for 20 percent of investment in coal research and 5 percent of investment in qualified equipment.

Property Taxes: Utility real property assessed at 33.33 percent of value, same assessment as most other businesses. Special valuation for solar and wind systems not to exceed value of conventional systems. Exemptions include: property owned by municipal natural gas agency; pollution control equipment.

INDIANA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 15 cents per gallon; diesel at 16 cents per gallon; gasohol at 15 cents per gallon; LPG users subject to annual fee. All non-highway uses, including agriculture and aviation, are exempt or subject to full refund. Federal government use is exempt. State and local government highway use is taxed at full rate; non-highway use is subject to refund. Use by local transit buses is exempt. Marine use is allowed refund for purchases at locations other than lakes. All refunds may be alternatively taken as income tax credits. An additional 11 cents per gallon tax is levied on motor carriers. Motor fuels are also subject to the general sales tax. Motor fuel excise tax revenues are dedicated to highways. There are no local motor fuel excise taxes.

Petroleum Inspection Fees: A 4 cent per barrel inspection fee is imposed on sales of gasoline and kerosene.

Utility Regulatory Fees: Administrative assessment imposed on gross receipts of utilities at rate of 0.15 percent, but not to exceed $2 million from any one utility.

Taxes on Energy Natural Resources Producers

Oil: Production tax imposed at rate of 1 percent of value. State also collects between $1 and $10 per acre for lease of state-owned land, plus a royalty not to exceed 12.5 percent of market value of extracted petroleum.

Gas: Production tax imposed at rate of 1 percent of value. State also collects between $1 and $10 per acre for lease of state-owned land, plus a royalty not to exceed 12.5 percent of market value of extracted petroleum.

Environmental Charges: A $2,000 initial payment, plus $1,000 annually, is assessed on companies engaged in surface coal mining to support abandoned mine land reclamation fund. Surface mining application fee imposed at fixed rate of $100, plus $125 for each acre.

General Taxes

Sales Taxes: State rate is 5 percent. Exemptions include: utility and fuels used in manufacturing, mining, production, refining, oil extraction, mineral extraction, irrigation, horticulture and agriculture; pollution control equipment required by federal, state or local law; federal and state taxes on gasoline. Fuel purchases by electric utilities are not taxable. Sales to municipalities are not taxable. There are no local sales taxes.

Corporate Income Taxes: (1) State corporate gross income tax imposed at rate equal to greater of: (a) 1.2 percent of gross receipts from rentals, services (including utility services), interest, passive income, and sales other than normal wholesale and retail sales, plus 0.3 percent of wholesale and retail sales; or (b) 3.4 percent adjusted federal taxable income. Deductions from gross income tax include: income from public transportation fares; receipts for electrical power purchased from power-producing subsidiaries; receipts from any part of the transportation of goods by truck or rail in interstate commerce. A depreciation deduction is allowed for resource recovery systems used to dispose of solid waste, hazardous waste, or coal conversion systems if the federal government allows a similar deduction. (2) Corporate supplemental net income tax imposed at rate of 4.5 percent of adjusted gross income less amounts paid in adjusted gross income tax, gross income tax and premium tax. (3) Local taxes include: county individual adjusted gross income tax based on Indiana adjusted gross income and imposed at rate of 1 percent in 49 counties, at 0.5 percent in 2 counties; county option income tax based on Indiana adjusted gross income imposed at average rate of 0.6 percent in 23 counties; county economic development income tax based on adjusted gross income imposed at average rate of 0.26 percent in 23 counties.

Personal Income Taxes: Individual adjusted gross income tax imposed at rate of 3.4 percent of federal adjusted gross income with specific state adjustments. Deductions include up to $1,000 for home insulation installation.

Property Taxes: Utility real and tangible personal property assessed at 33.33 percent of "true tax value," the same assessment rate as other business. Exemptions include: solar heating and cooling; wind power devices to produce mechanical or electrical power; required air pollution control equipment; 95 percent of assessed value of resource recovery and coal conversion (until 1988) facilities; hydroelectric or geothermal heating and cooling; personal property owned by coal mining operation used to meet reclamation standards. State rate is limited to $0.01 per $100. Local rates average 8.953 percent of assessed value.

IOWA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 20 cents per gallon; diesel at 22.5 cents per gallon; gasohol at 19 cents per gallon; LPG at 20 cents per gallon. General non-highway use including agriculture and aviation allowed full refund. Federal, state and local government use is exempt or allowed refund. Refunds may alternatively be used as state income tax credit. Motor fuels subject to motor fuel excise taxes are exempt from state general sales tax. Motor fuel excise revenues are dedicated to highway spending. There are no local motor fuel excise taxes.

Pipeline Inspection Fees: Pipeline Construction Inspection Fee (one time fee) imposed at rate of $0.50 per mile; annual fee imposed on pipelines in state at rate of 25 cents per mile.

Regulatory Fees: Public utility commission administrative assessment imposed on utilities at rate not to exceed 0.1 percent of gross revenues.

Environmental Charges: Underground storage tank fee imposed on motor fuels at rate of 1 cent per gallon.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: State rate is 5 percent. Exemptions include: gas, fuels and electricity used to produce tangible property sold at retail; motor fuels; pollution control equipment. Fuels used in manufacturing are generally exempt. Sales to municipal governments and energy cooperatives for resale are not taxable, but sales by them are. Local rates average 0.13 percent. In general, local taxes are imposed on the same basis as state sales tax., but sales of natural gas and electricity are exempt if county imposes a franchise tax or user fee on gross receipts.

Property Taxes: Utility real property assessed at 100 percent fair market value. Electric transmission lines and pipelines assessed at 100 percent; computers and manufacturing equipment assessed at 30 percent; other nonagricultural land assessed at 100 percent. Exemptions include: pollution control equipment installed after September 30, 1970; solar energy systems (for five assessment years). There is no state property tax. Local rates average 3.04 percent of assessed value.

KANSAS

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 18 cents per gallon; diesel at 20 cents per gallon; gasohol at 18 cents per gallon; LPG at 18 cents per gallon (or annual fee). General non-highway uses including agriculture and aviation are exempt or allowed refund. Federal government use is exempt. State and local highway use is taxed; non-highway use is subject to refund. There is an income tax credit equal to 20 cents for each gallon of ethanol produced (equal to 2 cents per gallon of gasohol). Motor fuels are exempt from the state general sales tax if otherwise taxed as motor fuel for highway use. Motor fuel excise revenues are dedicated to highway spending. There are no local motor fuel excise taxes.

Inspection Fees: (1) Imposed on gas utilities based on number of meters in service area: less than 2,000 meters at 20 cents per meter; 2,001 to 10,000 meters at 15 cents per meter; 10,001 to 50,000 meters at 10 cents per meter; more than 50,000 meters at 7.5 cents per meter. (2) Oil inspection fee imposed on petroleum products at rate of 1 cent per barrel.

Utility Regulatory Fees: Public service commission administrative assessment imposed on gross receipts of utilities not to exceed 0.2 percent.

Environmental Charges: (1) Petroleum product environmental fee imposed on petroleum products at rate of 1 cent per gallon.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed on oil producers at rate of 8 percent of gross value. Exemptions are available for small production depending on the difficulty of recovery and current oil prices. Production from any "pool" first producing oil after April 1, 1983, is exempt for 24 months from date of first production. Credit available for property taxes paid. Effective production tax rate is 4.33 percent. (2) See also Environmental Charges.

Gas: (1) Production tax imposed on natural gas producers at rate of 8 percent of gross value. Production from any "pool" first producing gas after April 1, 1983, is exempt for 24 months from date of first production. Credit available for property taxes paid. Effective production tax rate on gas is 7 percent.
(2) See also Environmental Charges.

Coal: (1) Severance tax imposed at rate of $1 per ton. First 350,000 tons from any mine is exempt.
(2) See also Environmental Charges.

Environmental Charges: Environmental assessments collected for Department of Health and Environment to cover cost of services provided to prevent surface and subsurface water pollution. Current rate is 13.5 mills per barrel of crude oil or petroleum marketed or used, 4.3 mills per Mcf of natural gas produced, sold, marketed or used. Conservation and Reclamation Tax imposed on coal producers at rate of $50 plus a fee ranging from 3 cents to 10 cents per ton set by Department of Health and Environment.

General Taxes

Sales Taxes: State rate is 4.9 percent. Exemptions include: sales of electricity, natural gas, heat and water delivered through mains, lines or pipes to residential premises for non-commercial use; fuel sales for residential and agricultural use; motor fuels for which fuel tax paid; sales to community action group or agency for exclusive purpose of repair or weatherization of low-income housing; repair of pipeline equipment. Fuels used in manufacturing are generally exempt. Utilities consumed in production are taxed at 2.5 percent. Fuel purchases by gas and electric utilities are exempt from sales tax. Also, fuel purchases by a municipal utility are exempt. Personal income tax credit allowed for sales and excise taxes paid by senior citizens depending on income. Local rates average 1 percent. Local taxes imposed on all electric and gas sales; otherwise, local provisions conform with state.

Corporate Income Taxes: There is an income tax credit equal to 20 cents for each gallon of ethanol produced (equal to 2 cents per gallon of gasohol).

Property Taxes: Utility real and personal property assessed at 30 percent of market value, the same assessment rate as other businesses. Exemptions include: merchants' and manufacturers' inventories and tangible personal property of utilities. There is no state tax. Local rates average 11.6 percent of assessed value. Local governments may also impose Intangibles Tax on gross earnings from business intangible personal property at rate not to exceed 2.25 percent.

KENTUCKY

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 15 cents per gallon; diesel at 12 cents per gallon; gasohol at 15 cents per gallon; LPG at 15 cents per gallon. General non-highway use is taxed at full rate. Agriculture use receives full refund. Aviation use receive 95 percent refund. Gasoline is exempt if purchased in blocks of 2,000 gallons or more. Federal government use is exempt. State and local government highway and non-highway use is taxed at full rate. Refund available for 90 percent of tax paid for fuel used in motorboats. Use by city and suburban buses, nonprofit buses, taxicabs and senior citizen transportation is allowed refund of approximately half of tax. There is an additional 5.2 cents per gallon surtax imposed on motor carriers with more than three axles and gross weight over 26,000 pounds, plus 2 cents per gallon if 60,000 pounds or more, plus 4 cents per mile if 60,000 pounds or more. Motor fuels subject to motor fuel excise are exempt from state general sales tax. Motor fuel excise revenues are dedicated to highway spending. There are no local motor fuel excise taxes.

Utility Regulatory Fees: Public utility commission administrative assessment imposed on gross receipts of utilities not to exceed 0.2 percent.

Environmental Charges: (1) Radioactive Wastes Tax imposed on processors of radioactive waste and contaminated waste materials at rate of 10 cents per pound received. (2) Hazardous Waste Management Assessment imposed on generators of waste oil, spent material from air pollution control devices controlling emissions from coke manufacturing facilities, and secondary handlers that store, process or reclaim waste generated by other in-state generators. Rates for off-site disposal are 10 cents per gallon for liquid waste, $5 per cubic yard for solid waste. Rates for on-site disposal are 5 cents per gallon liquid waste, $2.50 per cubic yard for solid waste. (3) Petroleum Environmental Assurance Fee imposed on use of gasoline and special fuels at rate of 0.4 cents per gallon.

Taxes on Energy Natural Resources Producers

Oil: Production tax imposed at rate of 4.5 percent of market value.

Gas: Production tax imposed at rate of 4.5 percent of market value.

Coal: Production tax imposed at rate of 4.5 percent of market value (minimum 50 cents per ton).

General Taxes

General Sales Taxes: State rate is 6 percent of gross receipts. Exemptions include: all residential utilities and home heating fuels; coal for electricity production; air-pollution control equipment; certified alcohol production facilities; certified fluidized bed energy production facilities; motor fuels subject to motor fuels tax; fuels used for agriculture; fuels used in ships or vessels for conveyance of property or persons for hire; fuels for rail operations. Fuels used in manufacturing are taxed at normal rate unless they represent more than 3 percent of cost of production, in which case the tax is equal to 3 percent times the total cost of production times 6 percent. Sales to municipal governments and energy cooperatives are not taxable; sales by them are taxable. There are no local sales taxes.

Corporate Income Taxes: Graduated rate up to 8.25 percent of taxable net income over $250,000. Federal taxable income is not used as base. Credits available for 4.5 percent of purchase price of coal used to generate steam or hot water used for space heating or industrial processing.

Franchise Taxes: Corporation License Tax imposed at rate of $2.10 for each $1,000 of capital employed in business apportioned to state. Every corporation with gross receipts of not more than $500,000 is entitled to a credit equivalent to $1.40 per $1,000 of the initial $350,000 of capital employed in business. Exemptions include: public service corporations subject to Public Service Company Property Tax and property certified as alcohol production facility.

Property Taxes: Utility property assessed at full market value, same as other property. State taxes real property at 18.7 cents per $100 fair cash value in 1991. State tax rate on personal property varies: manufacturing machinery is taxed at rate of 15 cents per $100; leasehold interests (owned and financed by tax-exempt organizations) at 1.5 cents; pollution-control equipment at 15 cents; alcohol production equipment at 0.1 cents; unmined coal at 18.9 cents; fluidized bed facilities at 0.1 cents; crude petroleum at 0.5 cents. Local rates average 0.24 percent of assessed value. Local governments are generally not permitted to impose property taxes on property taxed by state, but local governments may tax crude oil at rate not to exceed 1.0 percent of value.

LOUISIANA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 20 cents per gallon; diesel at 20 cents per gallon; gasohol at 20 cents per gallon; LPG at 20 cents per gallon (or annual fee). General non-highway use is taxed at full rate. Agricultural and aviation use allowed full refund. Gasoline in blocks of 6,000 gallons or more is exempt. Use by armed services for aircraft or ships, or fuel used out of state, is exempt. State and local government highway and non-highway use is taxed at full rate. Full refund for gasoline used in fishing boats in state. There is an income tax credit available for ethanol production equal to 12 cents per gallon (which equals 1.2 cents per gallon of gasohol). Vehicles having gross weight of 10,000 pounds or less and propelled by natural gas or LPG pay $150 annual fee in lieu of excise tax. Motor fuels subject to motor fuel excise are exempt from state general sales tax. Motor fuel excise revenues are partially dedicated to highway spending. There are no local motor fuel excise taxes.

Petroleum Inspection Fees: Petroleum products inspection fee imposed at rate of 1/32 cent per gallon.

