

REV-28 REPEAL THE LOW-INCOME HOUSING CREDIT

	Annual Added Revenues (Billions of dollars)					Cumulative Five-Year Addition
	1996	1997	1998	1999	2000	
Addition to Current-Law Revenues	0.5	1.3	1.7	2.0	2.4	7.9

SOURCE: Joint Committee on Taxation.

The low-income housing credit (LIHC) subsidizes the construction and substantial rehabilitation of low-income rental housing. Individuals and corporations who qualify for the LIHC receive tax credits over a 10-year period that are worth up to 70 percent, measured in present value, of the construction or rehabilitation costs of qualifying projects. The percentage is limited to 30 percent for projects that receive other federal subsidies. To qualify for the LIHC, project owners must set aside at least 20 percent of rental units for families whose income is below 50 percent of area median income, or 40 percent of units for families whose income is below 60 percent of median income. Rents are restricted. The set-aside and rent restrictions apply for at least 15 years. State housing agencies allocate the credits subject to statutory limits.

The low-income housing credit will reduce federal revenue by \$2.2 billion in 1995 and is estimated to grow to \$3.7 billion by 1999. Repealing the tax credit would raise \$7.9 billion from 1996 through 2000.

Housing assistance could be provided to the same number of people at lower cost if the assistance was provided in the form of an expanded housing voucher program. Low-income tenants can use housing vouchers to pay for all or part of the rent for the housing of their choice, as long as it meets minimum standards for habitability. By contrast, the low-income housing credit subsidizes only new and substantially rehabilitated housing, which is the most expensive kind of housing.

High overhead costs also make some housing subsidized by the LIHC even more expensive to pro-

duce and rent. Private investors in low-income housing syndicates require high rates of return to compensate for the inherent risk of such investments, as well as the specific risks imposed by the credit itself. For example, projects that fail to comply with the requirements of the program may be subject to heavy penalties. Also, some investors cannot use the credits every year because of the limits on passive losses and on the use of business tax credits. Moreover, the administrative and marketing costs in organizing low-income housing syndicates are high, averaging 20 percent of project costs in some cases.

Advocates of the LIHC argue that it, in combination with subsidies such as rental assistance under section 8 of the United States Housing Act of 1937, assists many poor families and can be an important part of neighborhood revitalization efforts. In addition, affordable housing that meets minimal housing standards is in short supply in some areas with low-income families. For those reasons, a supply subsidy such as the LIHC might be a more effective policy tool than a demand subsidy such as housing vouchers. In addition, advocates argue that lower-middle-income people who benefit from the credit are neglected by traditional housing programs, which primarily assist poor families.

Although providing support for low-income housing through housing vouchers instead of the LIHC could potentially provide assistance to the same number of families at lower cost, budget constraints on discretionary spending might make it difficult to repeal the credit in favor of an expanded voucher program funded by annual appropriations. The discretionary spending limits of the Balanced Budget and Emergency Deficit Control Act of 1985

(as amended in 1990 and 1993) already impose severe constraints on funding for existing discretionary programs. Expanding the housing voucher program

would subject those programs to even greater budgetary pressures.

REV-29 TAX CREDIT UNIONS LIKE OTHER THRIFT INSTITUTIONS

Addition to Current-Law Revenues	Annual Added Revenues (Billions of dollars)					Cumulative Five-Year Addition
	1996	1997	1998	1999	2000	
Tax All Credit Unions	0.8	0.8	0.9	0.9	0.9	4.3
Tax Credit Unions with More Than \$10 Million in Assets	0.8	0.8	0.8	0.8	0.8	4.0

SOURCE: Joint Committee on Taxation.

Credit unions are nonprofit institutions that provide their members with financial services such as accepting deposits and making loans. The federal income tax treats credit unions more favorably than competing thrift institutions, such as savings and loan institutions and mutual savings banks, by exempting their retained earnings from tax. As a result, more credit unions and fewer taxable thrifts exist than would otherwise be the case. That situation reduces economic efficiency in that competing institutions might otherwise provide the same services at lower cost.

Credit unions, savings and loans, and mutual savings banks were originally all tax-exempt, but in 1951 the Congress removed the tax exemptions for savings and loans and mutual savings banks. It considered them to be more like profit-seeking corporations than nonprofit mutual organizations.

