

TABLE 1. ASSUMPTIONS AS TO U.S. OIL SUPPLY AND DEMAND AT THREE PRICE LEVELS AND IN THE ABSENCE OF NEW OIL TAXES
(In millions of barrels per day)

Variable	Preliminary 1985	Projected					
		1986	1987	1988	1989	1990	1991
Oil Price: \$23.00 per Barrel							
Demand	15.6	15.8	16.0	16.2	16.3	16.7	17.0
Supply ^{a/}	11.0	11.1	11.1	11.0	10.8	10.7	10.6
Imports ^{b/}	4.6	4.7	4.9	5.3	5.6	6.0	6.4
Oil Price: \$18.00 per Barrel							
Demand	--	--	16.8	17.3	17.7	18.2	18.6
Supply ^{a/}	--	--	10.9	10.7	10.5	10.4	10.2
Imports ^{b/}	--	--	5.9	6.5	7.2	7.8	8.4
Oil Price: \$13.00 per Barrel							
Demand	--	--	17.9	18.7	19.4	20.1	20.9
Supply ^{a/}	--	--	10.6	10.4	10.1	9.9	9.6
Imports ^{b/}	--	--	7.3	8.3	9.3	10.3	11.3

SOURCE: Congressional Budget Office.

- a. Includes natural gas liquids and refinery gain.
- b. Includes 0.3 million barrels per day in 1985 for stock adjustment and statistical discrepancy, which are assumed to be zero for later years.

If oil imports are seen as continuing to pose risks for the economy, then some form of oil tax may constitute an appropriate response. Specifically, an oil import tariff set at a level equal to the social "premium" associated with oil consumption would provide a broad signal to energy suppliers and consumers by raising the benchmark price of all energy in the economy. That is, all energy suppliers and consumers would be led to value oil correctly, from a social perspective, once an oil tariff was applied. Energy

taxes that fall upon only U.S. energy production, or upon the consumption of only one oil product, lack this evenhandedness. An oil import tariff might also be an efficient substitute for other incentives for U.S. energy production, such as the preferential tax treatments afforded some energy producers, or federal research programs into energy development or use.^{5/}

On the other hand, even if a social "premium" exists for oil consumption, taxes to reduce oil imports may not be the best solution so long as the alternative remains of reducing oil imports by allowing markets to work freely. Completing natural gas decontrol and promoting renegotiations to reduce the rigidities of gas contracts and facilitate orderly adjustment in the gas market may be two such options available to the Congress. Electricity production could be made more efficient if its regulation was redesigned, perhaps by allowing unregulated generating units to compete for sales to a central grid.^{6/} Thus, in terms of energy policy, the issues before the Congress are whether dependence on foreign oil poses or will pose a threat to the United States, and, if so, whether an oil tax would be the most effective policy for addressing the potential costs of this dependence.

An "Optimal Tariff" on Foreign Monopolists

A second rationale for taxes on oil imports sees them as a way of counteracting a foreign monopolist. Tariffs on imported goods generally place the economy at a disadvantage by forcing it to produce domestically goods and services that could be obtained more advantageously abroad. This is true of goods that are bought and sold in competitive world markets, as most are. But if the producer of the imported goods is a monopolist, or, more broadly, has significant market power, then consumers must pay more for imported goods than the cost of the resources that went into them. The imposition of a tariff on a foreign monopolist's production may be warranted, therefore, if it forces him to lower his price toward the level that would obtain on a competitive market.

Oil production may be a legitimate example of such a case. OPEC is obviously not a competitive oil producer, and earns large monopoly profits on its production since the resource cost of producing much OPEC oil is

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5. It is impossible, of course, to determine how high the tariff would need to be to offset the risk associated with oil consumption. The level of the tariff would be almost arbitrary, since estimates of the risk premium range from \$5.00 to \$50.00 per barrel.
 6. Congressional Budget Office, *Promoting Efficiency in the Electric Utility Sector* (November 1982).

substantially less than its market price. Moreover, a tariff on oil imports might force OPEC to share some of its profits with consumers by lowering the world oil market price. This outcome is essential if a tariff is to increase economic welfare. Unless it drives down foreign prices, an oil tariff will have only the distorting effects associated with tariffs in general.