Utility Gross Receipts Taxes: (1) Public Utility License Tax imposed on gross receipts of pipelines and non energy utilities at rate of 2 percent. (2) Natural Gas Franchise Tax imposed on gross receipts of natural gas pipeline companies at rate of 1 percent. (3) New Orleans imposes additional tax on gross receipts of utilities at rate of 0.6 percent. (4) Occupation Tax: Electric and gas utilities with more than $2.5 million gross revenues pay $7,500. Electric and gas utilities are allowed credit for increases in price of natural gas delivered from outer continental shelf.

Regulatory Fees: Assessment for inspection, control and supervision imposed on gross receipts of utilities at variable rate ranging from .318 percent on the first $100,000 or less of receipts to 0.038 percent for receipts in excess of $100 million. An additional surtax of 20 percent is also levied to support the Public Service Commission's economics and rate analysis division.

Environmental Charges: (1) Oil Spill Contingency Fee imposed on persons operating a marine terminal facility where crude oil is loaded or unloaded at rate of 2 cents per barrel. (2) Underground storage tank tax imposed motor gasoline and diesel at 0.3 cents per gallon.

Taxes on Energy Natural Resources Producers

Oil: Production tax imposed on oil production at rate of 12.5 percent of market value. Reclaimed oil taxed at reduced rate of 3.125 percent. Oil produced using tertiary recovery methods is exempt. Also, the working-interest owner in an oil or gas well who discovers a new field is exempt from 50 percent of the taxes on oil and gas from that well for a period of 24 months from date regular production begins. This exemption applies only to first 100 barrels of oil per day or first 2 million cubic feet per day of gas during the 24 month period. Natural resources owned and severed by a political subdivision for its own use are also exempt. There is a 20 percent reduction in severance tax rate that would otherwise be due on incremental production resulting from injecting produced water into an oil or gas reservoir. The purpose of this Act was to ease the financial burden placed on industry by state regulations prohibiting discharge of produced water into surface waters of the state. Oil and gas contained in earth is exempt from ad valorem taxes. Producing equipment, such as wells, derricks, pumps, connections, and other accessories are taxable.

Gas: Severance tax imposed on natural gas production at rate of 7.5 cents per Mcf (rate adjusted annually according to changes in spot market prices). Natural gas liquids are taxed at the equivalent natural gas rate. Approximately two-thirds of Louisiana gas production is from off-shore leases which is not subject to tax. Exemptions include: sales of gas used in manufacture of carbon black (affects six carbon black companies) and gas consumed in production of natural resources (affects one large sulfur company). Also, the working-interest owner in an oil or gas well who discovers a new field is exempt from 50 percent of the taxes on oil and gas from that well for a period of twenty-four months from date regular production begins. This exemption applies only to first one hundred barrels of oil per day or first two million cubic feet per day of gas during the twenty-four month period. Natural resources owned and severed by a political subdivision for its own use are also exempt. There is a 20 percent reduction in severance tax rate that would otherwise be due on incremental production resulting from injecting produced water into an oil or gas reservoir. The purpose of this Act was to ease the financial burden placed on industry by state regulations prohibiting discharge of produced water into surface waters of the state. Oil and gas contained in earth is exempt from ad valorem taxes. Producing equipment, such as wells, derricks, pumps, connections, and other accessories, are taxable.

Coal: Severance tax imposed on coal at rate of 10 cents per ton; tax on lignite is 12 cents per ton. Coal or lignite stored in the state (including in the ground) is exempt from ad valorem taxes on property.

General Taxes

General Sales Taxes: State rate is 4 percent (3 percent state tax plus 1 percent Louisiana Recovery District tax). Exemptions include: fuels and materials used by manufacturing plant to produce electric power for self consumption or cogeneration; all energy sources other than refinery gas used for boiler fuel; energy used in agriculture; fuel used in production of crawfish; diesel fuel used by resident commercial fishermen; butane and propane for private residential cooking and heating; pollution control equipment; gasoline and gasohol; natural gas. Local rates average 3.83 percent. In general, local provisions conform with state. New Orleans combined state and local tax is 9.5 percent on a few items, but most items are taxed at total of 9 percent. New Orleans imposes normal city rate of 5 percent on sales (except sales for resale) of coke, coal, fuel oil, and other combustibles (butane, propane, acetylene, etc.); however, natural gas is completely exempted.

Corporate Income Taxes: Graduated rate up to 8 percent of net income over $200,000. Credits allowed for: certain utility customer refunds; purchases of equipment to recover or recycle chlorofluorocarbons; purchase of recycling equipment; conversion of vehicle to burn clean fuel. There is an income tax credit available for ethanol production equal to 12 cents per gallon (which equals 1.2 cents per gallon of gasohol). A credit is allowed against any state tax for fuel used or consumed in manufacturing operations by municipally operated manufacturing establishment. Credit allowed against any state tax for municipal electric plants and municipally operated manufacturing plants for taxes paid based on amount of gas used in excess of 25,000 Mcf.

Property Taxes: Utility real property assessed at 10 percent of market value, same as most other businesses. Personal property of public service corporations assessed at 25 percent of market value, compared with residential at 10 percent, electric co-ops at 15 percent, all other personal property at 15 percent. Exemptions include: materials, boiler fuels and energy used by public utilities to generate electricity; solar systems attached to residential owner-occupied houses; coal or lignite stored in-state; pollution control equipment. Oil and gas contained in earth is exempt from ad valorem taxes. Producing equipment, such as wells, derricks, pumps, connections, and other accessories are taxable. State tax imposed at rate not to exceed $0.00575 per dollar of assessed value. Local rates average 9.9 percent of assessed value.

MAINE

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 19 cents per gallon; diesel at 20 cents per gallon; gasohol at 19 cents per gallon; LPG at 19 cents per gallon. General non-highway use and agricultural use is subject to refund of all but 1 cent of tax. Aviation use is subject to refund of all but 4 cents. Federal highway and non-highway use is exempt. State highway use is taxed at full rate, non-highway use allowed refund of all but 4 cents. Use in local transit buses allowed full refund. Use in county and local vehicles is exempt; state vehicles are taxed at full rate. Motor fuels are exempt from state general sales tax if subject to motor fuels excise tax. Motor fuel excise revenues are dedicated to highway spending. There are no local motor fuel excise taxes.

Utility Regulatory Fees: Administrative assessment imposed on utilities at rate not to exceed 0.25 percent.

Environmental Charges: (1) Oil Terminal Fee imposed on all petroleum and petroleum products at rate of 3 cents per barrel. Revenues go to Environmental Improvement Commission. (2) Assessment for Ground Water Oil Cleanup Fund imposed at 44 cents per barrel of gasoline and 25 cents per barrel of other refined petroleum products.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

Sales Taxes: State rate is 6 percent. Exemptions include: motor fuels; jet fuels; coal, oil and wood used for residential cooking and heating; natural gas used for residential heating and cooking; first 750 kWh per month of residential electric; fuel oil for burning blueberry land; water pollution control facilities; air pollution control facilities. 95 percent of energy used in manufacturing is exempt; remaining 5 percent is taxed at 6 percent rate. There are no local sales taxes.

Property Taxes: Utility real and tangible property is assessed at market value, the same assessment rate as other businesses. Exemptions include: pollution control equipment; solar energy devices (for five assessment years). Local rates average 2.2 percent of assessed value.

MARYLAND

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 23.5 cents per gallon; diesel at 23.5 cents per gallon; gasohol at 23.5 cents per gallon; LPG at 23.5 cents per gallon. There is a 0.75 cent surcharge on diesel fuels. General non-highway use, including agriculture, is allowed full refund. Tax on fuel for pleasure boat use is not refunded. Aviation use is taxed at 5 cents per gallon. Federal highway use is taxed, non-highway use is exempt. State and local use is taxed. Use for mass transit and certain municipal bus companies is exempt. Motor fuels subject to motor fuel excise are exempt from state general sales tax. Motor fuel excise revenues are partially dedicated to highway spending. There are no local highway motor fuel excise taxes; however, several counties impose taxes on some fuel that might be used as motor fuel. Anne Arundel County imposes a 2 cents per gallon sales tax on LPG; Baltimore County imposes an 8 percent sales tax on non-residential heating fuels including LPG; Montgomery County imposes a $0.2028 per pound sales tax on LPG; Prince George's County imposes a 4.49 cents per gallon sales tax on LPG; St. Mary's County imposes a 5.192 cents per gallon sales tax on LPG.

Utility Gross Receipts Taxes: Public Service Company Franchise Tax imposed at rate of 2 percent of gross receipts from electric, gas and oil pipeline activities. Electric cooperatives and municipal utilities are exempt. Credit allowed for $3 per ton of Maryland-mined coal purchased in excess of amount purchased in 1986. Gross receipts subject to Utility Tax are exempt from corporate income tax.

Utility Regulatory Fees: Administrative assessment imposed at rate equal to gross operating revenues of the utility divided by total revenues for state utilities multiplied by the estimated costs of Maryland Public Service Commission. Rate is not to exceed 0.17 percent of gross operating revenues.

Miscellaneous Local Energy Taxes: Weighted average rates are as follows: electricity at 3.9 percent; natural gas at 2.6 percent; coal at 2.1 percent; fuel oil at 2.3 percent; and LPG at 2.5 percent.

Environmental Charges: (1) Electric Environmental Surcharge imposed at rate of 0.15 mills per kWh or $1,000 per month, whichever is less. (2) Oil Terminal Facilities license fee imposed at rate of 5.75 cents per barrel of oil transferred into the state. (3) For fees related to coal mining see Taxes on Energy Resources.

Taxes on Energy Natural Resources Producers

Coal: (1) Reclamation Surcharge imposed at rate of 6 cents per ton of coal removed by open pit or strip methods. Collected by county where mine resides. (2) Local Severance tax imposed by counties at rate of 30 cents per ton of coal removed by surface mining methods. (3) Deep Mining License Tax imposed by state at rate of 15 cents per ton. (4) Strip Mining License Tax imposed by state at rate of 15 cents per ton. (5) Bond Supplement Reserve Charge imposed by state at rate of 3 cents per ton of coal extracted from ground. (6) Special Reclamation Fee imposed at rate of $75 per acre.

General Taxes

General Sales Taxes: State rate is 5 percent. Exemptions include: motor fuels; residential electric and gas sales; residential fuels; heating fuels; pollution control equipment; agricultural fuels; fuels used to operate machinery or equipment; diesel fuel used in coal mine reclamation. Fuels for manufacturing are generally exempt. Purchases of fuels by electric and gas utilities are not taxable. Sales to municipal governments are not taxable, but sales by municipal governments are taxable. There are no local general sales taxes, but many counties impose specific taxes on energy, lodging, etc. (see "Miscellaneous Local Energy Taxes").

Corporate Income Taxes: State rate is 7 percent of taxable income. Gross receipts subject to Public Service Franchise Tax are exempt. Credit allowed for $3 per ton of Maryland-mined coal purchased by cogenerator who is not subject to Public Service Company Franchise Tax in excess of number of tons that cogenerator purchased in calendar year 1986.

Property Taxes: Utility real property assessed at 40 percent of "phased-in value," same as other businesses. Tangible personal property of utilities assessed based on earning capacity and other factors. Appears that utilities are treated differently. State general property rate in 1985 was $2.10 per $1,000 for real and tangible personal property. Local rates average 2.32 percent of assessed value. Local governments may offer credit for solar energy devices.

Under Consideration: H.B. 1349 and S.B. 793 would offer tax credit for some costs of alternative-fueled vehicles and alternative fuel vehicle retrofits. [Alternative Energy Network Online Today, March 12, 1993.]

MASSACHUSETTS

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 21 cents per gallon; diesel at 21 cents per gallon; gasohol at 21 cents per gallon; LPG at 9.4 cents per gallon. Non-highway general and agricultural use is exempt or allowed full refund. Aviation use taxed at 10 cents per gallon. Federal, state and local highway and non-highway use is exempt or subject to refund. Motor fuels subject to motor fuel excise are exempt from state general sales tax. Motor fuel excise revenues are partially dedicated to highway spending. There are no local motor fuel excise taxes.

Utility Franchise Tax: Utility franchise tax imposed on the net income of public utilities at rate of 6.5 percent in lieu of the Corporate Net Income Tax.

Regulatory Fees: Public utility commission administrative assessment imposed on utilities not to exceed 0.25 percent of operating revenues plus $50,000 per nuclear power plant plus other miscellaneous assessments, for example, to fund consumer action.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

Sales Taxes: State rate is 5 percent. Exemptions include: motor fuels subject to motor fuels excise tax; heating fuels sold to residential consumers, businesses with five or fewer employees, and qualified industrial users; piped and bottled gas sold to residential consumers, businesses with five or fewer employees, and to qualified industrial users; electricity sold to residential consumers, employers with five or fewer employees, and to qualified industrial users; residential solar, wind and heat pump systems; home heating fuels; electricity, gas and other fuels used in manufacturing, research and development, agriculture and fishing, utility services, newspaper printing; and fuel used in operating railroads and aircraft. There are no local sales taxes.

Corporate Income Taxes: (1) Corporation Net Income Tax imposed at rate of 9.5 percent of net income plus $2.60 per $1,000 tangible property not taxed locally. Public utilities are exempt. Credits include: 30 percent of the cost of lease or purchase of company shuttle vans. Deduction allowed for cost of solar or wind energy devices. Accelerated deductions available for: expensing exploration and development costs; expensing certain alternative energy sources; five-year amortization of pollution control facilities. Natural Resource Depletion Allowance allowed, but may not exceed 50 percent of net income from property. In case of oil and gas corporations, depletion allowance is available only to independent producers.

Personal Income Taxes: Credit equal to lesser of $1,000 or 15 percent of cost of renewable energy device for residential property. Deductions include: percentage of gross mining income as a depletion allowance which may exceed actual cost of resource property. Accelerated Cost Recovery allowed for equipment. Immediate deduction may be taken for certain natural resources exploration and development costs.

Property Taxes: Utility real and personal property assessed at 100 percent of fair cash value, same as other business. Exemptions include: 75 percent of value of electric transmission lines; pollution control equipment; solar and wind devices (for 20 assessment years); hydroelectric facilities begun construction after 1978; property of Massachusetts Bay Transportation Authority. There is no state tax. Local rates cannot exceed 2.5 percent of cash value unless approved by two-thirds of voters.

