

Issue Brief for Congress

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Energy Tax Policy

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Energy Tax Policy

SUMMARY

Historically, federal energy tax policy promoted the supply of oil and gas. However, the 1970s witnessed 1) a significant cutback in the oil and gas industry's tax preferences, 2) the imposition of new excise taxes on oil, and 3) the introduction of numerous tax preferences for energy conservation, the development of alternative fuels, and the commercialization of the technologies for producing these fuels (renewables such as solar, wind, and biomass, and non-conventional fossil fuels such as shale oil and coalbed methane).

The Reagan Administration, using a free-market approach, advocated repeal of the windfall profit tax on oil and the repeal or phase-out of most energy tax preferences — for oil and gas, as well as alternative fuels. Due to the combined effects of the Economic Recovery Tax Act and the energy tax subsidies that had not been repealed, which together created negative effective tax rates in some cases, the actual energy tax policy differed from the stated policy.

The Bush and Clinton years witnessed a return to a much more activist energy tax policy, targeted, as in the 1970s, to energy conservation and alternative fuels. While the ultimate concern is to reduce the demand for imported oil, energy tax policy is being viewed as a tool for achieving environmental and fiscal objectives. The current posture of energy tax policy is weighted toward energy conservation — particularly petroleum in transportation — and alternative fuels supply.

The Clinton Administration's energy tax policy was focused on reducing the demand for petroleum by encouraging energy effi-

ciency and providing incentives to promote the supply of alternative fuels and the demand for technologies that use these fuels. However, the Administration is emphasizing the environmental benefits from reducing greenhouse gases and addressing possible global climate change.

A significant expansion of energy tax incentives has been proposed as part of comprehensive energy policy reform legislation in the 107th Congress. Several energy tax issues are addressed in these bills: 1) tax incentives to increase the supply of oil and gas, and the demand for coal; 2) energy tax issues relating to energy conservation and energy efficiency; 3) energy tax issues relating to alternative fuels; 4) selected issues relating to electricity restructuring; and 5) expiring energy tax provisions. Legislative interest has focused on the H.R. 4, approved by the House on August 2, 2001, and the Senate Finance Committee bill (the Energy Tax Incentive Act of 2002), which was modified somewhat and added as Amendment #2917 to the Senate's comprehensive energy policy bill (originally introduced as S. 517, but renamed Securing America's Future Energy Act, which was approved on April 25).

President Bush has issued a comprehensive energy policy initiative, and more recently, a global climate change initiative, which include limited energy tax measures. The Bush Administration had originally criticized such measures as being inconsistent with its free market philosophy. Certain energy tax provisions that had expired were extended retroactively as part of the economic stimulus bill (P.L. 107-147).



MOST RECENT DEVELOPMENTS

On April 25, the Senate approved the Securing America's Future Energy Act, a substitute to the House energy bill H.R. 4. On March 9, President Bush signed the Job Creation and Worker Assistance Act of 2002 (P.L. 107-147), a \$42 billion, ten-year tax cut that retroactively extends several energy tax provisions that had expired on December 31, 2001. On August 2, 2001, the House approved H.R. 4, a comprehensive energy policy bill that includes numerous energy tax incentives, which were marked up as H.R. 2511 (the Energy Tax Policy Act of 2001) by the House Committee on Ways and Means on July 18, 2001.

BACKGROUND AND ANALYSIS

Introduction

Energy tax policy involves the use of the government's main fiscal instruments – taxes (financial disincentives) and tax subsidies (or incentives) – to alter the allocation or configuration of energy resources to either correct a problem or distortion in the energy markets or to achieve some social, economic (efficiency, equity, or even macroeconomic), environmental, or fiscal objective.

The idea of applying tax policy instruments to the energy markets is not new, but until the 1970s energy tax policy had been little used. Recurrent energy related problems since the 1970s – oil embargoes, oil price and supply shocks, wide petroleum price variations and price spikes, large geographical price disparities, tight energy supplies, rising oil import dependence, as well as increased concern for the environment – have caused policymakers to look toward energy taxes and subsidies with greater frequency.

This issue brief discusses the history, current posture, and the outlook for federal energy tax policy. It also discusses recent energy tax proposals, focusing on the major energy tax policy reform bills in the House (H.R. 4), and Senate (S. 389, S. 596, and the bill recently marked up the SFC) which are facing possible floor action this 2nd session of Congress. (For a general economic analysis of energy tax policy, see CRS Report RL30406, *Energy Tax Policy: An Economic Analysis*.)