Since 1951, credit unions have come to resemble those other thrift institutions in certain respects. Credit unions no longer limit membership to people sharing a common bond, which was usually employment. Since 1982, the regulators have allowed credit unions to extend their services to others, including members of other organizations. In addition, most credit unions allow members and their families to participate permanently, even after members have left the sponsoring organization. Credit union membership has grown from about 5 million in 1950 to about 65 million today. That leap in numbers offers evidence that credit unions, like taxable thrifts, now

serve the general public. In addition, credit unions retain earnings like thrift institutions. Credit unions argue that they retain earnings as protection against unexpected events, but other thrift institutions argue that credit unions use the retained earnings to finance expansion. Moreover, credit unions are becoming more like savings and loans and mutual savings banks in the services they offer. A significant number of credit unions currently offer such services as first and second mortgages, direct deposit, automatic teller access, preauthorized payments, credit cards, safe deposit boxes, and discount brokerage services.

Many smaller credit unions, however, retain the characteristics of nonprofit mutual organizations and perhaps should not be subject to taxation. For instance, only volunteers from the membership manage and staff some of those credit unions. Moreover, many of those smaller credit unions do not expand their membership beyond their immediate common bond or provide services comparable to competing thrift institutions. To protect those smaller credit unions, the Congress could choose to exempt from taxation those credit unions with assets below \$10 million. Such an action would exempt about 61 percent of all credit unions from taxation, although they hold only about 9 percent of all credit union industry assets.

Taxing all credit unions like other thrift institutions would raise \$4.3 billion in 1996 through 2000. Taxing only credit unions with assets above \$10 million would raise about \$0.3 billion less.

REV-30 REPEAL TAX PREFERENCES FOR EXTRACTIVE INDUSTRIES

Addition to Current-Law Revenues	Annual Added Revenues (Billions of dollars)					Cumulative Five-Year Addition
	1996	1997	1998	1999	2000	
Repeal Expensing of Intangible Drilling, Exploration, and Development Costs	0.8	1.4	1.3	1.2	1.1	5.8
Repeal Percentage Depletion	0.9	0.9	1.0	1.0	1.0	4.8

SOURCE: Joint Committee on Taxation.

Under the normal tax rules for cost recovery, taxpayers cannot immediately deduct purchases of capital assets such as plant and equipment from taxable income. Instead, they must capitalize the purchase price and then deduct the cost at a prescribed rate over the asset's useful life either by depreciation or depletion. Those rules also apply to assets that the user constructs instead of purchasing (self-constructed assets). Although oil and gas wells and mineral mines are self-constructed assets, they benefit from special cost-recovery rules. Taxpayers may immediately deduct ("expense") certain exploration and development costs, including intangible drilling costs, that under normal tax rules they would have to capitalize and deduct more slowly.

Expensible exploration and development costs include costs for excavating mines and drilling wells. They also include prospecting costs for hard minerals, but not for oil and gas. Current law limits expensing to 70 percent of those costs for corporations engaged in extracting hard minerals and for integrated producers of oil and gas that also operate sizable refineries. Those corporations may deduct the remaining 30 percent of costs over a 60-month period.

The percentage depletion method of cost recovery allows taxpayers to deduct a certain percentage of a property's gross income, regardless of the actual capitalized costs. Current law typically allows non-integrated oil and gas companies to deduct 15 percent

of the gross income from oil and gas production up to 1,000 barrels per day. The deduction for oil produced from marginal properties can be up to 25 percent, however, if the market price of oil drops low enough. (In contrast, integrated oil and gas producers must use the normal method of cost depletion to recover capitalized costs.) Producers of hard minerals may also use percentage depletion, but the statutory rates vary. Minerals eligible for percentage depletion include sand (5 percent), coal (10 percent), iron ore (14 percent), dimension stone and mollusk shells (14 percent), oil shale (15 percent), gold (15 percent), and uranium (22 percent). The tax law limits the amount of percentage depletion to 100 percent of the net income from an oil and gas property and 50 percent of the net income from a property with hard minerals.

Because percentage depletion depends on the value of production rather than the amount of capitalized costs, it is more akin to a production subsidy than a method of cost recovery. The subsidy provides little or no incentive to develop or expand production from marginal properties, however, because the amount of percentage depletion cannot exceed net income. Because marginal properties that are more costly to develop produce less net income, their deductions for percentage depletion per dollar of gross income are smaller.