MICHIGAN

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 15 cents per gallon; diesel at 15 cents per gallon; gasohol at 15 cents per gallon; LPG at 15 cents per gallon. General non-highway and agricultural use is exempt or allowed full refund. Aviation use is taxed at 3 cents per gallon; interstate flights allowed 1.5 cent refund. Federal, state and local government highway and non-highway use is exempt. Discount of 6 cents per gallon for diesel fuel consumed in licensed commercial motor vehicles. Motor fuels are not exempt from state general sales tax. Motor fuel excise revenues are dedicated to transportation. There are no local motor fuel excise taxes.

Utility Gross Receipts Taxes: City of Detroit levies gross receipts tax at rate of 5 percent on electric, gas and other utilities.

Miscellaneous Excise Taxes: Funds to support low-income weatherization programs are collected by several utilities through special "conservation surcharge" based on kilowatt-hour usage.

Inspection Fees: No energy-related provisions.

Utility Regulatory Fees: Public utility commission administrative assessment imposed on gross receipts of utilities at rate of 0.02 percent.

Environmental Charges: Environmental protection regulatory fee imposed on all refined petroleum products at rate of 0.875 cents per gallon.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed on oil at rate of 6.6 percent of gross market value; rate reduced to 4 percent for stripper well crude oil and crude oil from "marginal properties." Additional fee imposed not to exceed 1 percent of gross market value of oil produced in previous year. Oil subject to severance taxes is exempt from property taxes. (2) Additional oil and gas fee imposed at rate of 1 percent of value.

Gas: (1) Production tax imposed on natural gas at rate of 5 percent of gross market value. Additional fee imposed not to exceed 1 percent of gross market value of gas produced in previous year. Gas subject to severance taxes is exempt from property taxes. (2) Additional oil and gas fee imposed at rate of 1 percent of value.

General Taxes

General Sales Taxes: State rate is 4 percent. Exemptions include pollution control equipment; fuels used in agriculture; home heating fuels to public assistance recipients; diesel fuel. Fuels for manufacturing are generally exempt. There are no local sales taxes.

Corporate Income Taxes: Single Business Tax (modified value-added tax) imposed at rate of 2.35 percent of "adjusted tax base" which includes business income, compensation paid to employees, interest payments, and depreciation of tangible assets. The first $45,000 is exempt. A credit is allowed for 5 percent of public utility property taxes paid, up to total of income tax liability. There is also a credit for alcohol fuel production.

Property Taxes: Utility real and personal property assessed at 50 percent of true cash value, same as other businesses. Exemptions include: solar, wind and water devices installed before 1984; LPG tanks on residential and agricultural property used for residential or agricultural purposes; pollution control equipment; property owned by mass transit system; corporations subject to special taxes in lieu of property taxes, including oil and gas for which severance taxes have been paid (oil and gas production machinery and equipment is still taxable). Since enactment of state sales tax there has been no state general property tax, however, the state taxes real and personal operating property of utilities in lieu of local property taxes. State rate on centrally assessed property was $58.09 per $1,000 of assessed value. Local rates average 5.07 percent of assessed value.

MINNESOTA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 20 cents per gallon; diesel at 20 cents per gallon; gasohol at 18 cents per gallon (after alcohol fuels credit); LPG and other highway fuels subject to annual fee based on vehicle weight and mileage. Vehicles propelled by natural gas or propane are required to obtain annual alternate fuel permit in lieu of motor fuel and special fuel excise taxes. Motor fuel excise revenues are dedicated to highway spending. There are no local motor fuel excise taxes.

Petroleum Inspection Fees: A variable rate inspection fee is imposed on motor fuels.

Utility Gross Receipts Taxes: Some local governments impose gross receipts taxes on electric and/or gas utilities, including Minneapolis, St. Paul, Duluth, Albert Lea, Coon Rapids, South St. Paul and Winona. Average local rate is about 1.1 percent.

Utility Regulatory Fees: Rates vary.

Environmental Charges: Petroleum Release Cleanup Fee imposed on petroleum products at rate of $10 per 1,000 gallons.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: State rate is 6.5 percent. Exemptions include: motor fuels; resource recovery equipment; residential heating fuels (if they are the primary heating fuel); gas and electric for months November through April. Sales tax refund available for new plant and equipment and plant expansion. In 1992, state legislature granted sales tax exemption to photovoltaic devices and wind conversion systems, if they are used as an electric power source; also exempted materials used to manufacture, install, construct, replace or repair those systems. Purchases by manufacturers are exempt including fuels. Fuel purchases by electric utilities are exempt under general manufacturing exemption. Local average rate is 0.55 percent.

Property Taxes: Real and personal property assessed according to class. Utilities are in the highest class of property assessed at 3 percent to 4.7 percent of market value, along with some other commercial and industrial businesses. Exemptions include: personal property, except personal property of electric and gas companies and pipeline companies; solar, wind and biomass systems installed before 1984; state or municipally owned hydroelectric facilities; electric power lines used primarily to supply agriculture; city parking lots; photovoltaic systems installed after Jan. 1, 1992, and wind systems installed after Jan. 1, 1991. A credit is allowed property owners where high voltage power line built after 1974 runs over property. Rural Electric Cooperative Associations are subject to a tax at rate of $10 per 100 members in lieu of personal property taxes. There is no state real property tax. Local taxes average 10.13 percent of assessed value.

MISSISSIPPI

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 18 cents per gallon; diesel at 18 cents per gallon; gasohol at 18 cents per gallon; LPG at 18 cents per gallon. Motor fuel excise revenues dedicated to highway spending. Local motor fuel excise tax rates average 0.3 cents per gallon.

Utility Regulatory Fees: (1) Public utility administrative assessment imposed on gross receipts at rate of 0.164 percent for electric and gas utilities and 0.09 percent for electrical power associations. Municipal gas utility tax imposed on all municipal gas utilities, prorated based on gross revenues of each utility to collect total revenues of $25,000. (2) See also Oil and Gas Board Maintenance Tax in the following section.

Environmental Charges: Environmental fee imposed on petroleum products at rate of 0.2 cents per gallon.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed on oil production at rate of 6 percent of gross value at the point of production. Oil produced by enhanced recovery methods in which carbon dioxide, transported by pipeline to oil well site, is used is taxed at rate of 3 percent. (2) Oil and Gas Board Maintenance Tax imposed at rate of 35 mills per barrel. (3) Local Privilege Tax imposed on drilling rigs at rate of 1.01 cents per foot for wells not exceeding 7,000 feet; 4.21 cents per foot for wells exceeding 7,000 feet. All oil and gas produced or in the ground and all producing equipment, including wells, connections, pumps, derricks, and other appurtenances owned by the producer, and all leases in production, including mineral rights in producing properties, are exempt from ad valorem taxes levied by state or local governments or taxing entities.

Gas: (1) Production tax imposed on natural gas production at rate of 6 percent of gross value at point of production. Exemptions include: gas produced from wells drilled after March 15, 1987, and before July 1, 1990, for a period of two years beginning on date of first sale of the production. Gas from wells which produce occluded gas from coal seams that began production after March 20, 1990, and before July 1, 1993, are taxed at rate of 3.5 percent for a period of five years. (2) Oil and Gas Board Maintenance Tax imposed at rate of 4 mills per Mcf. (3) Local Privilege Tax imposed on drilling rigs at rate of 1.01 cents per foot for wells not exceeding 7,000 feet; 4.21 cents per foot for wells exceeding 7,000 feet. All oil and gas produced or in the ground and all producing equipment, including wells, connections, pumps, derricks, and other appurtenances owned by the producer, and all leases in production, including mineral rights in producing properties, are exempt from ad valorem taxes levied by state or local governments or taxing entities.

General Taxes

General Sales Taxes: State rate is 6 percent. Electric and gas sales to electric cooperatives are taxed at reduced rate of 1 percent; electric, gas and fuels to industry and agriculture are taxed at 1.5 percent. Machinery and equipment (including pollution control) are taxed at 1.5 percent. Exemptions include: all residential energy sales; motor fuels. Local sales tax rates average 1 percent. Local provisions generally conform with state provisions.

Corporate Income Taxes: Graduated rate up to 5 percent of net income over $100,000. Deduction allowed for 5-year amortization of pollution control equipment.

Property Taxes: (1) Utility real and personal property assessed at 30 percent of value compared with most other property assessed at 15 percent. Exemptions include: 66.67 percent of the value of nuclear fuel and assemblies used by electric utilities in the state; property of nonprofit electric cooperatives. All oil and gas produced or in the ground and all producing equipment, including wells, connections, pumps, derricks, and other appurtenances owned by the producer, and all leases in production, including mineral rights in producing properties, are exempt from ad valorem taxes levied by state or local governments or taxing entities. There is no state tax. Local rates average 13.7 percent of assessed value. (2) Additional tax imposed on electric companies at rate of $22.50 per mile of pole line transmitting electrical current in the state. Exemptions include distribution lines; nonprofit electric cooperatives. (3) Additional tax imposed on intrastate pipeline companies transporting oil or gas products based on diameter of pipeline: diameter greater than 26 inches taxed at $125 per mile; 20-26 inches at $75; 15-20 inches at $52.50; 12-15 inches at $37.50; less than 12 inches at $15.

MISSOURI

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 13 cents per gallon; diesel at 13 cents per gallon; gasohol at 13 cents per gallon; LPG at 13 cents per gallon (or annual fee). Vehicles powered by electricity or LPG may pay annual fee in lieu of excise tax. Motor fuels are exempt from state general sales tax if otherwise taxed as motor fuel. Motor fuel excise revenues are dedicated to highway spending. Local motor fuel excise taxes average 0.0087 cents per gallon.

Petroleum Inspection Fees: Imposed on motor fuels at rate of 1.5 cents per 50 gallons.

Taxes on Energy Natural Resources Producers

Coal: Assessment on Surface Coal Mining Permitees applies to persons holding permit for surface coal mining and reclamation who elect to file a Phase I reclamation bond as an alternative to filing a full cost bond. Rate is 45 cents per ton for first 50,000 tons of coal sold, shipped or otherwise disposed of; 30 cents per ton for next 50,000 tons in calendar year. Permitees filing full cost bonds pay a one-time assessment not to exceed $125,000 based on estimated production between September 1988 and September 1993.

General Taxes

General Sales Taxes: State rate is 4.225 percent. Exemptions include: fuel used by utilities; electricity used in manufacture, mining, processing, or producing if electric costs exceed 10 percent of the costs of production; electricity, natural, artificial or propane gas, wood, coal, or home heating oil for residential use; propane, natural gas, electricity or diesel used exclusively for drying agricultural crops; fuel for commercial shipping; electricity, natural or artificial gas, and propane for "basic steelmaking"; pollution abatement equipment; motor fuels subject to motor fuels excise tax; pumping machinery and equipment. Fuels purchased at retail to be consumed in manufacturing or creating gas, power, steam, electrical current, or in furnishing water at retail are also exempt. Local rates not allowed to exceed 1.43 percent. Local governments may impose sales tax on residential energy, otherwise they conform with state.

Corporate Income Taxes: A tax credit is available for processing of wood waste to pellets or other usable fuel. The credit is $5 per ton of wood waste processed for sale to others.

Property Taxes: Utility real property assessed at 32 percent of market value same as most other businesses. Utility tangible personal property assessed at 33.33 percent same as other businesses. Local rates average 4.07 percent of assessed value.

MONTANA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 20 cents per gallon; diesel at 20 cents per gallon; gasohol at 20 cents per gallon; LPG users subject to annual fee. An income tax credit is available for ethanol production equal to 30 cents per gallon produced (equals 3 cents per gallon of gasohol). There is no state general sales tax. Motor fuel excise revenues are dedicated to highway spending. There are no local motor fuel excise taxes.

Miscellaneous Excise Taxes: (1) Electrical Energy Producers' tax imposed on electric producers at rate of 2/10 mill per kWh. Credit available for up to $75,000 for difference between interest received on low-interest loans made by utilities for installation of energy conservation or non-fossil fuel energy systems in residential dwellings and the prevailing rate for home improvement loans. (2) There is a temporary surtax on energy in 1993 applicable to the motor fuels excise tax, the electric energy producer's tax, state oil and natural gas severance taxes, and local oil and natural gas severance taxes.

Utility Regulatory Fees: Public utility commission administrative assessment imposed at rate of 0.24 percent of gross receipts of non-municipal utilities plus a consumer counsel fee at rate of 0.045 of gross receipts.

Environmental Charges: See Coal Resources Indemnity and Groundwater Assessment Tax imposed on coal producers in the following section.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed at rate of 5 percent of gross value. (2) Conservation tax imposed at rate not to exceed 0.2 percent of market value of each barrel of oil produced, saved, marketed, stored or exported. (3) Local production taxes imposed at rate of 8.4 percent of gross taxable value (gross value less value paid in cash or apportioned to non-working interest). Reduced rate of 5 percent for oil produced using tertiary recovery methods. Non-working interests are taxed at rate of 12.5 percent of gross value. (4) Local Net Proceeds Tax imposed at rate of 7 percent of gross value collected at county level in lieu of ad valorem taxes.

Gas: (1) Production tax imposed at rate of 2.65 percent of gross value. First 30 Mcf produced from well that produced 60 Mcf or less during prior calendar year is exempted. Production in excess of 30 Mcf from well that produced less than 60 Mcf is taxed at reduced rate of 1.59 percent. (2) Conservation tax imposed not to exceed 0.2 percent of market value of each 10 Mcf produced, saved, marketed, stored or exported. (3) Local production tax imposed at rate of 15.25 percent of gross taxable value (gross value less value paid in cash or apportioned to non-working interest). Non-working interests are taxed at rate of 15.25 percent of gross value. (4) Local Net Proceeds Tax imposed at rate of 12 percent of gross value collected at county level in lieu of ad valorem taxes.

Coal: (1) Production tax imposed on coal at variable rate depending on Btu content: surface mined coal under 7,000 Btu per pound taxed at rate of 10 percent of value; underground mined coal under 7,000 Btu per pound taxed at 3 percent of value; surface mined coal over 7,000 Btu per pound taxed at rate of 15 percent of value; underground mined coal over 7,000 Btu per pound taxed at 4 percent of value. There is no tax imposed on the first 50,000 tons per year, except if taxpayer produces more than 50,000 tons, he is liable for tax on all coal produced in excess of 20,000 tons. (2) Local Gross Proceeds Tax imposed on same base as production tax at rate of 5 percent. Collected at county level in lieu of ad valorem taxes on coal. (3) Resource Indemnity and Groundwater Assessment Tax based on gross value of product less royalties. Rate is $25 plus 0.4 percent; all other minerals taxed at rate of $25 plus 0.5 percent.