This rationale must be invoked very cautiously. There is no certainty that a U.S. oil tariff would drive down the world price of oil. Oil producers might instead be induced to limit their production in order to maintain prices. Moreover, the tariff might evoke countermeasures by some producing countries, which could retaliate by restricting their imports of goods from the United States, such as capital goods and farm products. Finally, the imposition of tariffs is always risky. It invokes the sort of "beggar-thy-neighbor" policies that, in the 1930s, led to a virtual breakdown of international trade and senselessly prolonged the Great Depression.

Economic Adjustment

Another goal of an oil tax would be to shield the domestic oil industry from downward swings in the price of oil. The swift decline in oil prices since the beginning of the year has caused hardship throughout the industry. Exploration budgets have been slashed, drilling rigs are idle, and personnel are being laid off. Some wells are closing never to be reopened. The state governments of Texas, Louisiana, and Oklahoma are all facing fiscal crises of enormous proportions, since the bulk of their revenue comes from royalty payments, severance taxes, and other oil-based revenue sources. Unless other revenues are found, public services will have to be curtailed. These somewhat localized effects of lower oil prices could be felt on a national scale through the banking system. Many of the banks in the Southwest have significant oil investments. A massive writing down of these investments could precipitate runs on some banks that would create difficulties in turn for money center banks and banks in other regions.

Hardships such as these are not unique to the oil industry. Other U.S. industries have faced falling prices and excess capacity. City and state governments that depend on the health of those industries have lost revenue and been obliged to make the kinds of choices the oil states are now making. The automobile and steel industries have undergone contractions that were comparable to those the oil industry is now facing.

Moreover, not all segments of the oil industry are being hurt by the oil price decline. The oil price rises of the 1970s resulted in more employment

in the production end of the oil industry, but in an absolute reduction in the number of jobs in refining and distribution.^{7/} If oil price declines encourage more consumption, then the distribution and refining ends of the industry should see employment increases. Employment in the production end of the oil business (oil field machinery, oil mining, and oil and gas field services) has been declining since 1981, and the gains in employment that have come to the oil industry since then have all been in wholesale and retail distribution. On the other hand, it is unlikely that the gains in employment in refining and distribution will come about as rapidly as the loss of employment in the production-oriented segment of the oil industry should oil prices remain at their current levels.

One problem unique to the oil industry is the vulnerable position of many major banks. Many banks made loans to cover equipment and drilling expenses, and these loans may not be collectible. Without some relief, such banks may lose a significant fraction of their net worth and/or experience a run. Oil asset prices have been eroding for a long time, however, giving banks some advance warning. A major question is whether a tax or import tariff is the appropriate mechanism to deal with the risks posed by a group of problem banks. The recent experience of federal banking agencies in dealing with problem banks suggests other avenues for adjustment.

It should also be pointed out that most oil taxes would not help the industry. Only an oil import tariff would do so, by raising domestic oil prices. Other taxes would divert the income stream to the federal government, worsening the situation for oil producers.

MAJOR ASSUMPTIONS OF THE ANALYSIS

This analysis estimates the net budgetary effects of a variety of oil taxes. Such estimates depend critically on underlying assumptions. The most important assumptions made concern changes in macroeconomic variables, the response of OPEC producers, and the quantities of domestic oil that would be produced and consumed in the absence of an oil tax.

7. See Congressional Budget Office, *Understanding Natural Gas Price Decontrol* (April 1983), p. 49. For updated employment figures, see Bureau of Labor Statistics, *Supplement to Employment and Earnings* (June 1985).

Macroeconomic Effects

When estimating the revenue effects of various tax alternatives, the Congressional Budget Office, like most other analytic agencies and institutions, employs the assumption that nominal GNP--that is, GNP expressed in current dollars uncorrected for inflation--remains constant before and after the imposition of the tax. This assumption is made because the macroeconomic effects of tax changes are complex and often uncertain, and to incorporate these effects into estimates of the revenue gains or losses associated with different taxes would add an unreasonable degree of uncertainty.

Moreover, the assumption that nominal GNP remains the same after changes in tax policy is a plausible one, particularly when changes in income taxation are considered. Higher taxes have the potential to reduce GNP in the short term, since higher taxes leave households with less income to spend and also distort their economic incentives. But other, positive effects also occur as taxes rise and the federal deficit is correspondingly lowered. Interest rates may fall, allowing interest-sensitive sectors of the economy to expand more rapidly. Lower interest rates would also reduce net inflows of foreign capital into the United States, which would allow the dollar exchange rate to fall and the U.S. trade balance to improve. In fact, in an open and competitive world economy, changes in the federal deficit might affect the composition of economic activity more than its level: lower deficits in general appear to encourage production, exports, and--most crucially--investment.