Percentage depletion and the expensing of exploration and development costs encourage oil and

gas production and extraction of hard minerals, but the incentives are not available to all producers on an equal basis. Integrated oil and gas producers may not claim percentage depletion deductions that independent producers can use. Furthermore, most corporations can deduct immediately only 70 percent of their exploration and development costs, including intangible drilling costs, whereas noncorporate producers can expense all of them. Finally, because percentage depletion and expensed exploration and development costs are tax preferences under the alternative minimum tax, producers who pay the minimum tax must defer or even forgo those deductions, but producers who pay the regular income tax may take them in the current year.

There are several reasons to repeal expensing and percentage depletion. First, those provisions allocate capital to drilling and mining that firms could use more productively elsewhere in the economy. Second, they encourage the use of scarce domestic oil and gas resources, which may lead to a greater reliance on foreign energy producers in the future. Third, the provisions fail to provide all producers with the same incentive, which lessens their effectiveness in encouraging production.

Repealing the expensing of intangible drilling costs and other exploration and development costs would raise nearly \$6 billion in 1996 through 2000, assuming that firms could still expense the costs of dry holes, unproductive mines, and worthless mineral rights. Repealing percentage depletion would raise nearly \$5 billion over the same five-year period.

REV-31 CAPITALIZE THE COSTS OF PRODUCING TIMBER

	Annual Added Revenues (Billions of dollars)					Cumulative Five-Year Addition
	1996	1997	1998	1999	2000	
Addition to Current-Law Revenues	0.3	0.5	0.5	0.5	0.4	2.2

SOURCE: Joint Committee on Taxation.

Businesses that incur costs to produce or purchase products that will be sold in future years generally cannot deduct those costs until the products are sold. Instead of deducting production and acquisition costs in the year they are incurred, businesses must capitalize such costs by adding them to the cost basis of inventory. When the product is sold from inventory, the business deducts the cost basis of the inventory from the sales price to determine the amount of taxable income. When businesses do not capitalize costs properly, business income is not measured correctly because the costs associated with producing goods and services are not matched with the sale of the goods and services.

The Tax Reform Act of 1986 (TRA-86) established a uniform set of rules for capitalizing production costs, but explicitly exempted the production of timber and certain ornamental trees. The rules require businesses to capitalize not only direct costs, such as the cost of production materials and the compensation paid to production workers, but also the allocable portion of most indirect costs that benefit production. Those indirect costs include property taxes and insurance costs for the plant and equipment, and the salaries and benefits of production managers. Moreover, if a product takes longer than two years to produce or if it has a useful life of 20 years or more, the interest cost that is allocable to the production of the product must also be capitalized.

Because the production of timber and certain ornamental trees is currently exempt from the uniform capitalization rules, the producers of those products can deduct costs that otherwise would have to be capitalized. The deductible costs include the costs of labor and materials to remove unwanted trees and to

control fire, disease, and insects; interest and insurance costs; property taxes; and administrative overhead. By allowing timber producers to deduct such production costs before the timber is harvested or sold, the tax code in effect subsidizes timber producers by deferring tax that they otherwise would owe on their income. (Under certain circumstances, however, the deferral granted to noncorporate producers of timber may be greatly curtailed by the limit of the tax code on losses from passive business activities.)

The subsidy from tax deferral distorts investment behavior in two ways: more private land is devoted to timber production, and trees are allowed to grow longer before they are cut. Unless timber production offers important spillover benefits to society, those distortions lower the social return on investment in timber below that of alternative investments.

Whether or not timber production offers important spillover benefits is unclear. Although standing timber provides some spillover benefits by deterring soil erosion and absorbing carbon dioxide (a gas linked to global warming), the cutting of timber can lead to soil erosion. In addition, the production of wood and paper products and the disposal of them add to pollution.