General Taxes

General Sales Taxes: None.

Corporate Income Taxes: State rate is 6.75 percent of net income. Additional surtax increases rate to 7. 1 percent. Alternative minimum tax is 0.5 percent of gross receipts. Public utilities and financial institutions are allowed credit for low-interest (maximum 7 percent) energy conservation and non-fossil fuel generation loans equal to the difference between interest earned at prevailing rates and the interest rate charged. An income tax credit is available for ethanol production equal to 30 cents per gallon produced.

Personal Income Taxes: Investment credits allowed for: 10 percent of first $1,000 and 5 percent of next $3,000 of cost of non-fossil energy system; 5 percent (up to $150) of expenditures for energy conservation measures in residential building and 5 percent (up to $300) of expenditures in non-residential building.

Property Taxes: Utility real and personal property assessed at 12 percent of market value. Electric cooperatives, gasohol production facilities and pollution control equipment assessed at 3 percent of market value. Non-fossil fuel energy generation is exempt for ten years, up to $20,000 for single family residential installations and $100,000 for other. Additional taxes apply to electric transmission greater than 500 kilovolts. According to State Tax Office, combined state and local effective tax rates on utility property average 2.74 percent of market value; effective tax rate on all other property is 1.65 percent.

NEBRASKA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 24.6 cents per gallon; diesel at 24.6 cents per gallon; gasohol at 24.6 cents per gallon; LPG at 24.6 cents per gallon. Tax includes: 12.5 cents per gallon base rate; plus a variable tax based on the average cost to the state of purchases of 50 gallons or more. An income tax credit is available for ethanol production at 20 cents per gallon (equals 2 cents per gallon of gasohol). Variable part of excise tax must be sufficient to cover lost revenues from ethanol production tax credit. Income tax credit allowed for taxes paid on motor fuels used for non-highway purposes. Motor fuels are exempt from state general sales tax if otherwise taxed as motor fuel for highway use. Motor fuel excise revenues are dedicated to highway spending. There are no local motor fuel excise taxes.

Utility Gross Receipts Taxes: Local gross receipts taxes imposed by counties in public power districts at rate of 5 percent in lieu of property taxes.

Environmental Charges: Petroleum Release Remedial Action fee imposed at rate of 0.3 cents per gallon on motor fuels and 0.1 cents per gallon on other fuels.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed on non-stripper oil at rate of 3 percent of value; stripper oil at 2 percent of value. Most oil production in state is from stripper wells. (2) Conservation tax imposed at rate not to exceed 4 mills per $1 value, currently 3.5 mills.

Gas: (1) Production tax imposed at rate of 3 percent of value. (2) Conservation tax imposed at rate not to exceed 4 mills per $1 value, currently at 3.5 mills.

Uranium: Production tax imposed at rate of 2 percent of value in excess of $5 million gross value.

General Taxes

General Sales Taxes: State rate is 5 percent. Exemptions include: electric, gas and other fuels for manufacturing, agriculture, generation of electricity, sales to hospitals, motor fuels; pollution control equipment. Local rates average 0.88 percent.

Corporate Income Taxes: Graduated rate up to 6.65 percent of net income of $50,000 and higher. Credits for: state taxes paid on non-highway use fuels for vehicles; 20 cents per gallon of ethanol produced.

Property Taxes: Utility real and tangible personal property assessed at actual value same as other businesses. Local tax rates average 3.02 percent of assessed value.

NEVADA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 23 cents per gallon; diesel at 27 cents per gallon; gasohol at 23 cents per gallon; LPG at 23 cents per gallon. Motor fuels for highway use are exempt from state general sales tax. Motor fuel excise revenues are dedicated to highway spending. Average local excise tax rate is 6.91 cents per gallon.

Petroleum Inspection Fees: Inspection fee imposed at rate of 0.055 cents per gallon of motor fuel or lubricating oil.

Utility Regulatory Fees: Administrative assessment imposed on utilities at rate of 0.35 percent of gross receipts for public service commission, plus 0.075 percent to fund consumer advocacy efforts.

Environmental Charges: Tax imposed at rate of 0.6 cents per gallon on motor fuel, diesel and heating oil. Revenues go to petroleum discharge cleanup fund.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed on net proceeds. Variable rate depends on ratio of net proceeds to gross proceeds: if ratio is less than 0.1, then rate is 2 percent of net proceeds; 0.1-0.18 taxed at 2.5 percent rate; 0.18-0.26 taxed at 3 percent rate; 0.26-0.34 taxed at 3.5 percent rate; 0.34-0.42 taxed at 4 percent rate; 0.42-0.50 taxed at 4.5 percent rate; 0.50 or higher taxed at 5 percent rate. (2) Conservation tax imposed at rate of 50 mills per barrel.

Gas: (1) Production tax imposed on net proceeds. Variable rate depends on ratio of net proceeds to gross proceeds: if ratio is less than 0.1, then rate is 2 percent of net proceeds; 0.1-0.18 taxed at 2.5 percent rate; 0.18-0.26 taxed at 3 percent rate; 0.26-0.34 taxed at 3.5 percent rate; 0.34-0.42 taxed at 4 percent rate; 0.42-0.50 taxed at 4.5 percent rate; 0.50 or higher taxed at 5 percent rate. (2) Conservation tax imposed at rate of 50 mills per 50 Mcf.

Coal: Production tax imposed on net proceeds. Variable rate depends on ratio of net proceeds to gross proceeds: if ratio is less than 0.1, then rate is 2 percent of net proceeds; 0.1-0.18 taxed at 2.5 percent rate; 0.18-0.26 taxed at 3 percent rate; 0.26-0.34 taxed at 3.5 percent rate; 0.34-0.42 taxed at 4 percent rate; 0.42-0.50 taxed at 4.5 percent rate; 0.50 or higher taxed at 5 percent rate.

Geothermal: Production tax imposed on net proceeds at rate of 3.64 percent.

General Taxes

General Sales Taxes: State rate is 2 percent. Exemptions include: motor fuels for highway use; electricity and gas; residential fuels. Fuels for manufacturing are generally taxable. Fuels purchased by electric and gas utilities are subject to tax. Sales to and by municipal governments are exempt from tax. Energy cooperatives are exempt from tax if they are an instrumentality of a government. Local rates average 4.56 percent.

Property Taxes: Utility real and personal property assessed at 35 percent of "taxable value" same as other businesses. Exemptions include: pollution control equipment; active solar energy devices. Combined state and local rates not to exceed 5 cents per dollar of assessed value.

NEW HAMPSHIRE

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 18 cents per gallon; diesel at 18 cents per gallon; gasohol at 18 cents per gallon; LPG at 18 cents per gallon. There is no state general sales tax. Motor fuel excise revenues are dedicated to highway spending. There are no local motor fuel excise taxes.

Utility Gross Receipts Taxes: Public Utility Franchise imposed on gross receipts of utilities at rate of 1.0 percent. Municipal utilities are exempt.

Environmental Charges: Petroleum Discharge and Disposal Clean-up fee imposed on petroleum products at rate of 0.6 cents per gallon.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: None.

Corporate Income Taxes: Rate is 8 percent of net income. Public utilities are allowed credit for Public Utility Franchise Tax paid.

Property Taxes: Utility real property assessed at full value same as other businesses. Exemptions include pollution control equipment. Municipalities may exempt wood, solar and wind energy systems. Small power producers and cogenerators may enter into agreements with local governments to pay not more than 5 percent of gross revenues in lieu of property taxes. State imposes Nuclear Station Property Tax at rate of 0.64 percent of assessed value of nuclear station property (rate will be reduced to 0.491 percent in 1994, after which it will fall to 0.25 percent).

NEW JERSEY

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 10.5 cents per gallon; diesel at 13.5 cents per gallon; gasohol at 10.5 cents per gallon; LPG at 5.25 cents per gallon. Aviation fuels are taxed at 12.5 cents per gallon. Motor fuels are also subject to Petroleum Gross Receipts Tax. Motor fuels are exempt from state general sales tax. Motor vehicles less than 50,000 pounds gross weight may obtain refund for 3 cents per gallon of diesel tax paid. Motor fuel excise revenues are partially dedicated to highway spending. There are no local motor fuel excise taxes.

Petroleum Business Gross Receipts Tax: Imposed on companies that refine or distribute petroleum products in New Jersey at rate of 2.75 percent of gross receipts (or 4 cents per gallon) derived from first sale within state not for export. Exemptions include: home heating oil and propane gas used for residential heating.

Additional Utility Taxes: Beginning in 1992, gas and electric light, heat and power companies are subject to tax based on units of energy sold in preceding year. Rate of taxation must be adjusted so that total tax liability of each taxpayer is equal to its relative share of total tax due from all gas and electric utilities under previous public utility tax law. Previous law included a franchise tax imposed on gross receipts of electric and gas utilities at rate of 5 percent plus surtax of 0.9375 percent, and an additional tax on utilities imposed at rate of 7.5 percent of gross receipts plus surtax of 0.625 percent.

Utility Regulatory Fees: Public utility commission administrative assessment imposed on gross receipts of utilities at rate of 0.25 percent of gross receipts. Nuclear facility assessment imposed at rate not to exceed greater of $2 million or 0.1 percent of gross receipts.

Environmental Charges: (1) Spill Compensation and Control Tax imposed at rate of 1.75 cents per barrel of non-petroleum hazardous substances (or 1 percent of market value plus 0.25 cents/barrel if greater) and 1.75 cents per barrel of all other substances. Total rate not to exceed 125 percent of tax due in 1986 tax year. (2) Surtax on corporate net income imposed at rate of 0.417 percent to fund Hazardous Discharge Site Cleanup Fund.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: State rate is 6 percent. Exemptions include: motor fuels; sales of fuels to airlines for use in airplanes and railroads for use in locomotives; all fuels subject to petroleum tax; gas, water, steam, fuel and electricity delivered through mains, lines, pipe or containers in bulk; energy conservation equipment in the form of solar energy devices and systems or cogeneration equipment; recycling equipment; pollution control. Fuels for manufacturing are generally exempt. Fuel purchases by electric and gas utilities are not taxable, and neither are sales to or by municipal governments or energy cooperatives. There are no local sales taxes.

Corporate Income Taxes: Rate is 9 percent of net income. Public utilities that are subject to gross receipts taxes are exempt from income taxes.

Property Taxes: Utility real and tangible personal property assessed at "taxable value" determined by each county (personal property assessed at true value which is equal to original cost less depreciation, real property is assessed at between 20 percent and 100 percent of market value, but 50 percent by default) same as other businesses. Exemptions include pollution control equipment.

NEW MEXICO

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 22 cents per gallon; diesel at 18 cents per gallon; gasohol at 22 cents per gallon; LPG at 22 cents per gallon (or annual fee). LPG vehicles up to 26,000 pounds may pay annual fee in lieu of excise tax. Motor fuel excise revenues are partially dedicated to highways. There are no local motor fuel excise taxes.

Pipeline Inspection Fees: (1) Natural gas pipeline companies pay tax of $500 plus an amount based on aggregate installed horsepower of compression facilities. (2) Oil pipelines are taxed at a rate of $513 plus an amount based on pipeline distance.

Utility Regulatory Fees: Administrative assessment imposed on utility gross receipts at rate of 0.5 percent.

Environmental Charges: Petroleum Loading Fee imposed at rate of 1 cent per gallon on gasoline, diesel and gasohol.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed at rate of 3.75 percent of value less royalties paid or due and less transport expenses to first place of market. (2) Emergency School Tax imposed at rate of 3.15 percent of value less royalties less transport expenses less value of products taxed under general sales tax. (3) Local ad valorem production tax imposed on 150 percent of the value of production after deducting royalties and transport expenses. Rate varies by district and is equal to nonresidential property tax in each district. (4) Conservation tax imposed at rate of 0.18 percent of value less royalties and transport expenses.

Gas: (1) Production tax imposed at rate of 3.75 percent of value less royalties paid or due and less transport expenses to first place of market. (2) Emergency School Tax imposed at rate of 3.15 percent of value less royalties less transport expenses less value of products taxed under general sales tax. (3) Local ad valorem production tax imposed on 150 percent of the value of production after deducting royalties and transport expenses. Rate varies by district and is equal to nonresidential property tax in each district. (4) Conservation tax imposed at rate of 0.19 percent of value less royalties and transport expenses.

Coal: (1) Severance tax imposed on underground-mined coal at rate of 55 cents per ton; surface-mined coal at rate of 57 cents per ton. Coal sold under existing contracts is subject to a surtax which brings total rate to $1.13 to $1.17 per ton. (2) Resources excise tax or processors' tax imposed at rate of 0.75 percent of sale value. (3) Conservation tax imposed at rate of 0.19 percent of value less royalties and transport expenses.

Uranium: (1) Production tax imposed at rate of 3.5 percent of 50 percent of sales price. (2) Resources excise tax or processors' tax imposed at rate of 0.75 percent of sale value. (3) Conservation tax imposed at rate of 0.19 percent of sales price less royalties. (4) Radiation Protection Continued Care Fund tax imposed at rate of 10 cents per pound of uranium.

General Taxes

General Sales Taxes: State rate is 5 percent of gross receipts. Exemptions include: sales subject to Emergency School Tax or Natural Gas Processors' Tax; receipts from storage of crude oil, natural gas or liquid hydrocarbons; sales or leases of oil, natural gas or mineral leases; motor fuels. Fuels for manufacturing are generally taxable. Personal income tax credit available (refundable if no tax is due) to taxpayers with modified gross income less than $10,000. Municipalities must also pay taxes but many deductions are allowed. Local rates average 1.12 percent. Average combined sales tax rate on electricity was 5.72 percent in calendar year 1992. Local provisions generally conform with state provisions.

Personal Income Taxes: Geothermal tax credit is available.

Property Taxes: Utility real and tangible personal property is assessed at 33.33 percent of market value, the same assessment rate as other businesses. There is no state tax. Local rates average 2.33 percent of assessed value.

NEW YORK

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 8 cents per gallon; diesel at 10 cents per gallon; gasohol at 8 cents per gallon; LPG at 8 cents per gallon. Revenues from 0.625 cents per gallon of the excise tax are dedicated to emergency highway funds; the remainder goes into general fund. Motor fuels are also subject to general sales tax and petroleum business tax. County taxes ranging from 3 percent to 4.25 percent of price are also imposed. There are no local motor fuel excise taxes, except for New York City, which imposes an excise tax on leaded gasoline only.