Excise taxes, such as the oil taxes discussed in this report, are a special case, since they are targeted at one commodity as opposed to the broader base of income taxes. The fact that oil taxes are aimed at one commodity means that they inherently distort the relative prices of different goods in the economy. This distortion compromises the economy's efficiency--it requires producers and consumers to react to a set of prices that distort underlying economic costs. In this case, consumers would be led to use less oil than the cost of producing and acquiring it would suggest as optimal. Moreover, the economy would be forgoing seemingly less expensive opportunities to purchase foreign oil and substituting for them more expensive domestic production. This loss of efficiency suggests that oil taxes would have a more negative effect on the economy per dollar of revenue raised than would a general increase in a tax with a broader base.

But, as discussed above, oil taxes could lead to a lower world price of oil. If they did, the taxes would in effect be paid in part by foreign oil producers. The decline in world oil prices would represent a transfer of income from foreigners to the United States, an unambiguously positive

result. The magnitude of this income transfer is uncertain, but it could offset, in whole or in part, the efficiency losses traditionally associated with excise taxes and tariffs.

An important implication of the convention that nominal GNP remains approximately unchanged after the imposition of an energy tax is that the gross receipts collected from an oil tax are not equal to the net revenue effect of the tax. Oil taxes yield positive revenue, but if nominal GNP is constant this requires that incomes elsewhere in the economy decline by just the amount of the tax. The analysis assumes, therefore, that any new cost burden created by an oil tax results in equivalent losses of business and personal income that would have been taxed at some aggregate marginal tax rate (here assumed to be 25 percent, the same rate at which any new corporate or personal income resulting from an oil duty is taxed). Thus, if an oil import tariff raises domestic oil costs as it raises revenues, the increase in domestic costs will result in lower income, and lower tax payments, elsewhere in the economy. Conversely, if a gasoline tax lowers world oil prices, and, in turn, the price received by domestic oil producers, then gross motor fuels tax receipts will be offset by the reduced income tax paid by domestic oil and gas producers.

Response of Foreign Producers

An excise tax (or a tariff) on a good produced abroad further complicates the analysis. Unless foreign producers of the good act to curb their output, its world price will fall. This is because U.S. consumers, through interfuel substitution and conservation, will reduce their purchases of oil, including imported oil. Foreign oil producers will then face a choice between reducing their output to maintain world market prices and maintaining their output while allowing prices to fall. How they respond will help to determine who bears the burden of the tax. Any oil tax will have this consequence because all taxes, though in differing degree, will reduce the quantity of foreign oil demanded.

In a competitive market, the division of the burden of any excise tax between producers and consumers depends on supply and demand responses to price changes. The international oil market, however, is characterized by major noncompetitive elements. Consequently, the supply response to oil price changes depends heavily on policies of major producing countries, particularly Saudi Arabia and other members of OPEC. During periods of OPEC strength, producers attempted to shift the entire price change to consumers through output reduction. Recently OPEC, and in particular Saudi, policy appears to have changed. Major OPEC producers now seem to

be less concerned, or less able, to defend the world price and more oriented toward preserving their market share. For this reason, this analysis assumes that producers would not adjust their output levels in response to an oil tax by enough to maintain a constant world price. Instead, they might absorb a significant portion of the tax.

The amount of the tax absorbed by foreign producers would depend on the extent to which the demand for imported oil declined in response to the particular tax--the greater the extent to which any tax reduces the demand for imported oil, the more it forces foreign producers to accept lower prices for the oil they wish to sell. If world oil prices declined in response to taxes, the result would be a gain in real income for oil consumers both at home and abroad. CBO assumes, on the basis of rough calculations of domestic and foreign supply and demand responses, that foreign producers would absorb approximately 37 percent of any import tariff and 33 percent of an oil excise tax. They would absorb more of the import tariff because such a tax allows domestic oil production to rise (and the demand for imported oil to fall) while an oil excise tax does not. Similarly, foreign producers would absorb 17 percent of the per barrel value of a broad-based energy tax. The lower percentage obtains because an energy tax would raise the prices of oil substitutes as well as of oil, thus limiting the possibilities for interfuel substitution, and would discourage the domestic production of other fuels. Thus the decline in U.S. demand for imported oil would be smaller with the energy tax than with either oil tax. Foreign producers would absorb a smaller share--13 percent--of an increase in motor fuels taxes. This smaller proportion reflects the fact that a motor fuels tax is imposed on a more limited base than an oil tax and, therefore, precludes many possibilities for reductions in oil demand, while providing no new incentives for fuel supply. Moreover, short-term gasoline demand depends strongly on the characteristics of the automotive vehicle fleet, which change little in the short term. The combination import/motor fuels tax described below would force foreign producers to absorb approximately 25 percent of the per barrel value of such a tax.