Capitalizing costs incurred after December 31, 1995, to produce timber and ornamental trees (in accord with the uniform capitalization rules of TRA-86) would raise \$2.2 billion in revenue from 1996 through 2000 by accelerating tax payments from timber producers. In the long run, the capitalization of timber production costs would raise the price of domestic timber and lower the value of land used to grow timber. Moreover, lease payments to private

landowners by timber growers would be likely to decline, causing some land that historically has been devoted to growing timber to be used in other ways. In the short run, however, capitalizing timber produc-

tion costs might lower the price of domestic timber because producers would have an incentive to harvest timber earlier when currently deductible costs have to be capitalized.

REV-32 REPEAL THE PARTIAL EXEMPTION FOR ALCOHOL FUELS
FROM EXCISE TAXES ON MOTOR FUELS

	Annual Added Revenues (Billions of dollars)					Cumulative Five-Year Addition
	1996	1997	1998	1999	2000	
Addition to Current- Law Revenues	0.4	0.6	0.5	0.5	0.5	2.5

SOURCE: Joint Committee on Taxation.

The tax code imposes excise taxes on motor fuels, but it partially exempts fuels that are certain blends of gasoline and alcohol. Immediate repeal of the partial excise tax exemption would raise \$2.5 billion in revenues over the 1996-2000 period. That estimate assumes that the Congress also repeals the alcohol fuels credit, an alternative tax benefit that can be used instead of the partial excise tax exemption. The credit, however, is in almost all cases less valuable than the exemption and is rarely used.

The exemption rate depends on the percentage of alcohol in the fuel and whether the alcohol was made from a fossil fuel (nonrenewable) or nonfossil fuel (renewable) source. The exemption applies only to alcohol fuels produced from nonfossil fuel sources. For example, gasohol, which is 90 percent gasoline and 10 percent (renewable) ethanol--an alcohol fuel produced primarily from corn and sugar--receives a 5.4 cents per gallon exemption from the 18.4 cents per gallon tax on gasoline.

One purpose of the tax benefit--enacted in the late 1970s--was to increase national security by reducing the demand for imported oil and thereby reducing U.S. dependence on foreign oil sources. Another purpose was to provide an additional market for U.S. agricultural products by encouraging domestic production of ethanol. Over the last several years, U.S. environmental action has increased the value of ethanol by mandating the oxygen content of motor fuels in many areas of the country. Use of oxygenated fuels in motor vehicles generally produces less carbon monoxide pollution than does gasoline.

Before the Clean Air Act Amendments of 1990 were enacted, the tax benefits encouraged energy producers to substitute ethanol for gasoline--and successfully so. Motor fuels blended with ethanol made up less than 1 percent of the total motor fuels market in 1980, but that proportion grew to nearly 7 percent by 1990. Because ethanol production uses more resources than gasoline production, the resulting allocation of resources may create economic inefficiencies if the value of those resources in alternative uses is greater than the value of the diminution in air pollution.

The Clean Air Act Amendments of 1990 reduced the need for the partial excise tax exemption. In that legislation, the Congress mandated the minimum oxygen content of gasoline in areas of the country with unacceptable levels of air pollution.

In the areas where the mandate applies, the partial excise tax exemption for alcohol fuels affects the type of oxygenating agent used but not the total use of oxygenated fuels. The exemption only applies to oxygenated fuels made from renewable resources, effectively meaning ethanol. The other major source of oxygen in gasoline is methyl tertiary butyl ether (MTBE), which does not receive a tax benefit because it is made from natural gas. Given the mandate, ethanol primarily competes with MTBE, not gasoline, in those markets.

The tax benefit encourages the use of higher-cost ethanol rather than lower-cost MTBE. Some proponents of ethanol argue that it is better for the environ-

ment than MTBE. But that argument is not settled. Ethanol appears to reduce carbon monoxide emissions from automobiles more than MTBE does; but ethanol evaporates quickly, especially in hot weather, contributing to ozone pollution. In response, companies have developed ethyl tertiary butyl ether (ETBE), a product derived from ethanol that does not have the same evaporative problem. It also qualifies for the tax benefit. ETBE, however, does not contribute to reduced carbon monoxide emissions, as does ethanol.

The net effect that repealing the exemption would have on ethanol producers, farm income, and agricultural support payments depends on market conditions and what discretionary action the Secretary of Agriculture takes. Income of ethanol producers would probably fall.