Background

The history of federal energy tax policy can basically be divided into four eras: the oil and gas period from 1916 to 1970, the energy crisis period of the 1970s, the free-market era of the Reagan Administration, and the post-Reagan era, including the most recent three year period since 1998 – which has witnessed a plethora of energy tax proposals to address recurring energy market problems.

Energy Tax Policy from 1918-1970: Promoting Oil and Gas

Historically, federal energy tax policy was focused on increasing domestic oil and gas reserves and production; there were no tax incentives for energy conservation or for alternative fuels. Two oil/gas tax code preferences embodied this policy: 1) expensing of intangible drilling costs (IDC's) and dry hole costs, which was introduced in 1916, and 2) the percentage depletion allowance, first enacted in 1926 (coal was added in 1932). Expensing of IDC's (such as labor costs, material costs, supplies, and repairs associated with the drilling of a well) gave oil and gas producers the benefit of fully deducting from the first year's income ("writing off") a significant portion of the total costs of bringing a well into production, costs that would otherwise (i.e., in theory and under standard, accepted tax accounting methods) be capitalized (i.e., written off during the life of the well as income is earned). For dry holes, which comprised on average about 80% of all the wells drilled, the costs were also allowed to be deducted in the year drilled (expensed) and deducted against other types of income, which led to many tax shelters that benefitted primarily high income taxpayers. Expensing accelerates tax deductions, defers tax liability, and encourages oil and gas prospecting, drilling, and the development of reserves. The percentage depletion allowance for oil and gas permitted oil and gas producers to claim 27.5% of revenue as a deduction for the cost of exhaustion or depletion of the deposit, allowing deductions in excess of capital investment (i.e. in excess of adjusted cost depletion) — the economically neutral method of capital recovery for the extractive industries. Percentage depletion encourages faster mineral development than cost depletion (the equivalent of depreciation of plants and equipment).

These and other tax subsidies discussed later (e.g., capital gains treatment of the sale of successful properties, the special exemption from the passive loss limitation rules, and special tax credits) reduced marginal effective tax rates in the oil and gas industries, reduced production costs, and increased investments in locating reserves (increased exploration). They also led to more profitable production and some acceleration of oil and gas production (increased rate of extraction), and more rapid depletion of energy resources than would otherwise occur which increases oil import dependency and reduces energy security. Such subsidies tend to channel resources into these activities that otherwise would be used for oil and gas activities abroad or for other economic activities in the United States. Relatively low oil prices encouraged petroleum consumption (as opposed to conservation) and inhibited the development of alternatives to fossil fuels, such as unconventional fuels and renewable forms of energy. Oil and gas production increased from 16% of total U.S. energy production in 1920 to 71.1% of total energy production in 1970 (the peak year).

Energy Tax Policy During the 1970s: Conservation and Alternative Fuels

Three developments during the 1970s caused a dramatic shift in the focus of federal energy tax policy. First, large the revenue losses associated with the oil and gas tax preferences became increasingly hard to justify in the face of a progressively worsening fiscal picture – increasing federal budget deficits – and in view of the long-standing economic arguments against the special tax treatment for oil and gas. Second, heightened awareness of environmental pollution and concern for environmental degradation, and the increased importance of distributional issues in policy formulation (i.e., equity and fairness), lost the domestic oil and gas industry much political support. Thus, it became more difficult to justify percentage depletion and other subsidies, largely claimed by wealthy individuals and big vertically-integrated oil companies. More importantly, during the 1970s there were two energy crises: the oil embargo of 1973 – also known as the first oil shock – and the Iranian

Revolution in 1979, which focused policymakers' attention on the problems (alleged "failures") in the energy markets and how these problems reverberated throughout the economy causing stagflation, shortages, productivity problems, rising import dependence, and other economic and social problems.

These developments caused the increased use of fiscal subsidies or incentives – special tax credits, deduction, exclusions etc.– to shift from oil and gas supply toward energy conservation (reducing oil and gas demand) through: 1) a direct demand response (i.e., curbing energy use through higher prices, and reduced service or utility levels by reducing the number of miles driven or turning down thermostats in homes during the winter, etc.); 2) substitution of more energy-efficient for less energy-efficient technologies (i.e., reduced energy demand through an increased demand for more energy-efficient houses, vehicles, industrial equipment and other energy-using capital goods); and 3) an increased supply of alternative and renewable fuels (solar, wind, biomass, ethanol fuel, and non-conventional fossil fuels such as shale oil, and coalbed methane), and stimulating investment in, and demand for, technologies that used these alternative (such as renewable) sources of energy.