All of these estimates involve considerable uncertainty because of the difficulty of assuming just how producers would respond to various taxes.^{8/} If taken as an affront, oil taxes could provoke retaliatory action. Moreover, given the rate of change currently occurring in the oil markets, it is not clear whether the conditions of supply and demand will remain constant in the future. In short, these effects should be taken as illustrative of the level of producer absorption that might be expected.

8. For a similar analysis, see *PEMEX Information Bulletin*, March 1986.

Oil Consumption, Production, and Import Assumptions

Given the substantial uncertainty underlying future world oil prices, this analysis calculates revenues for all tax alternatives under three oil price assumptions: constant nominal oil prices (average refiners' acquisition cost) of \$23.00 per barrel, \$18.00 per barrel, and \$13.00 per barrel.^{9/} In the \$23.00 per barrel case, domestic oil consumption is assumed to rise from 16.0 million barrels per day in calendar year 1987 to 17.0 million barrels per day in 1991. Crude oil and refined product imports rise from 5.5 million barrels per day in 1987 to 7.0 million barrels per day in 1991. At the other extreme, given oil prices of \$13.00 per barrel, oil imports rise from 7.9 million barrels per day in 1987 to 11.9 million barrels per day in 1991. (See Table 1.) The prices and quantities of natural gas and coal are assumed to change with oil prices. The revenues generated by the crude oil windfall profit tax would also change: at \$23.00 per barrel, the windfall profits tax would lead to net federal revenues, while at \$13.00 per barrel, no windfall profit tax would be collected.

The analysis also assumes that Strategic Petroleum Reserve (SPR) acquisitions would not be subject to any of the taxes, so that SPR costs would change only with the world price of oil. The use of oil tax receipts to finance SPR purchases is discussed below.

9. These price paths and the corresponding consumption levels do not correspond to the CBO baseline forecast. For this and other reasons, these estimates differ from those appearing in *Reducing the Deficit: Spending and Revenue Options* (March 1986).

CHAPTER II

OIL TAXES AND THE FEDERAL BUDGET

This chapter presents estimates of the effects of oil taxes on the federal budget.^{1/} The estimates include the additional revenue that would be raised directly by the oil taxes, and also by the crude oil windfall profit tax where appropriate, as well as the reduction in revenue from corporate and personal income taxes that would occur as other prices changed in the economy. The estimates reflect changes that would occur in the demand and domestic supply of oil and other fuels as the prices confronting consumers and producers of those fuels changed.

OIL TAX OPTIONS

Among the tax options most frequently discussed are an import tariff, an excise tax, a motor fuels tax, and a broad-based energy tax (sometimes called a Btu tax).^{2/}

Oil Import Tariff

A \$5.00 per barrel tariff would be imposed on all imported crude oil, and a tariff of \$10.00 per barrel on imported petroleum products. An extra \$5.00 per barrel on imported products would be sufficient to prevent their importation, since enough domestic refining capacity exists to meet demand (given the tariff penalty) at \$23.00 and \$18.00 per barrel. Thus, this analysis assumes that imports of crude oil would be substituted for all imports of refined products at \$23.00 and \$18.00 per barrel, so that the revenue

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1. The estimates presented in this analysis are not comparable with estimates in previous CBO studies. They are based on different assumptions as to oil price levels and employ a different methodology. They also reflect updated assumptions regarding consumption and production, tax rates, and other variables. The methods used in formal revenue estimates can be found in Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options* (March 1986), p. 232. For the purpose of administering the budget process, baseline assumptions would be used in scoring the revenue implications of new energy taxes.
 2. While such a tax is not strictly an oil tax, it is usually discussed in this context because it would contribute to revenues and to energy security.

effects of this proposal are identical to a \$5.00 tariff on imported crude and products at the two higher price levels. At \$13.00, consumption of refined petroleum products would become large enough to require imports, and the added tariff on imported refined products would yield added revenues.

Taxes that increase domestic crude oil and natural gas prices will increase federal royalties from oil and natural gas production from the outer continental shelf and onshore federal and Indian lands, and increase receipts from the sale of the Naval Petroleum Reserve. On the other hand, the federal government consumes roughly 500,000 barrels of refined petroleum products per day.^{3/} It is assumed that outlays would increase to cover the added costs of this consumption.