The revenue effect cited for this option does not reflect the Environmental Protection Agency's ruling of June 1994 that would expand the market for ethanol. The agency ruled that renewable oxygenates must constitute 15 percent of the total amount of the mandated oxygen in reformulated gasoline, the type of fuel required year-round starting in 1995 in areas of the country with severe ozone pollution. (The percentage increases to 30 percent in 1996 and thereafter.) The rule, however, has not gone into effect pending resolution of a legal challenge. The revenue projection shown here does not reflect the increased use of ethanol that would result from that rule because the court challenge remains unresolved.

REV-33 IMPOSE A VALUE-ADDED TAX

Addition to Current-Law Revenues	Annual Added Revenues (Billions of dollars)					Cumulative Five-Year Addition
	1996	1997	1998	1999	2000	
Impose a 5 Percent Rate, with a Comprehensive Base	0	116.0	179.4	188.7	198.3	682.4
Impose a 5 Percent Rate, with Food, Housing, and Medical Care Excluded	0	63.4	98.0	103.1	108.3	372.8

SOURCE: Joint Committee on Taxation.

NOTE: Estimates are based on an effective date of January 1, 1997. They are net of reduced income and payroll tax revenues, but do not reflect added administrative costs.

A value-added tax (VAT) is a form of general tax used in more than 50 countries, including Canada, Japan, and all European countries except Iceland. It is typically administered by taxing the total value of sales of all businesses, but allowing businesses to claim a credit for taxes paid on their purchases of raw materials, intermediate materials, and capital goods from other businesses. As a result, only sales to consumers end up being taxed.

A 5 percent VAT on a broad consumption base (as defined in Table 5-3) would increase net revenues by about \$116 billion in 1997 and by about \$680 billion through 2000. Most VATs, however, do not tax such a broad base. The typical European VAT, for example, excludes food, housing, and medical care. It also partially excludes financial services because they are difficult to tax. A 5 percent VAT on a narrower base (as defined in Table 5-3) would net only about \$63 billion in 1997 and nearly \$375 billion through 2000. Those revenue estimates assume that collections would not begin until January 1, 1997, because the Internal Revenue Service would need more than a year to set up a VAT.

A VAT might be preferable to an income tax increase because it would not discourage saving and investment by taxing their return. In addition, a broad-based VAT with a single rate would distort economic decisions less than an equal revenue in-

crease in selective consumption taxes. The VATs that have been enacted in other countries, however, include many tax preferences and multiple rates. Such a tax would distort consumption choices more than a single-rate, broad-based VAT and could be more distorting than higher income tax rates.

A VAT makes the price consumers pay higher than the price sellers receive. Therefore, adopting one would cause an initial jump in the overall consumer price level because the government computes the consumer price index on a tax-inclusive basis. The increase in the price level, however, would not necessarily lead to further inflation, depending on how the Federal Reserve System responded. Many experts believe that the Federal Reserve would adjust the money supply in a way that would maintain nominal income. Under that scenario, macroeconomic models generally predict little inflation beyond the initial price jump.

The VAT is a regressive tax in the sense that families with lower annual income pay a larger share of their income in tax. That effect occurs because the ratio of consumption to annual income is higher for low-income families than for high-income families. A VAT is less regressive over people's lifetimes than in a single year because income and consumption nearly match over a lifetime, even though income tends to fluctuate annually more than consumption

does. Many economists believe that lifetime measures of tax burdens are more meaningful than annual measures.

Table 5-3.
The Size of Two Possible Tax Bases
for a Value-Added Tax, 1993

Items Included in Tax Base	Amount (Billions of dollars)
Broad Tax Base	
Total Personal Consumption in Gross Domestic Product	4,378
Net Purchases of Residential Structures	<u>251</u>
Subtotal	4,629
Exclusions from the Base ^a	
Rental value of housing	-629
Religious and welfare activities	<u>-123</u>
Subtotal	-752
Total	3,877
Narrower Tax Base	
Total Personal Consumption in Gross Domestic Product	4,378
Exclusions from the Base ^a	
Rental value of housing	-629
Religious and welfare activities	-123
All medical care (including insurance)	-760
Food consumed at home	-374
Food furnished to employees	-12
Food produced for farm consumption	b
Brokerage, banking, and life insurance services	-285
Local transit (excluding taxis)	-6
Clubs and fraternal organizations	-9
Tolls for roads and bridges	-2
Private education and research	<u>-106</u>
Subtotal	-2,306
Total	2,072

SOURCE: Congressional Budget Office based on national income and product accounts.