Petroleum Business Tax: Imposed at various rates. Effective January 1992, motor fuel, aviation gasoline, kero-jet fuel and automotive-type diesel fuel are taxed at rate of 14.84 cents per gallon; non automotive-type diesel fuel for agricultural use taxed at 8.05 cents per gallon; all other non-automotive-type diesel motor fuel taxed at 14.03 cents per gallon; residual petroleum products taxed at 12.42 cents per gallon. These rates include a supplemental tax and 15 percent surcharge where applicable. Electric utilities receive a credit of 5.25 cents per gallon for no. 2 heating oil and 5.01 cents per gallon for residual petroleum products. Manufacturers receive credit or reimbursement of 5.98 cents per gallon for unenhanced diesel motor fuel and residual petroleum products. Residential fuel oil is exempt.

Petroleum Inspection Fees: (1) Petroleum testing fee imposed on motor fuels at rate of 5 mills per gallon.

Utility Gross Receipts Taxes: (1) Utility franchise tax imposed on water, gas, steam and electric companies at rate of 0.75 percent of gross earnings plus 4.5 percent of dividends paid in excess of 4 percent of paid-in-capital. Utilities are exempt from general corporate income tax. (2) Gross income tax imposed on gross receipts of all utilities at rate of 3 percent. Electric utilities are allowed a credit against gross income tax liability for: certain residual petroleum and diesel fuels purchased to power generators; surcharges imposed on gross receipts of petroleum business companies. (3) Surcharge imposed at rate of 10 percent of utility franchise and gross income taxes, after deduction of allowable credits. (4) New York City levies an additional tax on utilities at rate of 2.35 percent of gross receipts. The New York Metropolitan Transportation Authority also taxes transportation and transmission companies.

Regulatory Fees: Public utility commission administrative assessment imposed on utility gross receipts at rate not to exceed 0.33 percent.

Environmental Charges: Refineries and storage fee imposed on petroleum products at rate of 1 cents per barrel.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: State rate is 4 percent. Exemptions include: fuels sold to airlines; residential sales of electricity and gas and other fuels; utilities and fuel used in manufacturing, mining, processing, farming, rural electric cooperatives. Local rates average 3.38 percent. Combined state and local range from 6 percent to 8.25 percent. Counties and cities may tax residential energy at reduced rates, but most exempt them. In New York City, exemption for manufacturing and residential energy is not allowed.

Corporate Income Taxes: Rate is 9 percent of net income, or 0.178 percent of capital, or 4.5 percent of minimum taxable base (alternative minimum tax), whichever is greater. Public utilities are exempt from tax. Credits include: sales and use taxes paid for pollution control equipment. New York City imposes income tax at rate of 8.85 percent of allocated city income. Credits include sales and use taxes paid for production machinery or equipment, electricity and other energy.

Property Taxes: Utility real property is assessed at locally determined "percent of value," same as other business. Exemptions include: pollution control equipment; energy conservation measures in one to four family homes; solar and wind systems constructed before July 1, 1988, or after Jan. 1, 1991, and before Jan. 1, 1996, but only for increase in property value due to system and only for 15 assessment years. Local tax rates average 21.8 percent of assessed value.

NORTH CAROLINA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 17 cents per gallon; diesel at 17 cents per gallon; gasohol at 17 cents per gallon; LPG at 17 cents per gallon. An additional sales tax component is imposed at rate of 7 percent of average wholesale price (minimum rate is 3.5 cents per gallon; current rate is 5 cents per gallon). Motor fuel excise revenues are dedicated to highways; revenues from sales tax component of fuel tax are not dedicated. There are no local motor fuel excise taxes.

Petroleum Inspection Fees: Inspection fee imposed on motor fuels at rate of 0.25 cents per gallon.

Utility Gross Receipts Taxes: Franchise tax imposed on electric and gas utilities at rate of 3.22 percent of gross receipts. This tax is in lieu of franchise tax on normal corporations imposed at rate of $1.50 per $1,000 of total capital stock, surplus and undivided profits.

Miscellaneous Taxes: (1) Tax levied on wholesale fuel distributors based on number of pumps owned or leased by wholesaler through which motor fuel is sold at retail. Rate per pump varies with number of pumps, with preferential rates given distributors selling through 600 or fewer pumps. Lowest rate is one fifth the highest. (2) An expansion surcharge may be collected by natural gas utilities to fund expansion into unprofitable territories. Expansion surcharge may not exceed 15 cents per dekatherm.

Taxes on Energy Natural Resources Producers

Oil: Conservation tax imposed at rate not to exceed 5 mills per barrel.

Gas: Conservation tax imposed at rate not to exceed 0.5 mills per Mcf.

General Taxes

General Sales Taxes: State rate is 4 percent on most items. Sales of electricity and natural gas are taxed at rate of 3 percent. Exemptions include: motor fuels subject to gallonage tax; fuels sold to ocean-going vessels for hire and engaged in interstate commerce or foreign trade; sales of electric power by municipality that sells power purchased from a federal agency. Pollution control equipment is taxed at rate of 1 percent like other machinery. Aviation fuel taxed at general rate of 4 percent. Propane sold to schools is subject to 4 percent tax. LPG sold to farmers is taxed at 1 percent. Fuel — other than electricity and piped natural gas — purchased by electric utilities and manufacturers is taxed at 1 percent; electricity and natural gas taxed at 3 percent. Fuel — other than electricity and piped natural gas — purchased by gas utility companies is taxed at state rate of 4 percent plus local rate of 2 percent; electricity purchased by gas utilities for use as fuel is taxed at rate of 3 percent; natural gas purchased for resale is not taxed. Sales to municipalities and electric cooperatives are exempt; sales by them are taxable. Local rates average 2 percent. County sales tax imposed at rate of 2 percent on transactions state taxes at 4 percent rate. Sales taxed by state at 3 percent are not taxed locally. Local provisions generally conform with state.

Corporate Income Taxes: Rate is 7.75 percent of net income plus surtax. Combined rate in fiscal year 1992 was 7.98 percent. Credits include 25 percent of solar energy system construction cost (maximum $1,000 per system or per year for single dwelling unit); 10 percent of costs of cogenerating power plant not fueled by residual oil, middle distillate oil, gasoline, natural gas, or LPG; 20 percent of installation and construction costs of ethanol distillery, 30 percent if powered by an alternative fuel source (neither are to exceed net tax liability in a given tax year); 20 percent of cost of photovoltaic equipment facility (not to exceed net tax liability in a given year); 10 percent (up to $2,500) of methane gas facility; 10 percent of (up to $1,000) of wind device; 20 percent (up to $8,000) of facility using solar energy to produce industrial heat; 10 percent (up to $5,000) of hydroelectric generator; 20 percent of peat facility (not to exceed net tax liability in a given year).

Property Taxes: Utility real and personal property assessed at true value same as other businesses. Exemptions include: pollution control facilities and "special nuclear materials." Buildings equipped with solar heating and cooling equipment are assessed as conventional heating and cooling equipment. No state tax. Local rates averaged 71.2 cents per $100 in 1990-91 for rural property, $1.27 per $100 for property located in municipal areas.

NORTH DAKOTA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 17 cents per gallon; diesel at 17 cents per gallon; gasohol at 17 cents per gallon; LPG at 17 cents per gallon. A 40 cents per gallon ethanol production credit (equals 4 cents per gallon of gasohol) is also available. A special excise tax of 2 percent is imposed on all special fuels for use in state that are exempt from motor fuels excise. Motor fuels subject to motor fuels excise tax are exempt from state general sales tax. Motor fuel excise revenues are dedicated to highways. There are no local motor fuel excise taxes.

Utility Gross Receipts Taxes: (1) Nonprofit rural electric cooperatives subject to tax on gross receipts. Rate varies according to length of time co-op has been in existence: if in existence 5 years or less the rate is 1 percent, if more than 5 years the rate is 2 percent. This tax is imposed in lieu of state property taxes. Local property taxes are still applicable.

Miscellaneous Energy Taxes: (1) Coal conversion tax rates vary: facilities (excluding electric generation and coal gasification) designed to use over 500,000 tons of coal per year are taxed at rate of 2.5 percent of gross receipts. Electric plants with capacity of 120,000 kilowatts or more are taxed at 1/4 mill times 60 percent of installed capacity of each unit times the number of hours in period. Tax is in lieu of personal property taxes. (2) Additional tax is imposed at rate of 1/4 mill per kilowatt-hour produced for sale. (3) Coal gasification facilities are taxed at rate of 2.5 percent of gross receipts on first 110 million cubic feet per day of gas produced for sale.

Environmental Charges: Tax imposed on petroleum products at rate of 0.225 cents per gallon. Revenues go to Petroleum Tank Release Fund.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed at rate of 5 percent of gross value at the well. Imposed in lieu of state and local ad valorem taxes on property. (2) Production tax imposed at rate of 6.5 percent of gross value at the well except that tax is imposed at rate of 4 percent for oil produced from wells drilled and completed after April 27, 1987, and not otherwise exempt. A 4 percent rate also applies to tertiary or secondary recovery. If price of oil exceeds $33 per barrel then tax is 6.5 percent for all. If price falls below $33 per barrel, reduced rate and exemptions are reinstated.

Gas: Severance tax imposed at rate of 4 cents per Mcf indexed for inflation. Imposed in lieu of state and local ad valorem taxes on property.

Coal: Severance imposed at rate of 75 cents per ton plus 2 cents per ton (dedicated to lignite research fund). The 75 cents per ton tax rate is reduced to 37.5 cents for coal used in cogeneration facilities designed to use renewable resources as a fuel to generate 10 percent or more of energy output. Exemptions include: coal used primarily to heat buildings in state, coal used by state or political subdivisions, and coal used in agricultural processing and sugar beet refining plants in state or adjoining states. Tax is in lieu of sales and property taxes on minerals in ground.

General Taxes

General Sales Taxes: Variable tax rate. Most sales taxed at rate of 5 percent. Exemptions include: motor fuels or other products subject to "special North Dakota taxes" (including fuel oil which is subject to 2 percent special fuel tax; electricity; sale of biomass from agriculture for use in producing steam or electricity; sales of production equipment and tangible property used in lignite power plants; gross receipts from initial sales of coal subject to privilege tax on coal conversion plants (i.e., all coal exempt unless used for heating purposes in which case it is taxable). Natural gas sales are taxed at rate of 4 percent (down from 5 percent in 1992); rates will decline to 3 percent in 1994, and 2 percent after 1994. Sales to municipal governments are exempt, while sales by municipal governments are taxable. Sales to and by energy co-ops are fully taxable, unless specifically exempted. Fuels for manufacturing are generally taxable. Utility fuel purchases are taxable unless specifically exempted (electric utility natural gas purchases are subject to sales tax; fuel oil is exempt but subject 2 percent special fuel tax; North Dakota mined coal is exempt in lieu of severance tax). Local rates average 0.28 percent. Local provisions generally conform with state.

Corporate Income Taxes: Graduated rate up to 10.5 percent of net income over $50,000. Credits include: 5 percent (per year for three years) of cost of geothermal, wind or solar device.

Personal Income Taxes: For most taxpayers, rate is 14 percent of federal tax liability. Credits include: 5 percent (per year for three years) of cost of geothermal, wind or solar device.

Property Taxes: (1) Utility real and personal property assessed at 5 percent of market value, the same assessment rate as other businesses. Exemptions include: residential and commercial solar, wind, and geothermal systems (up to five years exemption); coal conversion systems subject to coal conversion tax (land is subject to property tax); minerals in place in the earth (if at time of extraction they are either subject to oil and gas gross production tax or coal severance tax); and a 10-year exemption for pipelines carrying carbon dioxide to a North Dakota oil field for use in enhanced recovery. Rural electric co-ops pay gross receipts tax in lieu of personal property tax. Local rates average 41.5 percent of assessed value. (2) Transmission lines tax imposed by state on electric cooperatives at rate of $225 per mile of 230-kilovolt or larger line owned or operated by co-op.

OHIO

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 22 cents per gallon; diesel at 22 cents per gallon; gasohol at 21 cents per gallon; LPG at 22 cents per gallon. Excise rate is adjusted (maximum 1 cent per gallon) each July 1. Motor fuel excise revenues are dedicated to highways. There are no local motor fuel excise taxes.

Utility Gross Receipts Taxes: Public Utility Excise Tax imposed on gross receipts of utilities: electric and gas utilities at rate of 4.75 percent; pipeline companies at 6.75 percent. Exemptions include: municipally-owned utilities; first $25,000 of gross receipts; sales to other utilities for resale.

Utility Regulatory Fees: Nuclear Assessment levied to cover expenses of Utility Radiological Safety Board.

Taxes on Energy Natural Resources Producers

Oil: Severance tax imposed at rate of 10 cents per barrel.

Gas: Severance tax imposed at rate of 2.5 cents per Mcf.

Coal: (1) Severance tax imposed at rate of 9 cents per ton. (2) Additional tax of 1 cent per ton imposed to pay expenses of reclaiming lands that operator failed to reclaim. Imposed in any year in which trust falls below $2 million.

General Taxes

General Sales Taxes: Rate is 5 percent. Exemptions include: motor fuels subject to fuel excise tax; public utility services including electricity and natural gas; property (including fuels) used in manufacturing, mining, agriculture and production, transmission, distribution of public utility service; property used in energy or waste conversion facilities; pollution control equipment. Local rates average 0.76 percent. Local provisions generally conform with state.

Corporate Income Taxes: Graduated rate: greater of 5.1 percent of net income under $50,000 plus 8.9 percent net income over $50,000, or 0.582 percent of net worth. Public utilities (except long-distance telephone companies, insurance companies and financial institutions) are exempt. Exclusions from net worth include: coal conversion facilities; pollution control facilities; certified energy and solid waste conversion facilities. Deductions from net income include: dividends from public utilities; income from coal conversion facilities; pollution control property excluded from property apportionment factors; coal conversion property excluded from property apportionment factors. Local rates range from 0.25 percent to 2.5 percent (over half are 1 percent). Net profits of public utilities, except long-distance telephone must by state law be exempted.

Personal Income Taxes: No energy-related provisions.