Oil Excise Tax

A \$5.00 per barrel tax would be imposed on all crude oil (both foreign and domestic) used by refineries and an equivalent tax would be imposed on all imported refined petroleum products. Because of the competition posed by refined product imports, U.S. refiners would not be able to increase their margins, and higher crude costs would be passed forward equally to all products.

Motor Fuels Tax

The motor fuels excise tax would be increased by 12 cents per gallon (\$5.04 per barrel). The tax would be similar to the motor fuels tax that finances the Highway Trust Fund, but revenue would not be dedicated to the fund. Gasoline and diesel fuels would be subject to the tax. All current exemptions, such as those for alcohol fuels or off-road uses (primarily in agriculture), would be continued.

Broad-based Energy Tax

The broad-based energy tax would be an ad valorem tax on oil, natural gas, coal, and electricity, equal to 5 percent of the final sale price of each. An equivalent tax would be placed on all imports of these energy sources. At

3. Energy Information Administration, *1984 Annual Energy Review* (Washington, D.C.: Government Printing Office, 1985), p. 21. Not all of this oil is purchased from domestic sources. Consequently, the estimates in this report overstate the additional outlays that would result from an import tariff.

an oil price of \$23.00 per barrel, the energy tax would initially be equal to 4 cents per gallon of gasoline, \$0.22 per thousand cubic feet of natural gas, \$1.74 per ton of coal, and 0.4 cent per kilowatt hour of electricity. At an oil price of \$18.00 per barrel, the energy tax would be equal to 4 cents per gallon of gasoline, \$0.20 per thousand cubic feet of natural gas, \$1.69 per ton of coal, and 0.3 cent per kilowatt hour. At an oil price of \$13.00 per barrel, the energy tax would be equal to 3 cents per gallon of gasoline, \$0.19 per thousand cubic feet of natural gas, \$1.65 per ton of coal, and 0.3 cent per kilowatt hour.

Combination of Taxes

Refined product and crude oil taxes could be combined in many ways, but this report assumes a \$2.50 per barrel oil import tariff combined with a 6 cent per gallon motor fuels tax. The import tariff component is assumed to be spread evenly across all products by refiners. ⁴

EFFECTS ON THE BUDGET

The net budgetary effects of the tax alternatives defined above are presented in Table 2, for each of the three oil price assumptions. In Table 3, the budgetary effects are presented from a different perspective--the level of each tax required to achieve a cumulative deficit reduction of \$25 billion, \$50 billion, or \$75 billion in the five years following enactment. All the taxes are assumed to take effect on July 1, 1986. Under the revenue estimating conventions described earlier, no allowance is made for different levels of taxes having different macroeconomic effects. Note that even a revenue gain of \$75 billion amounts to less than 0.3 percent of cumulative GNP over the five-year period. (The reader is referred to Chapter I for a more complete discussion of the major economic assumptions underlying the estimates.)

Oil Import Tariff

A tariff of \$5.00 per barrel on imported crude oil and a \$10.00 tariff on imported refined products would lead to a net deficit reduction of \$8.9 billion in 1987 if oil prices remained at \$13.00 per barrel, a reduction of

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4. This is a simplifying assumption in that, under this combination of taxes, motor fuels consumers would experience price increases larger than those experienced by consumers of other petroleum products, and their demand response could force refiners to shift output from motor fuels to other products.

TABLE 2. NET DEFICIT REDUCTION UNDER
FIVE OIL TAX ALTERNATIVES
(By fiscal year, in billions of current dollars)

Tax Alternative	1987	1988	1989	1990	1991
Pre-tax Oil Price: \$23.00 per Barrel					
Import Tariff	8.1	8.3	8.6	8.8	9.0
Excise Tax	22.1	22.5	23.0	23.2	23.5
Motor Fuels Tax	8.8	8.9	9.1	9.1	9.3
Energy Tax	15.1	15.6	16.2	16.6	17.1
Combination of Taxes	8.6	8.7	9.0	9.2	9.6
Pre-tax Oil Price: \$18.00 per Barrel					
Import Tariff	8.2	8.8	9.3	10.0	10.5
Excise Tax	24.0	24.6	25.1	25.5	26.0
Motor Fuels Tax	9.0	9.1	9.2	9.3	9.5
Energy Tax	14.1	14.5	15.2	15.7	16.2
Combination of Taxes	9.2	9.5	10.0	10.4	11.0
Pre-tax Oil Price: \$13.00 per Barrel					
Import Tariff	8.9	9.9	10.6	11.5	12.2
Excise Tax	25.4	26.3	27.1	27.8	28.5
Motor Fuels Tax	9.2	9.2	9.3	9.3	9.5
Energy Tax	13.0	13.5	14.2	14.8	15.3
Combination of Taxes	10.1	10.8	11.5	12.2	13.0

SOURCE: Congressional Budget Office.