- a. The excluded amount assumes that the specified consumption is taxed at a zero rate.
- b. Reduction of less than \$500 million.

A VAT could be made slightly less regressive by granting tax preferences for the goods and services low-income people generally consume. Those preferences, however, would substantially increase the costs of enforcement and compliance, and they would reduce revenues. Another way to lessen the VAT's regressivity would be to allow additional exemptions or refundable credits for low-income people under the federal income tax. But exemptions for low-income people would also reduce the revenue gain and would cause many people to file tax returns who otherwise would have no need to file.

Like any new tax, a VAT would impose additional administrative costs on the federal government and additional compliance costs on businesses. If the United States adopted a VAT that was similar to the ones used in Europe, those costs could be quite substantial. CBO estimates that administering such a VAT would cost the government more than \$1 billion annually, and complying with it would cost businesses \$6 billion to \$10 billion annually. Those costs would be lower if the VAT exempted more small businesses from collecting the tax and if it taxed as many goods and services as possible at the same rate.

A retail sales tax is another way to tax consumption. Because a sales tax is collected entirely at the retail level, however, the incentive to evade a sales tax would be much greater than the incentive to evade a VAT. Moreover, because the sales tax lacks an effective credit mechanism for the taxes that businesses pay on their purchases, it taxes some business purchases by mistake. Given the drawbacks of a retail sales tax, most countries with general consumption taxes have chosen a VAT over the sales tax.

Other ways to tax a broad consumption base are possible, even though no country has ever tried one. A tax on consumed income, for example, would tax income but with an exclusion for net saving. Under a consumed-income tax, taxpayers could deduct all contributions to qualified saving accounts but would pay tax on net withdrawals. Because individuals would pay tax on a measure of their total consumption, the tax could include a graduated rate schedule, like the rate schedule of the individual income tax. That schedule would make the consumed-income tax less regressive than a VAT.

REV-34 IMPOSE A BROAD-BASED ENERGY TAX

Addition to Current-Law Revenues	Annual Added Revenues (Billions of dollars)					Cumulative Five-Year Addition
	1996	1997	1998	1999	2000	
Impose a Tax on the Carbon Content of Fossil Fuels (\$15.75 per ton)	13.7	20.4	21.3	22.4	23.5	101.3
Impose a Tax on the Heat Content of Fuels (34.5 cents per million Btus)	14.6	20.0	20.8	21.8	22.7	99.9
Impose an Ad Valorem Tax on Energy Consumption (5 percent of value)	14.5	20.0	20.8	21.7	22.6	99.6

SOURCE: Joint Committee on Taxation.

NOTE: Estimates are net of reduced income and payroll tax revenues. Increases in federal government expenditures for energy products under these options are not included.

Broad-based energy taxes fall into three types: a carbon tax, a Btu tax, and an ad valorem tax. A tax on the carbon content of fossil fuels (coal, oil, and natural gas) would help to reduce global warming by reducing carbon emissions. The tax, however, would be relatively harsh on coal-producing regions and regions that generate more electricity from coal than from other fuels. A tax on the heat content of fuels (measured in British thermal units, or Btus) that raised the same revenue would be more regionally neutral but would be less effective in reducing carbon emissions. An ad valorem tax on energy raising the same revenue would increase energy prices in a non-distortionary way, but would also be less effective in reducing carbon emissions than a carbon tax. None of these options would meaningfully reduce U.S. dependence on foreign oil.

Broad-based energy taxes also would have adverse distributional effects because families with lower annual income spend a larger share of their income on energy than families with higher income. The distributional effects of energy taxes are not generally significantly different, however, from those of a general consumption tax, such as a value-added tax

(see REV-33), which would not further environmental goals.

All three options would cause a one-time increase in the U.S. general price level of about 0.4 percentage points and an offsetting one-time decline in the dollar's foreign exchange value. The prices of energy-intensive goods would increase more than the general price increase, and the prices of goods that are not energy intensive would increase less. As a result, the prices of goods produced in the United States that are energy intensive--such as aluminum and chemicals--would rise when valued in foreign currency terms, making those U.S. products less competitive in world markets. Similarly, the prices of goods produced in the United States that are not energy intensive would fall when valued in foreign currency terms, making them more competitive in world markets.