Three broad actions through the tax code were taken to implement the new energy tax policy during the 1970s: First, the oil industry's two major tax preferences — expensing of IDCs and percentage depletion — were significantly reduced, particularly the percentage depletion allowance, which was 1) completely eliminated for the major integrated oil companies (which produce about 75% of all the oil in the United States), and 2) reduced for the remaining producers. Other oil and gas tax benefits were also cut back during this period. For example, oil-and gas-fired boilers used in steam generation (for example, to generate electricity) could no longer qualify for accelerated depreciation as a result of the Energy Tax Act of 1978 (as discussed below).

The second broad policy action was the imposition of several new excise taxes on oil and gas (and later coal). Chief among these was the windfall profit tax (WPT) on oil first enacted in 1980 (P.L. 96-223). The WPT imposed an excise tax of 15% to 70% on the difference between the market price of oil and a predetermined (adjusted) base price. This tax, which was repealed in 1988, was part of a political compromise that decontrolled oil prices (between 1971 and 1980 oil prices were controlled under President Nixon's Economic Stabilization Act of 1970 – the so-called "wage-price freeze"). Another, but relatively small, excise tax on petroleum was instituted in 1980: the environmental excise tax on crude oil received at a U.S. refinery. This tax, which was part of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (P.L. 96-510), otherwise known as the "Superfund" program, was designed to charge oil refineries for the cost of releasing any hazardous materials which resulted from the refining of crude oil. The tax rate was set initially at 0.79¢ (\$0.0079) per barrel, and was subsequently raised to 9.7¢ per barrel. This tax expired at the end of 1995 but legislation has been proposed since then to reinstate it as part of Superfund reauthorization. (See CRS Issue Brief IB10011.)

The third broad action taken during the 1970s to implement the new and refocused energy tax policy was the introduction of numerous tax incentives for energy conservation, the development of the supply of alternative fuels (renewable and non-conventional fuels), and the commercialization of energy efficiency and alternative fuels technologies. Most of these new tax subsidies were introduced as part of the Energy Tax Act of 1978 (ETA, P.L. 95-618), and expanded under the WPT, which also introduced additional new energy tax subsidies. The following list describes these:

- *The Residential and Business Energy Tax Credits.* The ETA provided income tax credits for homeowners and businesses that invested in a variety of energy conservation products (e.g., insulation and other energy-conserving components) and for solar and wind energy equipment installed in a principal home or a business. The business energy tax credits were 10% to 15% of the investment in conservation or alternative fuels technologies such as synthetic fuels, solar, wind, geothermal, and biomass. These tax credits were also expanded as part of the WPT but they generally expired (except for business use of solar and geothermal technologies) as scheduled either in 1982 or 1985. President Clinton's FY2001 budget included a solar credit that is very similar to the 1978 residential energy tax credits (see "Tax Credits for Solar Energy Equipment,"). A 15% investment tax credit for business use of solar and geothermal energy, which was made permanent, is all that remains of these tax credits.
- *Tax Subsidies for Alcohol Fuels.* The ETA also introduced the excise tax exemption for gasohol, currently at 5.3¢ per gallon (out of a gasoline tax of 18.4¢/gal.). Subsequent legislation extended the exemption and introduced the alcohol fuels "blenders" tax credits (which are in lieu of the exemption), and the 10¢/gal., small ethanol producers tax credit. The 1998 Transportation Equity Act (P.L. 105-178) extended the exemption, which was scheduled to expire, but at reduced rates. (For more information see: CRS Report 98-435 E, *Alcohol Fuels Tax Incentives.*)
- *The Gas Guzzler Tax.* The ETA created a federal tax on "gas guzzlers," a graduated excise tax on the sale of vehicles that do not meet the Corporate Average Fuel Economy (CAFÉ) standards established by the Environmental Protection Agency. The tax rate currently ranges from \$1,000 for a vehicle rated between 21.5 and 22.5 MPG (miles per gallon) to \$7,700 for a vehicle rated at less than 12.5 MPG. This tax is still in effect.
- *Percentage Depletion for Geothermal.* The ETA made geothermal deposits eligible for the percentage depletion allowance, at the rate of 22%. Currently the rate is 15%.
- *The §29 Tax Credit for Unconventional Fuels.* The 1980 WPT included a \$3.00 (in 1979 dollars) production tax credit to stimulate the supply of selected unconventional fuels: oil from shale or tar sands, gas produced from either geo-pressurized brine, Devonian shale, tight formations, and coalbed methane, gas from biomass, and synthetic fuels from coal. Adjusted for inflation, this credit, which is still in effect for wells, mines, or plants placed in service by June 30, 1998 (for coal and biomass facilities) and December 31, 1991 (for all other facilities and wells), was over \$6.00 per barrel of liquid fuels and about \$1.00 per thousand cubic feet (MCF) of gas in 1999. The credit for tight sands gas has been fixed at the 1979 rate of \$0.50 per MCF. (For more information, see CRS Report 97-679 E, *Economic Analysis of the Section 20 Tax Credit for Unconventional Fuels.*)
- *Tax-Exempt Interest on Industrial Development Bonds.* The WPT made facilities for producing fuels from solid waste exempt from federal taxation of interest on industrial development bonds (IDBs). This exemption was for