NOTES: *Import Tariff*: \$5.00 per barrel imposed on crude oil and \$10.00 per barrel on refined products.

Excise Tax: \$5.00 per barrel imposed on all domestic and foreign crude oil and refined products.

Motor Fuels Tax: 12 cents per gallon (\$5.04 per barrel) on all motor fuels.

Energy Tax: Ad valorem tax of 5 percent of final sale value of domestic and imported oil, natural gas, coal, and electricity.

Combination of Taxes: \$2.50 per barrel on imported oil and 6 cents per gallon on motor fuels.

TABLE 3. APPROXIMATE TAX LEVELS NECESSARY
TO ACHIEVE FIVE-YEAR NET DEFICIT
REDUCTION LEVELS, FISCAL YEARS 1987-1991

Tax Alternative	Five-Year Deficit Reduction Target		
	\$25 billion	\$50 billion	\$75 billion
Pre-tax Oil Price: \$23.00 per Barrel			
Import Tariff (dollars per barrel)	3.00	6.00	9.00
Excise Tax (dollars per barrel)	1.10	2.20	3.30
Motor Fuels Tax (cents per gallon)	6.7	13.3	20.0
Energy Tax (percent of value)	1.6	3.2	4.8
Combination of Taxes (dollars per barrel/ cents per gallon)	1.40 3.3	2.80 6.7	4.20 10.0
Pre-tax Oil Price: \$18.00 per Barrel			
Import Tariff (dollars per barrel)	2.70	5.30	8.00
Excise Tax (dollars per barrel)	1.00	2.00	3.00
Motor Fuels Tax (cents per gallon)	6.5	13.0	20.0
Energy Tax (percent of value)	1.7	3.3	5.0
Combination of Taxes (dollars per barrel/ cents per gallon)	1.40 3.3	2.50 6.0	3.75 9.0
Pre-tax Oil Price: \$13.00 per Barrel			
Import Tariff (dollars per barrel)	2.40	4.80	7.10
Excise Tax (dollars per barrel)	0.93	1.85	2.80
Motor Fuels Tax (cents per gallon)	6.5	12.9	20.0
Energy Tax (percent of value)	1.8	3.5	5.3
Combination of Taxes (dollars per barrel/ cents per gallon)	1.09 2.6	2.20 5.2	3.25 7.8

SOURCE: Congressional Budget Office.

\$8.2 billion at oil prices of \$18.00 per barrel, or a reduction of \$8.1 billion at oil prices of \$23.00 per barrel. The five-year deficit reduction achieved by such a tax would be \$42.9 billion, \$46.8 billion, and \$53.1 billion at oil prices of \$23.00, \$18.00, and \$13.00 per barrel, respectively. Table 4 presents these estimates in greater detail. An oil tariff would raise revenue through

TABLE 4. NET DEFICIT REDUCTION UNDER AN OIL IMPORT TARIFF OF \$5.00 PER BARREL ON CRUDE OIL AND \$10.00 PER BARREL ON REFINED PRODUCTS UNDER ALTERNATIVE OIL PRICE ASSUMPTIONS
(By fiscal year, in billions of current dollars)