To alleviate the adverse effects on the domestic energy and energy-intensive industries, the United States could institute border adjustments on a limited or extensive basis. A limited border adjustment might levy the energy tax on imported energy and

rebate the tax on exported energy. All three options make that adjustment. The adjustment eases the impact on the domestic energy industry, but not the impact on domestic producers of energy-intensive goods. More extensive border adjustments on the energy content of all goods would also mitigate the adverse effects on energy-intensive industries. However, they would be complicated and costly to administer and might violate the General Agreement on Tariffs and Trade. Therefore, they are not included in these options.

Impose a Tax on the Carbon Content of Fossil Fuels. A tax of \$15.75 per ton of carbon content (in 1996 dollars) of coal, oil, and natural gas, if it was indexed for inflation, would raise about \$100 billion from 1996 through 2000. The relative carbon content of the three fossil fuels would dictate the specific tax rate for each fuel. That tax rate, based on average carbon content, is equivalent to a tax of approximately \$9.50 per ton of coal, \$2 per barrel of oil, and about \$0.25 per thousand cubic feet of natural gas (in 1996 dollars).

Imposing a carbon-based tax at the minemouth, wellhead, or dockside for imports could discourage the use of fossil fuels and also encourage switching from higher carbon-emitting fuels to lower ones, thereby reducing subsequent emissions of carbon dioxide (CO₂). The Congress could impose higher tax rates on fossil fuels than assumed in this option. It could, for example, impose taxes either at levels that would discourage future increases in CO₂ emissions or at levels that would reduce emissions from current amounts by some target date.

Recent scientific evidence on the potential for global warming through an intensified greenhouse effect has prompted international concern about the emissions of greenhouse gases such as CO₂. The United States, along with some 150 nations, signed a climate treaty at the June 1992 "Earth Summit" conference in Brazil, agreeing to initiate steps aimed at controlling emissions of greenhouse gases. In 1993, the Administration announced an "Action Plan" for reducing greenhouse gases through voluntary action by government and businesses. A \$15.75 per ton carbon tax would reduce CO₂ emissions by about 1 percent to 2 percent from projected levels by 2000.

U.S. action, however, would not significantly reduce global CO₂ concentrations in the atmosphere if other countries did not make similar efforts. In addition, since scientists do not fully understand how emissions of greenhouse gases affect atmospheric concentrations, even reducing CO₂ emissions significantly may not prevent global warming. Moreover, a tax that significantly reduced emissions could impose economic costs that exceeded the benefits of such a policy. Adjusting to lower energy use would be costly, especially in energy extracting and processing industries and in energy-intensive manufacturing sectors. Furthermore, other means of controlling greenhouse gases could be adopted. Another alternative to raising energy prices through an excise tax on carbon is to adapt to a warmer globe. That approach could be justified if the expected costs of adjusting to a warmer climate were less than the costs of adjusting to a tax or other methods of reducing greenhouse emissions.

Compared with the other broad-based energy tax options, the carbon tax would impose greater costs on colder regions of the country, like the Northeast and Midwest, and on regions that produce electricity primarily from coal. Coal-producing regions might also be hurt relatively more as utilities switched from coal to other energy sources to produce electricity.

Impose a Tax on the Energy Content of All Fuel Sources. A tax of 34.5 cents per million Btus (in 1996 dollars) imposed on all energy sources and indexed for inflation would also raise about \$100 billion from 1996 through 2000. The relative heat content of coal, oil, and natural gas would dictate the specific tax rate for each fuel. That tax rate, based on average heat content, is equivalent to a tax of approximately \$7.35 per ton of coal, \$1.90 per barrel of oil, and about \$0.35 per thousand cubic feet of natural gas (in 1996 dollars).

Under this option, the change in relative prices between fossil fuels is similar to the change in relative prices under the carbon tax option because the carbon content of fuel is closely related to the heat content of fossil fuels. On average, the tax rates in this option are lower than those under the carbon tax option because the tax base is broader, including nuclear, hydropower, and other renewable resources.

Nonetheless, the tax rate on natural gas is higher than under a carbon tax because the heat content is higher relative to the carbon content for natural gas than for coal and petroleum. Because the average price increases for fossil fuels would be smaller under a Btu tax than under a carbon tax, the reduction in CO₂ emissions would not be quite as large as under the carbon tax option.