Property Taxes: Utility real property assessed at 35 percent of true value same as other businesses. Tangible personal property assessed at variety of rates: rural electric companies at 50 percent of value; natural gas companies and pipelines at 88 percent; electric production facilities at 100 percent of "true value" (equal to 50 percent of historical value); other electric utility personal property at 88 percent. All other tangible personal property assessed at 25 percent. Exemptions include: municipal utilities; air pollution control facilities; certified energy conversion; solid waste conversion and thermal efficiency improvement facilities; solar, wind and hydroelectric systems constructed between Aug. 14, 1979, and Dec. 31, 1985. There is no state tax.

OKLAHOMA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 16 cents per gallon; diesel at 13 cents per gallon; gasohol at 16 cents per gallon; LPG at 16 cents per gallon or annual fee. Motor fuel excise revenues are partially dedicated to highways. There are no local motor fuel excise taxes.

Utility Gross Receipts Taxes: Rural electric cooperatives subject to tax on gross receipts at rate of 2 percent.

Environmental Charges: Tax imposed on motor fuels at rate of 1 cent per gallon. Revenues go to underground storage tank fund.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed at rate of 7 percent of gross value. Exemptions for enhanced recovery and horizontally-drilled wells. Oil and gas reserves and all equipment, machinery, tools, material or property necessary and used in the production of oil and gas are exempt from ad valorem taxes on property. (2) Additional tax imposed at rate of 0.95 percent of value at point of production.

Gas: (1) Production tax imposed at rate of 7 percent of gross value. Exemptions for enhanced recovery and horizontally-drilled wells. Oil and gas reserves and all equipment, machinery, tools, material or property necessary and used in the production of oil and gas are exempt from ad valorem taxes on property. (2) Additional tax imposed at rate of 0.95 percent of value at point of production.
(3) Conservation excise tax imposed at rate of 7 cents per Mcf, less 7 percent of gross value of each such Mcf. Tax rate shall not exceed one-third of gross value. Designed to discourage wasteful use of gas if price falls dramatically. Tax not triggered until price of gas is below $1 per Mcf.

Uranium: Production tax imposed at rate of 5 percent of gross value.

General Taxes

General Sales Taxes: State rate is 4.5 percent. Exemptions include: motor fuels; aircraft fuels; alcohol for blend with other fuels; residential sales of gas and electricity; pollution control equipment. Fuels for manufacturing are generally exempt. Local rates average 2.77 percent. Local governments may tax residential sales of electricity and gas.

Corporate Income Taxes: Rate is 6 percent of net income. Credits include: manufacturers' natural gas credit of $0.003 per thousand cubic feet; portion of cost of solar energy device installed on commercial or residential rental property; energy conservation loan fund credit of 50 percent of contribution; coal production incentive credit; investment credit; $1 per ton credit for Oklahoma coal purchases.

Property Taxes: Utility real and tangible personal property assessed at 12 percent of value like other businesses. Corporations, excluding public service corporations are assessed intangibles (less real and tangible personal and property taxed in lieu of property taxation). Oil and gas reserves and all equipment, machinery, tools, material or property necessary and used in the production of oil and gas are exempt from ad valorem taxes on property. Local property tax rates average 8.1 percent of assessed value.

OREGON

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 24 cents per gallon; diesel at 24 cents per gallon; gasohol at 24 cents per gallon; LPG at 24 cents per gallon. Motor fuel excise revenues are dedicated to highways. Local motor fuel excise tax rates average 0.8 cents per gallon.

Utility Gross Receipts Taxes: (1) Electric cooperatives subject to tax at rate of 3 percent of gross revenues (less costs). (2) Municipal governments may impose tax on gross revenues of privately owned public utilities within city boundaries not to exceed 5 percent. Average rate is 3.5 percent for electricity and 3 percent for natural gas. These taxes are part of general license taxes imposed on most businesses.

Regulatory Fees: Administrative assessment imposed on utilities not to exceed 0.25 percent of gross receipts.

Taxes on Energy Natural Resources Producers

Oil: Production tax imposed at rate of 6 percent of gross value. Credit allowed for all property taxes.

Gas: Production tax imposed at rate of 6 percent of gross value. Credit allowed for all property taxes.

General Taxes

General Sales Taxes: None.

Corporate Income Taxes: Rate is 6.6 percent of net income. Credits include: pollution control facilities completed before Dec. 31, 1995; 35 percent of cost (10 percent first and second years; 5 percent third, fourth and fifth years) of business facilities using renewable energy (including solar, wind, geothermal and biomass) or solid waste conversion including alternative fuel fleet vehicles and refueling stations and underground storage tank replacement or soil remediation; 35 percent of cost (10 percent first and second years; 5 percent third, fourth and fifth years) of investment in conservation projects reducing energy use by 10 percent or more including heat recovery from refrigeration systems, controls for heating and cooling systems, efficient lights and controls, variable speed motors, insulation and weatherization; boiler oxygen controls, improved pumps and motors, window glazing, etc; 35 percent credit is also available to landlords who weatherize rental houses or apartments. Commercial lenders are allowed credit for financing energy conservation measures at below-market rates.

Property Taxes: Utility real and tangible personal property assessed at full market value same as other business. Exemptions include: pollution control equipment installed after 1966 by non-profit taxpayers; solar, wind, geothermal, water, methane systems installed after 1975 for assessment years prior to 1998; property used to make gasohol. Local rates average 2.87 percent of assessed value.

PENNSYLVANIA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 12 cents per gallon; diesel at 12 cents per gallon; gasohol at 12 cents per gallon; LPG at 12 cents per gallon. An additional 6 cents per gallon tax is levied on motor carriers, but motor carriers may claim credit for excise tax and oil franchise taxes paid (net tax is 6 cents per gallon motor carrier tax not including annual decal fees). Excise tax on aviation gasoline is 3.6 cents per gallon; jet fuel is 1.8 cents per gallon. Agricultural users of motor fuels may request refund of motor fuels taxes paid. Motor fuel excise revenues are dedicated to highways. There are no local motor fuel excise taxes. Petroleum franchise tax at rate of 11.5 percent of gross receipts imposed on highway motor fuels only.

Utility Gross Receipts Taxes: Gross receipts tax imposed on public utilities. Electric is taxed at rate of 4.4 percent; oil transporters and regulated gas utilities and all other utilities at 5 percent. Tax is in lieu of local property taxes. Exemptions include: gross receipts of municipal utilities; LPG sales by gas utilities; LPG or natural gas sales to municipally owned or operated utilities; receipts for recovery of costs of cleanup, amortization, and backup power due to nuclear accident. Electric cooperative corporation tax: annual fee of $10 for each 100 members or fraction thereof, in lieu of all other state taxes.

Utility Regulatory Fees: Administrative assessment imposed on utilities at rate not to exceed 0.3 percent.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

Sales Taxes: State rate is 6 percent. Exemptions include: residential electric, steam, natural or manufactured gas, fuel oil, and firewood; all coal; gasoline and motor fuels; machinery and equipment purchases by manufacturers, electric utilities, agriculture, mining; pollution control equipment; alternative fuel vehicles (net purchase price above cost of normal vehicle). Fuels for manufacturing are generally exempt. Fuel sales to electric utilities are exempt. There are no local sales taxes.

Property Taxes: Most real property assessed at full market value. Local rates average 13.5 percent of assessed value. Public utilities are exempt from tax on real property, but pay public utility realty tax at rate of 4.2 percent of state taxable value (equal to cost of property less reserves for depreciation and depletion) in lieu of local property taxes. Hydroelectric-electric plants, poles and lines are exempt from realty tax for 10 years after construction.

RHODE ISLAND

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 28 cents per gallon; diesel at 28 cents per gallon; gasohol at 28 cents per gallon; LPG at 28 cents per gallon. Most of motor fuel excise revenues go to general fund. There are no local motor fuel excise taxes.

Utility Gross Receipts Taxes: Tax on gross receipts imposed at rate of 4 percent for electricity and 3 percent for natural gas. Companies paying gross receipts tax are exempt from corporate income tax.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: State rate is 7 percent. Exemptions include: residential energy; pollution control equipment; motor fuels. Fuels for manufacturing are generally exempt. Refunds available for purchases of solar systems. There are no local general sales taxes.

Corporate Income Taxes: Rate is 9 percent. Credit allowed for 10 percent of cost of hydroelectric facility up to $50,000. Public service corporations paying gross receipts tax are exempt.

Property Taxes: Utility real and personal property assessed at full value same as other businesses. Solar, wind and cogeneration systems are valued at no more than conventional systems that they replace. Exemptions include: required pollution control equipment; intangibles of utilities; shares, bonds, and debentures of utilities. Local rates average 2.8 percent of assessed value.

SOUTH CAROLINA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 16 cents per gallon; diesel at 16 cents per gallon; gasohol at 16 cents per gallon; LPG at 16 cents per gallon. All motor fuels (except gasoline used in aircraft) are exempt from state general sales tax regardless of use. Motor fuel excise revenues are dedicated to highways. There are no local motor fuel excise taxes.

Petroleum Inspection Fees: Imposed on motor fuels at rate of 0.25 cents per gallon.

Electric Excise Tax: Privilege tax imposed on sales of electricity (both for resale and to ultimate users, but not taxed twice) at rate of 1/2 mill per kilowatt-hour. Exemptions include: sales by municipal utilities; subsidiary sales to utility; electricity exported out of state; electric power sold to industrial customers as a class in excess of amounts sold to such customers during the corresponding months of the state's fiscal year 1957-58; sales to or by the South Carolina Public Service Authority; sales to Savannah River Plant.

Utility Regulatory Fees: Administrative assessment imposed on utilities

Environmental Charges: Environmental impact fee imposed on petroleum products at rate of 0.5 cents per gallon.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: Rate is 5 percent (4 percent plus 1 percent for persons under age 85). Exemptions include: motor fuels (including non-highway agricultural and commercial fishing) except gasoline used in aircraft; fuels, lubricants, supplies for use in ships engaged in intercoastal or foreign trade; fuel used exclusively to cure agricultural products; coal, coke or other fuel sold to manufacturers, electric power and transportation companies; electricity used in manufacturing and mining; supplies and electricity sales to radio and television stations, and cable television systems, for use in producing, broadcasting, or distributing programs; supplies, equipment, machinery, and electricity sold to motion picture companies; all residential energy sales; natural gas and LPG used exclusively in production of poultry, livestock, swine, and milk; electricity used to irrigate crops; pollution control equipment. Fuel purchases by electric and gas utilities are not taxable. Sales to and by municipal governments and energy cooperatives are taxable unless specifically exempted. Six of 43 counties impose a 1 percent sales tax.

Corporate Income Taxes: Rate is 5 percent of net income. Credits include: 25 percent of all expenditures (not to exceed $2,500 per year) for purchase and installation of conservation tillage equipment; drip/trickle irrigation systems; dual purpose combination truck and crane equipment. These measures are called conservation and renewable energy production measures in tax code.

Property Taxes: Utility real and tangible personal property is assessed at 10.5 percent of market value , the same as manufacturers. Most other real property assessed at 6 percent of market value; most other personal property assessed at 10.5 percent. Exemptions include: fuel held by or for public utility; pollution control equipment; property leased to and operated by South Carolina Public Service Authority for generation and transmission of electricity. Local rates range from 15.6 percent to 42 percent of assessed value.

SOUTH DAKOTA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 18 cents per gallon; diesel at 18 cents per gallon; gasohol at 16 cents per gallon; LPG at 16 cents per gallon. Motor fuel excise revenues are dedicated to highways. There are no local motor fuel excise taxes.

Petroleum Inspection Fees: Imposed on distributors at rate of $20 per 1,000 gallons.

Utility Gross Receipts Taxes: Imposed on electric cooperatives at rate of 2 percent, in lieu of all property taxes.

Utility Regulatory Fees: Imposed on gross receipts of electric and gas utilities (except municipal utilities and electric cooperatives) at rate of 0.15 percent.

Environmental Charges: Petroleum release fee imposed on petroleum products at rate of 1 cent per gallon.

Taxes on Energy Natural Resources Producers

Oil: (1) Severance tax imposed at rate of 4.5 percent of market value less royalties. Imposed in lieu of all occupational, excise, income, privilege and franchise taxes, but not in lieu of sales, use and property taxes. (2) Conservation tax imposed at rate of 2.4 mills per dollar of value less royalties.

Gas: (1) Severance tax imposed at rate of 4.5 percent of market value less royalties. Imposed in lieu of all occupational, excise, income, privilege and franchise taxes, but not in lieu of sales, use and property taxes. (2) Conservation tax imposed at rate of 2.4 mills per dollar of value less royalties.

Coal: (1) Severance tax imposed at rate of 4.5 percent of market value less royalties. Imposed in lieu of all occupational, excise, income, privilege and franchise taxes, but not in lieu of sales, use and property taxes. (2) Conservation tax imposed at rate of 2.4 mills per dollar of value less royalties. (3) Severance tax imposed at rate of 20 cents per ton.

General Taxes

General Sales Taxes: State rate is 4 percent. Oil and gas field services are taxed at reduced rate of 3 percent. Exemptions include: motor fuels; electric for powering irrigation pumps for agriculture; coal or wood products used for creating power, light, heat or steam for manufacturing or industrial purposes. Fuels for manufacturing are generally taxable. Persons aged 65 or older and disabled persons receiving social security benefits who are residents may apply for refund of sales and service taxes paid. Persons receiving this refund are not eligible for refund of realty taxes on their dwelling. Local rates average 1.27 percent.

Corporate Income Taxes: Income tax credit available for 20 cents per gallon of ethanol production (equals 2 cents per gallon of gasohol).

Property Taxes: Utility real property (and centrally assessed personal property) assessed at true value, the same as other business. Exemptions include: personal property, not centrally assessed, of rural electric cooperatives subject to tax on gross receipts. Credit available for commercial and residential renewable energy systems not used to produce energy for sale and ethyl alcohol production facilities. Local non-agricultural rates average 3.2 percent of assessed value.

Under Consideration: The Renewable Fuels Incentives Act of 1993 (S. 465) would extend the alcohol fuel blenders credits (see Corporate Income Taxes) to include biodiesel.

TENNESSEE

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 20 cents per gallon; diesel at 17 cents per gallon; gasohol at 20 cents per gallon; LPG at 14 cents per gallon. Motor fuels subject to motor fuels excise tax are exempt from state general sales tax. Motor fuel excise revenues are dedicated to highways. There are no local motor fuel excise taxes.

Special Tax on Petroleum Products: Imposed at rate of 1 cent per gallon on all petroleum products sold or used or stored in the state including benzol, gasoline, gasohol, burning oil, distillate, fuel oil, gas oil, kerosene, naphtha, or any other volatile substance, but excluding propane. Revenues are dedicated to highways.