Revenues and Outlays	1987	1988	1989	1990	1991
Pre-tax Oil Price: \$23.00 per Barrel					
Revenues					
Gross tariff receipts	8.3	8.8	9.3	9.8	10.3
Increased windfall profit tax	1.9	1.5	1.3	1.0	0.8
Total offsets	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)
Net revenue increase	8.4	8.6	8.9	9.0	9.2
Outlays					
Increased federal energy costs	0.6	0.6	0.6	0.6	0.6
Offsetting receipts	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)
Net outlay increase	0.2	0.2	0.2	0.2	0.2
Net Deficit Reduction	8.1	8.3	8.6	8.8	9.0
Pre-tax Oil Price: \$18.00 per Barrel					
Revenues					
Gross tariff receipts	9.4	10.3	11.2	12.0	12.8
Increased windfall profit tax	0.7	0.5	0.2	0.1	a/
Total offsets	(1.7)	(1.7)	(1.8)	(1.9)	(2.0)
Net revenue increase	8.4	9.0	9.3	10.2	10.8
Outlays					
Increased federal energy costs	0.6	0.6	0.6	0.6	0.6
Offsetting receipts	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)
Net outlay increase	0.2	0.2	0.2	0.2	0.2
Net Deficit Reduction	8.2	8.8	9.3	10.0	10.5
Pre-tax Oil Price: \$13.00 per Barrel					
Revenues					
Gross tariff receipts	10.8	11.9	12.8	14.0	14.8
Increased windfall profit tax	0.0	0.0	0.0	0.0	0.0
Total offsets	(1.7)	(1.8)	(2.0)	(2.2)	(2.3)
Net revenue increase	9.1	10.1	10.8	11.8	12.4
Outlays					
Increased federal energy costs	0.6	0.6	0.6	0.6	0.6
Offsetting receipts	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)
Net outlay increase	0.2	0.2	0.2	0.2	0.2
Net Deficit Reduction	8.9	9.9	10.6	11.5	12.2

SOURCE: Congressional Budget Office.

NOTE: Numbers may not add because of rounding.

a. Less than \$50 million.

three avenues: tariff receipts, higher windfall profit tax payments by domestic oil producers, and increases in corporate income taxes paid by domestic producers of oil and gas. Domestic crude oil prices would rise in response to an oil tariff. The windfall profit tax would take a portion of this price increase. The remaining added profits of domestic oil producers and domestic gas producers would be taxed as corporate income.

These revenue increases would be offset by reduced corporate profits and personal incomes elsewhere, as higher energy prices raised business costs and reduced the income available for consumption of other goods and services. The additional \$5.00 imposed on imported products would not raise new revenues at price levels of \$23.00 and \$18.00 per barrel because no products would be imported. It would, however, raise the cost of refined products, as uneconomic U.S. refinery capacity was brought into production. At \$13.00 per barrel, some additional duty would be collected on refined product imports.

Oil Excise Tax

A \$5.00 per barrel excise tax on all crude oil, domestic and imported, and on imported products would reduce the federal deficit by \$25.4 billion in fiscal year 1987 if oil prices remained at \$13.00 per barrel, by \$24.0 billion at oil prices of \$18.00 per barrel, or by \$22.1 billion at oil prices of \$23.00 per barrel. The five-year deficit reduction achieved by such a tax would be \$114.3 billion, \$125.2 billion, and \$135.1 billion at oil prices of \$23.00, \$18.00, and \$13.00 per barrel, respectively. Table 5 shows these estimates in greater detail.

Motor Fuels Tax

A motor fuels tax of 12 cents per gallon would reduce the federal deficit by \$9.2 billion in fiscal year 1987 if oil prices remained at \$13.00 per barrel, or by \$9.0 billion at oil prices of \$18.00 per barrel or \$8.8 billion at oil prices of \$23.00 per barrel. The five-year deficit reduction achieved by such a tax would be \$45.2 billion, \$46.0 billion, and \$46.5 billion at oil prices of \$23.00, \$18.00, and \$13.00 per barrel, respectively. Table 6 gives these estimates in greater detail.

TABLE 5. NET DEFICIT REDUCTION UNDER A \$5.00 OIL EXCISE TAX UNDER ALTERNATIVE OIL PRICE ASSUMPTIONS
(By fiscal year, in billions of current dollars)