The tax would be easiest to administer if the Internal Revenue Service (IRS) collected it at the points where fossil fuels enter the economy--minemouth, wellhead, or dockside for imports--because that would minimize the number of taxpayers. The tax would need to be imposed on fuel used in the fuel production and distribution industries to capture all the energy consumed. If the tax was not imposed on alternative fuels--including hydroelectricity, nuclear, geothermal, and synthetic fuels--then the regional disparities of the tax would be magnified. For example, the Northwest generates more electricity from hydropower than other regions of the country.

The House of Representatives passed one version of a modified Btu tax in 1993. The Congress did not approve that option, however.

Impose an Ad Valorem Tax on All Energy. A tax of 5 percent levied at the retail level on all forms of energy would also raise about \$100 billion over the 1996-2000 period. An ad valorem tax applied at the retail level would leave the relative prices of different energy sources unchanged and therefore would not encourage consumers to switch from one form of energy to another. As a result, it would not decrease CO₂ emissions as much as a carbon tax for the same revenue increase. In addition, enforcement would be relatively costly with such a tax because the IRS would collect it from a large number of retailers. If the IRS collected the tax at an earlier stage of the distribution process, tax enforcement would be less costly, but the tax would then affect relative energy prices because different fuels have different markups at the retail level.

REV-35 INCREASE EXCISE TAXES ON TOBACCO AND ALCOHOLIC BEVERAGES

Addition to Current-Law Revenues	Annual Added Revenues (Billions of dollars)					Cumulative Five-Year Addition
	1996	1997	1998	1999	2000	
Increase Cigarette Tax to 48 Cents per Pack	3.5	4.0	3.9	3.9	3.8	19.1
Increase Cigarette Tax to 99 Cents per Pack	9.2	10.3	10.1	9.9	9.6	49.1
Increase All Alcoholic Beverage Taxes to \$16 per Proof Gallon	3.7	4.5	4.5	4.5	4.6	21.8
Index Cigarette and Alcohol Tax Rates for Inflation	0.4	0.7	1.1	1.4	1.8	5.4

SOURCE: Joint Committee on Taxation.

NOTE: Estimates are net of reduced income and payroll tax revenues.

Federal alcohol and tobacco taxes raised \$13.5 billion in 1994, including \$7.6 billion from taxes on distilled spirits, beer, and wines, and \$5.9 billion from taxes on tobacco. The Omnibus Budget Reconciliation Act of 1990 increased the federal excise tax on tobacco and most alcoholic beverages.

Smoking and drinking can create costs to society that the prices of tobacco and alcoholic beverages do not reflect. Examples of those "external costs" include higher health insurance costs to cover the medical expenses linked to smoking and drinking, the effects of cigarette smoke on the health of nonsmokers, and the loss of lives and property in alcohol-related accidents.

By raising the price of tobacco and alcoholic beverages, excise taxes can result in consumers' paying the full cost for smoking and drinking. To the extent that excise taxes lead to reduced consumption of tobacco and alcoholic beverages, tax increases can decrease the total external costs that smoking and drinking produce. If those external costs primarily come from heavy or abusive consumption, however, then higher taxes on tobacco and alcoholic beverages might unduly penalize moderate and infrequent

smokers and drinkers. Furthermore, some research suggests that, at least for tobacco, current taxes may more than adequately compensate for the external costs that smokers impose on society.

Increasing excise taxes to reduce consumption may be desirable regardless of the effect on external costs if consumers are either unaware of or underestimate the harm that their smoking and drinking does to them. If most consumers of cigarettes overestimate rather than underestimate the risks involved with smoking, as some studies have shown, then additional taxes would not be warranted to correct for poor information about the health consequences of smoking. Teenagers, however, may not be prepared to evaluate the long-term effects of smoking and drinking. Evidence suggests that teenage smoking and drinking declines in response to higher prices for tobacco and alcoholic beverages. A number of national medical organizations have supported a substantial increase in the existing federal excise tax on tobacco in the interests of reducing teenage smoking.

Taxes on tobacco and alcoholic beverages are regressive when compared with annual family income; that is, taxes are a greater percentage of in-