Utility Gross Receipts Taxes: Utility tax imposed on gross receipts of gas utilities at rate of 1.5 percent, electric utilities at rate of 3 percent. Credits are allowed for franchise and excise taxes paid.

Utility Inspection Fees: Inspection and utility supervision fees based on number of meters: 1 to 154 meters — $100; 155 to 2,000 meters — $100 plus $0.65 per meter; 2,001 to 10,000 meters — $1,300 plus $0.50 per meter; over 10,000 meters — $5,300 plus $0.35 per meter. Maximum tax is $78,000. Interstate pipeline transmission companies taxed at rate of $4.75 per mile for 24-inch equivalent pipe located in state.

Regulatory Fees: Administrative assessment imposed on gross receipts of utilities: first $1 million taxed at $3 per $1,000; over $1 million taxed at $0.75 per $1,000.

Environmental Charges: Environmental assurance fee imposed on motor fuels at rate of 0.4 cents per gallon.

Taxes on Energy Natural Resources Producers

Oil: Production tax imposed at rate of 3 percent of selling price.

Gas: Production tax imposed at rate of 3 percent of selling price.

Coal: Severance tax imposed at rate of 20 cents per ton.

General Taxes

General Sales Taxes: State rate is 6 percent. Exemptions include: energy sales to manufacturing if in direct contact with manufactured product, otherwise taxed at 1.5 percent; residential energy sales; motor fuels if motor fuel excise tax is applicable; agricultural gasoline or diesel regardless of whether motor fuel tax is applicable; steam produced by a municipally-owned thermal transfer plant (there is only one such taxpayer in state); pollution control equipment. Energy sales to agriculture taxed at 1.5 percent; aviation fuels taxed at 4.5 percent. Fuel purchases by electric and gas utilities are taxable unless fuel is purchased for resale. Sales to electric cooperatives and municipal utilities are exempt; sales by them are taxable. Local rates average 1.85 percent. Local sales taxes are not allowed to be imposed on energy sales.

Corporate Income Taxes: Rate is 6 percent of net income. Electric cooperatives are exempt.

Property Taxes: Utility real and tangible personal property assessed at 55 percent of value; industrial and commercial real property at 40 percent; industrial and commercial tangible personal property at 30 percent; residential and agricultural real property at 25 percent; other property at 5 percent. Pollution control equipment assessed at salvage value. New plants and facilities of electric cooperatives are exempt for four assessment years.

TEXAS

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 20 cents per gallon; diesel at 20 cents per gallon; gasohol at 20 cents per gallon; LPG at 20 cents per gallon or annual fee (vehicles registered in state). Motor fuels, oil, and other fuels exempt or taxed under motor fuels excise tax are exempt from state general sales tax. Aviation fuel is also exempt. Seventy-five percent of motor fuel excise is dedicated to highways; most of remainder goes to support schools. Local motor fuel excise taxes average 0.0002 cents per gallon.

Petroleum Inspection Fee: Petroleum products delivery fee imposed on petroleum products at rate of 0.5 cents per gallon.

Utility Gross Receipts Taxes: (1) Imposed on gross receipts of electric and gas utilities based on population of service territory: cities with population of 1,000-2,499 taxed at rate of 0.581 percent; 2,500-9,999 at rate of 1.070 percent; 10,000 or more at rate of 1.997 percent. Residential use of electricity is exempt. Electric co-ops and municipal utilities are exempt. Also, gas utilities having acquired any part of gas pipeline through eminent domain must pay 0.5 percent gross receipts to State Treasurer. (2) Additional local franchise taxes imposed on gross receipts of electric and gas utilities. Rates vary: Houston and Dallas at 4 percent; Fort Worth at 3 percent; El Paso at 2 percent. San Antonio levies a 14 percent gross receipts tax on the city's municipally owned utility. Austin taxes gas receipts at 5 percent; Austin's electric service is municipally owned.

Utility Regulatory Fees: Administrative assessment imposed on utilities not to exceed 0.167 percent of gross receipts.

Environmental Charges: Clean air surcharge imposed owner/operators of industrial or utility boilers with heat capacity greater than 10 MMBtu per hour capable of using natural gas at rate of $0.20 per MMBtu of fuel oil used on or between April 15 and October 15 of each year. The tax applies only to boilers located in metropolitan areas with population of 350,000 or greater which have not met the national ambient air quality standard for ozone.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed at rate of 4.6 percent of market value or 4.6 cents per barrel, whichever is greater. Enhanced recovery oil is taxed at 2.3 percent of market value. (2) Additional severance tax is imposed at rate of 3/16 cent per barrel. (3) Oil and gas well servicing tax imposed at rate of 2.4 percent of gross receipts for certain types of services to oil and gas wells. (4) Crude oil regulatory tax imposed at rate of 0.1875 cents per barrel. (5) Oil and gas reservoirs capable of being economically produced from existing wells are taxed at local level. Taxing authorities have wide latitude in determining whether production is economically feasible. On-site production equipment is also taxable.

Gas: (1) Production tax imposed at rate of 7.5 percent of market value except that tax on sweet and sour natural gas shall not be less than 121/1500 of 1 cent per Mcf. High cost gas is exempted. (2) Oil and gas well servicing tax imposed at rate of 2.4 percent of gross receipts for certain types of services to oil and gas wells. (3) Oil and gas reservoirs capable of being economically produced from existing wells are taxed at local level. Taxing authorities have wide latitude in determining whether production is economically feasible. On-site production equipment is also taxable.

General Taxes

General Sales Taxes: State rate is 6.25 percent. Exemptions include: manufacturing electric and gas; residential electric and gas; motor fuels, oil and other fuels exempt or taxed under other state laws; aviation fuel; certain drilling equipment; agricultural gas and electricity; railroad fuel and supplies; mining gas and electricity; pollution control if, like other machinery exempted, it has useful life of less than 6 months. Fuels for manufacturing are generally taxable. Local rates average 1.33 percent. Local governments may tax electric and gas sales.

Property Taxes: Utility real and tangible personal property assessed at market value same as other business. Exemptions include solar and wind systems. In practice property is valued at 40 percent to 60 percent of actual value.

Franchise Taxes: Franchise tax on capital and surplus imposed at rate of 0.525 percent. Special rates apply to: railroad, pipeline, bridge and public utility holding companies taxed at 1/5 the normal rate. Deductions are allowed for: purchases of solar energy devices. Companies engaged exclusively in manufacture, sale or installation of solar energy systems are exempt.

UTAH

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 19 cents per gallon; diesel at 19 cents per gallon; gasohol at 19 cents per gallon; LPG at 19 cents per gallon or annual fee. Motor fuel excise revenues are dedicated to highways. There are no local motor fuel excise taxes.

Utility Regulatory Fee: Administrative assessment imposed at rate not to exceed 0.3 percent of gross receipts.

Environmental Charges: Environmental surcharge on petroleum products at rate of 0.5 cents per gallon sold, used or received for sale in state.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed at rate of 3 percent of value up to and including the first $13 per barrel and 5 percent for remaining price above $13. No tax is imposed on: (a) the first $50,000 of gross value annually from each well; (b) stripper wells unless the exemption prevents the severance tax from being a deduction for federal tax purposes.; (c) the first six months of production for wildcat wells started after 1983 and before 1990; (d) the first twelve months for wildcat wells started after 1989; (e) the first six months for wells started after 1989. Working interest owners who pay for all or part of a recompletion or workover are entitled to a credit equal to 20 percent of the amount paid but may not exceed $50,000 per well. This credit is due to end after 1994. (2) Conservation tax imposed at rate of 0.2 percent of wellhead value. Revenues go to the State Board of Oil, Gas and Mining.

Gas: (1) Production tax imposed at rate of 3 percent of value up to and including the first $1.50 per Mcf and 5 percent for remaining price above $13. No tax is imposed on: (a) the first $50,000 of gross value annually from each well; (b) stripper wells unless the exemption prevents the severance tax from being a deduction for federal tax purposes; (c) the first six months of production for wildcat wells started after 1983 and before 1990; (d) the first twelve months for wildcat wells started after 1989; (e) the first six months for wells started after 1989. Working interest owners who pay for all or part of a recompletion or workover are entitled to a credit equal to 20 percent of the amount paid but may not exceed $50,000 per well. This credit is due to end after 1994. (2) Conservation tax imposed at rate of 0.2 percent of wellhead value. Revenues go to the State Board of Oil, Gas and Mining.

Uranium: Production tax imposed at rate of 2.6 percent of 30 percent of the gross value. Annual exemptions allowed for each mine for first $50,000 in gross value. In case of uranium, gross proceeds is the amount received from sale of "yellowcake," provided concentrate is sold under bonafide contract between unaffiliated parties. If not, the tax commission will determine value.

General Sales Taxes: State rate is 5 percent. Exemptions include: motor fuels; pollution control equipment. Residential fuels and electricity taxed at reduced rate of 2 percent. Fuels for manufacturing are generally exempt. Local rates average 1.25 percent.

Corporate Income Taxes: Rate is 5 percent of net income. Credit allowed for purchase of Utah steam coal in tax years prior to 1993. Tax credits available for up to 10 percent of commercial renewable energy system cost and installation to be used against income or franchise tax liability up to $25,000. Tax credit also available for 20 percent (up to $500) of cost of new vehicle fueled by alternate fuels (propane, compressed natural gas or electricity), and 20 percent (up to $400) of the cost of equipment for conversion of motor vehicle to alternate fuels.

Personal Income Taxes: Credits available for installation of solar, wind, hydroelectric and biomass systems. Homeowners can claim credit equal to 25 percent of residential renewable energy system's cost and installation up to $1,500. Tax credit also available for 20 percent (up to $500) of cost of new vehicle fueled by alternate fuels (propane, compressed natural gas or electricity), 20 percent (up to $400) of the cost of equipment for conversion of motor vehicle to alternate fuels.

Property Taxes: Utility real and tangible property assessed at full market value "adjusted for intangibles," same as other business. Exemptions include: power plants, transmission lines and other property used to power irrigation; intangibles. State property tax rates not to exceed $0.00048 per dollar. Local rates average 0.0016 percent of assessed value.

VERMONT

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 15 cents per gallon; diesel at 16 cents per gallon; gasohol at 15 cents per gallon; LPG is exempt. Diesel vehicles over 10, 000 pounds pay 26 cents per gallon. Motor fuels subject to or exempt from motor fuels excise tax are exempt from state general sales tax. Motor fuel excise revenues are not dedicated to highways. There are no local motor fuel excise taxes.

Utility Gross Receipts Taxes: Fuel gross receipts tax at rate of 0.5 percent imposed on sales of electricity, natural gas, propane, oil, kerosene, and coal. Revenues go to dedicated fund for low-income weatherization.

Utility Regulatory Fees: Public utility commission administrative assessment imposed on utilities at rate of 0.5 percent of gross receipts.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: State rate is 5 percent. Exemptions include: residential and agricultural energy sales; motor fuels subject to or exempted under motor fuels excise tax. Fuel purchases by electric and gas utilities subject to tax. Fuels for manufacturing are generally taxable. Governmental entities are exempt. Taxpayers who produce electricity for their own use and resale are exempt from use tax. Credit on personal income tax for sales taxes paid. There are no local sales taxes.

Property Taxes: Utility real and personal property assessed at 1 percent of actual value, the same as other business. Exemptions include: pollution control equipment. Local rates average 2.6 percent of assessed value. Additional tax imposed on electric utilities based on the appraised value of physical plant built after July 1, 1965; capacity in excess of 200 megawatts subject to tax of $0.0035 per dollar of value.

VIRGINIA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 17.5 cents per gallon; diesel at 16 cents per gallon; gasohol at 17.5 cents per gallon; LPG at 16 cents per gallon. Motor carriers with more than two axles pay additional 3.5 cents per gallon. Motor fuels otherwise taxed as motor fuel are exempt from state general sales tax. Motor fuel excise revenues are dedicated to highways. Local motor fuel excise taxes average 0.0006 cents per gallon.

Utility Gross Receipts Taxes: License tax imposed on gross receipts of utilities at rate of 2 percent, in lieu of income tax. Electric cooperatives may exempt from gross receipts the amount they paid for electricity for resale to consumers. Credit allowed for $3 (effective 1991) per ton of Virginia-mined coal purchased. Distribution pipeline at 2 percent. Transmission pipeline subject to income tax. Local gross receipts tax not to exceed 0.5 percent. Local optional consumer tax not to exceed 20 percent of first $15 per month of a residential gas and electric utility service, or $3; rates vary for industrial and commercial uses. Localities imposing higher tax on July 1, 1972, may continue but may not increase tax. Local rates average 4.9 percent for residential electric and 8.2 percent for residential gas.

Utility Regulatory Fees: Administrative assessment imposed on utility gross receipts at rate not to exceed 0.2 percent.

Environmental Charges: Tax imposed on petroleum products at rate of 0.2 cents per gallon. Revenues go to underground petroleum storage fund.

Taxes on Energy Natural Resources Producers

Oil: Oil severance taxes are levied by 6 cities and counties at rates ranging from 0.5 percent to 3 percent of gross receipts.

Gas: Gas severance taxes are levied by 10 cities and counties at rates ranging from 1 percent to 2 percent of gross receipts.

Coal: (1) Eight cities and counties levy road improvements tax on gross receipts from coal, gas, or oil production in the locality. (2) If balance in Surface Mining Reclamation Trust Fund falls below $1.75 million then coal producers pay: 3 cents per ton underground mined coal; 4 cents per ton surface mined coal; 1.5 cents per ton for loading and processing facilities. (3) Eighteen cities and counties impose taxes on the assessed value of mineral lands at rates ranging from 0.43 percent to 1.25 percent (one city imposes the tax on a per-ton basis at a rate of 5 cents).

General Taxes

General Sales Taxes: State rate is 3.5 percent. Exemptions include: highway motor fuels paying fuel tax; motor fuels to boats or ships upon which motor fuel or special fuel excise tax has been refunded; electric and gas sales; pollution control equipment; propane gas, firewood, coal, and heating oil for residential consumption; materials, equipment, supplies, including fuels used in manufacturing, drying or curing crops, producing feed, commercial watermen, harvesting forest products, airlines; tangible personal property purchased or leased by a public service corporation. Local rates average 1.28 percent, and apply to fuels (but not electricity) purchased for residential use unless specifically exempt. Twenty-one cities and 36 counties exempt residential fuels. A 2 percent sales tax is imposed on motor fuel in Northern Virginia transportation districts; proceeds are used for expenses incurred in operating mass transit within the transportation districts. Average transportation district rate statewide is 0.66 percent.