Revenues and Outlays	1987	1988	1989	1990	1991
Pre-tax Oil Price: \$23.00 per Barrel					
Revenues					
Gross tax receipts	28.6	28.9	29.2	29.4	29.6
Total offsets	(5.5)	(5.4)	(5.3)	(5.2)	(5.2)
Net revenue increase	23.0	23.5	23.9	24.2	24.4
Outlays					
Increased federal energy costs	0.6	0.6	0.6	0.6	0.6
Offsetting receipts	0.3	0.3	0.3	0.3	0.3
Net outlay increase	0.9	0.9	0.9	0.9	0.9
Net Deficit Reduction	22.1	22.5	23.0	23.2	23.5
Pre-tax Oil Price: \$18.00 per Barrel					
Revenues					
Gross tax receipts	29.8	30.5	31.1	31.6	32.1
Total offsets	(5.1)	(5.1)	(5.2)	(5.3)	(5.4)
Net revenue increase	24.7	25.4	25.9	26.3	26.7
Outlays					
Increased federal energy costs	0.6	0.6	0.6	0.6	0.6
Offsetting receipts	0.2	0.2	0.2	0.2	0.2
Net outlay increase	0.8	0.8	0.8	0.8	0.8
Net Deficit Reduction	24.0	24.6	25.1	25.5	26.0
Pre-tax Oil Price: \$13.00 per Barrel					
Revenues					
Gross tax receipts	31.5	32.5	33.5	34.3	35.1
Total offsets	(5.3)	(5.4)	(5.6)	(5.8)	(5.9)
Net revenue increase	26.2	27.1	27.9	28.6	29.2
Outlays					
Increased federal energy costs	0.6	0.6	0.6	0.6	0.6
Offsetting receipts	0.2	0.2	0.2	0.2	0.2
Net outlay increase	0.8	0.8	0.8	0.8	0.8
Net Deficit Reduction	25.4	26.3	27.1	27.8	28.5

SOURCE: Congressional Budget Office.

NOTE: Numbers may not add because of rounding.

TABLE 6. NET DEFICIT REDUCTION UNDER A 12 CENTS PER GALLON MOTOR FUELS TAX UNDER ALTERNATIVE OIL PRICE ASSUMPTIONS
(By fiscal year, in billions of current dollars)

Revenues and Outlays	1987	1988	1989	1990	1991
Pre-tax Oil Price: \$23.00 per Barrel					
Revenues					
Gross tax receipts	11.9	11.9	12.1	12.2	12.4
Total offsets	(3.1)	(3.1)	(3.1)	(3.1)	(3.2)
Net revenue increase	8.8	8.8	9.0	9.1	9.3
Outlays					
Decreased federal energy costs	0.1	0.1	0.1	0.1	0.1
Offsetting receipts	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Net outlay decrease	0.0	0.1	0.1	0.1	0.1
Net Deficit Reduction	8.8	8.9	9.1	9.1	9.3
Pre-tax Oil Price: \$18.00 per Barrel					
Revenues					
Gross tax receipts	12.0	12.0	12.2	12.3	12.5
Total offsets	(3.1)	(3.0)	(3.0)	(3.1)	(3.1)
Net revenue increase	9.0	9.0	9.1	9.2	9.4
Outlays					
Decreased federal energy costs	0.1	0.1	0.1	0.1	0.1
Offsetting receipts	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Net outlay decrease	0.1	0.1	0.1	0.1	0.1
Net Deficit Reduction	9.0	9.1	9.2	9.3	9.5
Pre-tax Oil Price: \$13.00 per Barrel					
Revenues					
Gross tax receipts	12.2	12.2	12.3	12.4	12.6
Total offsets	(3.0)	(3.0)	(3.1)	(3.1)	(3.1)
Net revenue increase	9.2	9.1	9.2	9.3	9.5
Outlays					
Decreased federal energy costs	0.1	0.1	0.1	0.1	0.1
Offsetting receipts	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Net outlay decrease	0.1	0.1	0.1	0.1	0.1
Net Deficit Reduction	9.2	9.2	9.3	9.3	9.5

SOURCE: Congressional Budget Office.

NOTE: Numbers may not add because of rounding.

Energy Tax

An energy tax set equal to 5 percent of the final sale price of domestic crude oil, natural gas, coal, and electricity, with an equivalent tax placed on imports, would decrease the federal deficit by \$13.0 billion in fiscal year 1987 if oil prices remained at \$13.00 per barrel, by \$14.1 billion at oil prices of \$18.00 per barrel, or by \$15.1 billion at oil prices of \$23.00 per barrel. These estimates are presented in Table 7. The five-year deficit reduction achieved by such a tax would be \$80.6 billion, \$75.6 billion, and \$70.9 billion at oil prices of \$23.00, \$18.00, and \$13.00 per barrel, respectively.

Combination of Taxes

A combination of a \$2.50 per barrel import tariff and a 6 cent motor fuels tax would increase net federal revenues by \$10.1 billion in fiscal year 1987 if oil prices remained at \$13.00 per barrel, by \$9.2 billion at oil prices of \$18.00 per barrel, or by \$8.6 billion at oil prices of \$23.00 per barrel. Table 8 presents these estimates in greater detail. The five-year deficit reduction achieved by such a tax would be \$45.2 billion, \$50.0 billion, and \$57.6 billion at oil prices of \$23.00, \$18.00, and \$13.00 per barrel.