Corporate Income Taxes: Rate is 6 percent of net income. Public utilities paying license tax are exempt (if the license tax liability is greater than the income tax liability). Cogenerators and small power producers selling electric to public service corporations in Virginia are allowed a $2 per ton credit for Virginia coal purchased.

Property Taxes: Utility real and tangible personal property is assessed at full market value, the same as other business, except the "public service corporation, which has not been equalized, is assessed at 40 percent of fair market value." Pipeline transmission companies pay state and local property taxes. If they are liable for gross receipts tax then not liable for franchise tax on capital stock. Local governments may exempt pollution control, renewable energy, conservation and cogeneration systems.

WASHINGTON

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 23 cents per gallon; diesel at 23 cents per gallon; gasohol at 19.5 cents per gallon; LPG is subject to annual fee. Motor fuel subject to excise tax is exempt from state general sales tax. Motor fuel excise revenues are dedicated to highways. There are no local motor fuel excise taxes.

Utility Gross Receipts Taxes: (1) Public utility tax imposed on gross operating income of utilities: light and power at rate of 3.873 percent; gas, sewer and railroad at rate of 3.852 percent; water at rate of 5.029 percent; urban transport at rate of 0.642 percent; motor transport at rate of 1.926 percent; others at rate of 1.926 percent. Tax is in lieu of the business and occupation tax which all other firms pay on their gross receipts, mostly at 0.484 percent. Utility tax deductions include: gas and water sales for resale; cash discounts given customers; credit losses; cost of cogenerated electricity (construction begun prior to 1990), electricity or gas from renewable energy, and promotion of energy efficiency; amounts paid to owners of new energy efficient residences additional payments for energy efficiency improvements if priority given senior citizens and low-income persons, and (until July 1, 1992) 50 percent of training costs of local government officials who enforce building code regulations; funds received in conjunction with commuter ride-sharing for elderly and handicapped. (2) Manufacture and sale of nuclear fuel assemblies is taxed at reduced rate of 0.25 percent under business and occupation tax. (3) Local public utilities district tax levied at rate of 2 percent of gross receipts from electric sales to customers served by district-owned distribution system. Additional tax imposed at rate of 5 percent of the "first 4 mills" per kilowatt-hour wholesale value of "self-generated" energy distributed to customers. Imposed on every district having a plant with 250 megawatts or more. This tax is a state tax levied in lieu of property tax on public utility districts (quasi-municipal jurisdictions). Receipts are shared with local governments. (4) Brokered natural gas tax imposed on natural gas consumed within state and not subject to public utility tax at 3.852 percent of gross receipts. This tax enacted in 1989 in response to large industrial customers purchases of gas outside of the state through brokers and thus avoiding public utility tax. (5) Cities are authorized to impose tax for privilege of using naturai or manufactured gas within city limits at maximum of 6 percent of gross receipts. State-wide average rate is 5.36 percent for electric and 5.22 percent for gas.

Utility Regulatory Fees: Public utility commission administrative assessment imposed on gross receipts of utilities at rate of 0.2 percent.

Environmental Charges: (1) Petroleum release tax imposed at 5 cents per barrel of petroleum. (2) Uranium and thorium milling tax imposed at rate determined by Department of Social and Health Services.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: State rate is 6.5 percent. Exemptions include: utility sales subject to gross income tax; pollution control equipment; natural or manufactured gas; sales of alcohol for use in farm vehicles and equipment; vans used regularly as ride-sharing vehicles by at least seven persons; cogeneration equipment; motor fuels subject to gasoline tax (i.e., those used on public highways); motor fuels used in public transportation or used to develop and test aircraft; alcohol fuel for off-highway use; diesel fuel used in commercial fishing. Fuels for manufacturing are generally exempt. Local rates average 0.89 percent.

Corporate Income Taxes: Business and occupation tax imposed on gross receipts of most businesses at rate of 0.484 percent. Exemptions include: utility sales subject to public utility tax; pollution control equipment; natural or manufactured gas; manufacturing and wholesaling of ethanol for use in gasohol. Credit allowed for: 3 percent of cost of cogeneration facility per year up to 50 percent of capital cost of facility [new applications terminated end of 1984]. Various municipal business taxes and license fees also imposed on businesses in general based either on gross receipts or number of employees.

Property Taxes: Utility real and tangible personal property assessed at true value, the same as other businesses. Regular levies not to exceed 1 percent; additional voter-approved levies may be imposed. Exemptions include: cogeneration facilities; motor vehicles. Combined state and local rates average 1.4 percent of assessed value.

Under Consideration: H.B. 1304 and S.B. 5342 would eliminate ethanol tax credit (see Corporate Income Taxes) in non-attainment areas.

WEST VIRGINIA

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 15.5 cents per gallon; diesel at 15.5 cents per gallon; gasohol at 15.5 cents per gallon; LPG at 15.5 cents per gallon. Motor fuel excise revenues are dedicated to highways. There are no local motor fuel excise taxes.

Miscellaneous Petroleum Taxes: Gasoline and special fuels, including heating fuel, are taxed at 5 percent of wholesale value (based on minimum 97 cents per gallon). This tax is in addition to other taxes on fuels. Distribution: revenues from levy on aircraft fuels to matching federal fund for airport maintenance and improvement; all other revenues to state road fund.

Utility Gross Receipts Taxes: (1) Business and occupation tax (applies only to public utilities, electric power producers and gas storage businesses): electric utilities pay greater of 4 percent of gross receipts or 0.26 cents per kilowatt-hour (the kilowatt-hour tax structure is currently in effect). Sales to manufacturers using more than 200,000 kilowatt-hours per hour per year are taxed at greater of 2 percent of gross receipts or 0.05 cents per kilowatt-hour (repealed effective 1998) whether produced in state or not. Exemptions include: electricity generated by municipally-owned plants; electric for electrolytic process for manufacture of chlorine; electricity used in manufacture of ferroalloy not including final production of steel. Credits allowed for purchase of West Virginia-mined coal equal to tax paid for kilowatt-hours produced from coal mine employing West Virginia miners over and above kilowatt-hours produced from West Virginia coal in base year (either average of years 1983-1985 or three years preceding tax year. 10 percent credit for new or revitalized coal loading facilities. Tax on electricity imposed regardless of whether power is sold to out-of-state user. Natural gas utilities pay 4.29 percent of gross income. Sales of natural gas are excluded from tax if separately metered and used by purchaser to derive hydrogen and carbon monoxide for use in manufacture of chemicals in state. No exclusion allowed for sale of natural gas to produce carbon monoxide or hydrogen for resale. Gas storage businesses pay 5 cents per dekatherm either injected into or withdrawn from gas storage reservoir located in state. Both electric and natural gas utility companies allowed credit against tax liability for amount of revenue lost due to mandatory 20 percent rate reductions given to qualified low-income residential customers during heating season November through March. Unused portion of credit may be taken as credit against corporation net income tax. (2) Local taxes imposed not to exceed 2 percent of gross receipts from customers in municipality.

Utility Regulatory Fees: Public utility administrative assessment imposed on utilities at rate of $0.29 per $100 of gross receipts.

Taxes on Energy Natural Resources Producers

Oil: Production tax imposed at rate of 5 percent of gross value. According to State Department of Tax and Revenue, 28 percent to 30 percent of severance tax liabilities are offset by various state investment tax credits.

Gas: Production tax imposed at rate of 5 percent of gross value. According to State Department of Tax and Revenue, 28 percent to 30 percent of severance tax liabilities are offset by various state investment tax credits.

Coal: Production tax imposed at rate of 5 percent of gross value (includes a 0.35 percent severance tax for counties). According to State Department of Tax and Revenue, 28 percent to 30 percent of severance tax liabilities are offset by various state investment tax credits.

General Taxes

General Sales Taxes: State rate is 6 percent. Exemptions include: sales of services (including electricity and gas) subject to regulation by public service commission; natural gas (delivered through mains or pipes); pollution control equipment; sales of property and services to businesses subject to business and occupation tax and severance taxes, excluding gasoline and special fuel; propane use for poultry production; equipment, supplies, materials and services (including energy) intended for direct use or consumption in manufacturing; purchases (including energy) for direct use or consumption in production of natural resources; purchases (including energy) for direct use or consumption in transportation of goods; purchases (including energy) for direct use or consumption in agriculture. Credit available for coal-loading facilities. Electric utility fuel purchases are exempt. There are no local sales taxes.

Corporate Income Taxes: Rate is 9 percent of net income plus 0.75 percent of capital employed. Credits allowed for: reduced rates by utilities to low-income residential customers; coal-coking facilities; sales and use taxes paid.

Property Taxes: Utility real and personal property assessed at 60 percent of value same as other businesses. Pollution control equipment valued at salvage. Local nonresidential and nonagricultural rates average 3.1 percent of assessed value.

WISCONSIN

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 23.2 cents per gallon; diesel at 23.2 cents per gallon; gasohol at 23.2 cents per gallon; LPG at 23.2 cents per gallon. Motor fuel excise revenues are dedicated to transportation. There are no local motor fuel excise taxes.

Miscellaneous Petroleum Taxes: In lieu of property taxes, all crude handled by refiners in state taxed at rate of 5 cents per ton.

Petroleum Inspection Fees: Inspection fee imposed on petroleum products at rate of 2 cents per gallon.

Utility Gross Receipts Taxes: Variable rate tax on utility gross receipts: electricity taxed at rate of 3.19 percent; gas at 0.97 percent; rural electric cooperatives at 3.19 percent. This tax is in lieu of all property taxes except assessments for special improvements.

Taxes on Energy Natural Resources Producers

No energy-related provisions.

General Taxes

General Sales Taxes: State rate is 5 percent. Exemptions include: gasoline, diesel fuel and aviation fuels; fuels purchased by utilities; coal, fuel oil, propane, steam, peat, fuel cubes produced from solid waste and wood sold to residential customers (exempt all year), and electricity and natural gas sold to residential customers (during November through April); electricity to agriculture during November through April; wood waste used as fuel in business activity; fuel used in rail freight or passenger cars, locomotives or other rolling stock used in railroad operations; fuel used in farming; pollution control equipment; tangible personal property that is consumed, destroyed or loses its identity in the manufacturing process of finished goods. Income tax credit available for sales and use taxes paid on fuels and electricity purchased by manufacturers. Fuel converted to electric energy, gas or steam by utilities and fuel purchased for resale are exempt. Sales to any government entity and energy cooperatives are exempt; sales by them are subject to tax. Local rates average 0.3 percent.

Corporate Income Taxes: Rate is 7.9 percent of net income. Some electric cooperatives exempt. Credit for sales and use taxes paid on fuel and electricity purchased for use in manufacturing.

Property Taxes: Utility real and tangible personal property assessed at full cash value same as other businesses. Exemptions include: active solar and wind systems; utilities subject to utility gross receipts tax. Local tax rates average 3.36 percent of assessed value. State imposes tax on pipeline systems at rate of 2.7 percent of Wisconsin allocated valuation in 1990.

WYOMING

Taxes on End-Use Energy

Motor Fuel Excise Taxes: Imposed on gasoline at rate of 8 cents per gallon; diesel at 8 cents per gallon; gasohol at 4 cents per gallon; LPG is exempt. LPG is subject to 3 percent state general sales tax. Motor fuels subject to motor fuels excise tax are exempt from state general sales tax. Motor fuel excise revenues are dedicated to highways. There are no local motor fuel excise taxes.

Petroleum Inspection Fees: Imposed on motor fuels at rate of 1 cent per gallon.

Utility Regulatory Fees: Public utility administrative assessment imposed on gross receipts of utilities not to exceed 0.3 percent.

Taxes on Energy Natural Resources Producers

Oil: (1) Production tax imposed at rate not to exceed 0.8 mill per $1 market value. (2) Excise tax imposed at rates ranging from 2 to 6 percent of gross value in lieu of real property taxes.

Gas: (1) Production tax imposed at rate not to exceed 0.8 mill per $1 market value. (2) Excise tax imposed at rates ranging from 2 to 6 percent of gross value in lieu of real property taxes.

Coal: Excise tax imposed in lieu of real property taxes. Above-ground coal taxed at rate of 9.5 percent of gross value; underground coal at 7.25 percent. Tax may not exceed 80 cents per ton. Current rates range from 3.75 to 7 percent.

General Taxes

General Sales Taxes: Rate is 4 percent. Exemptions include: motor fuels taxed under motor fuels excise tax; power or fuel sold for manufacture, processing or agriculture; sales of power or fuel taxed as motor or special fuel to persons engaged in transportation business; services of engineers, geologists, etc. and contractors engaged in drilling and/or testing of oil or gas; carbon dioxide and other gases used in tertiary production; intrastate transportation of oil and gas by pipeline. Fuel purchases by electric and gas utilities are exempt from tax. Sales made to government entities are exempt; sales by them are taxable. Local rates average 0.79 percent.

Property Taxes: Utility real and tangible personal property assessed at 9.5 percent of market value compared with industrial property assessed at 11.5 percent and mineral and mine products assessed at 100 percent. Exemptions include property owned by Black Hills Joint Power Commission; pollution control equipment. State rate is 1.2 percent of assessed value. Local rates average 7.8 percent of assessed value.

Under Consideration: The Ethanol Production Incentive Act.

Appendix Sources

1. Commerce Clearinghouse, *State Tax Guide*, Vols. 1 and 2, 1991.

2. Prentice-Hall, *All States Tax Guide*, MacMillan, Inc., 1990 with updates.

3. U.S. Advisory Committee on Intergovernmental Relations, *Significant Features of Fiscal Federalism: Budget Processes and Tax Systems 1991 Edition*, Volume 1. Washington, D.C.

4. Federal Energy Regulatory Commission, Form 50: Statement C, various utilities 1980-89.

5. Personal correspondence with state tax officials.

6. U.S. Advisory Committee on Intergovernmental Relations, *Local Revenue Diversification: Local Sales Taxes*, Washington, D.C., 1989.

7. Tax Analysts, *Tax Notes*, various issues.

8. New York State, *Tax Expenditure Report 1991-1992*, Division of the Budget, Albany, NY, March 1991.

9. State of Alabama, *Estimated Sales and Use Tax Revenue Losses* (Sept. 1990 Update), fax from Alabama Revenue Commission, February 5, 1992.