the benefit of the development of alcohol fuels produced from biomass, for solid-waste-to-energy facilities, for hydroelectric facilities, and for facilities for producing renewable energy. IDBs, which provide significant benefits to state and local electric utilities (public power), had become a popular source of financing for renewable energy projects.

(During the 1970s there was also a significant increase in the number of energy laws and regulations, such as the CAFÉ (Corporate Average Fuel Economy) standards to reduce transportation fuel use, and other interventions through the budget and the credit markets. This included some of the most extensive energy legislation ever enacted. These non-tax policy measures are not discussed here.)

Reagan's Free-Market Energy Tax Policy

The Reagan era, the period from 1981-1989, witnessed the first attempt to create a more free-market energy tax policy by deregulating the energy markets, and by both reducing taxes and eliminating tax subsidies, both for conservation, alternative fuels, and for oil and gas.

President Reagan's free-market views were well known prior to his election. During the 1980 Presidential campaign, he proposed repeal of the WPT, the deregulation of oil and natural gas, and the minimization of government intervention, including reduced spending and taxes. The Reagan Administration opposed using the tax law to promote either oil and gas development, energy conservation, or the supply of alternative fuels. The idea was to have a more neutral and less distortionary energy tax policy, which would make energy markets work more efficiently and generate benefits to the general economy. The Reagan Administration believed that the responsibility for commercializing conservation and alternative energy technologies rested with the private sector and that high oil prices – real oil prices (corrected for inflation) were at historically high levels in 1981 and 1982 – would be ample encouragement for the development of alternative energy resources. High oil prices in themselves create conservation incentives, stimulate oil and gas production, and render tax breaks for alternative resource generally ineffective, and wasteful, as a policy tool.

The Administration's energy tax policy was professed more formally in several energy and tax policy studies, including its 1981 National Energy Policy Plan and the 1983 update to this plan; it culminated in a 1984 Treasury study on general tax reform, which also proposed fundamental reforms of federal energy tax policy. In terms of actual legislation, many of the Reagan Administration's objectives were realized, although as discussed below there were unintended effects. In 1982, the business energy tax credits on most types of non-renewable technologies – those enacted under the ETA of 1978 – were allowed to expire as scheduled; other business credits and the residential energy tax credits were allowed to expire at the end of 1985, also as scheduled. Only the tax credits for business solar, geothermal, ocean thermal and biomass technologies were extended. And as mentioned above, today the tax credit for business investment in solar and geothermal technologies, which has since been reduced to 10%, is all that remains of these tax credits. A final accomplishment was the repeal of the WPT, but not until 1988, the end of the Reagan term.

The Administration's other energy tax policy proposals, however, were not adopted. The tax incentives for oil & gas were not eliminated, although they were pared back as part of the Tax Reform Act (TRA) of 1986:

- ‘Expensing’ was retained, but there were cutbacks for integrated oil producers, (who would only be allowed to expense 70% of such costs and amortize – deduct evenly over time – the remaining 30%) and other reductions;
- Percentage depletion would not apply to lease bonuses, advance royalties, or any other payments made without regard to actual production from the property. This amendment applied to geothermal wells as well as oil and gas properties. Another section of TRA denied capital gains treatment on certain dispositions of interest in oil and gas property (and to geothermal property);
- The TRA replaced the old minimum taxes with a new alternative minimum tax that placed limits on the tax benefits to oil/gas producers from the expensing of IDCs and the percentage depletion allowance. (Taxpayers must compute both the standard income tax and the alternative minimum tax imposed on a variety of tax preferences or subsidies, and pay the larger of the two.) However, in an effort to mitigate any burdensome effects of this new tax, only the excess of the deduction above 65% of net income was to be treated as a preference item;
- Investments in oil and gas properties were exempted from the passive loss limitation rules that were intended to curb tax shelter investments – a working interest in an oil and gas property was not treated as a passive activity. Thus any losses and credits derived from oil and gas investments activity could be used as a tax shelter to offset the taxpayer’s other income without limitations under the passive loss rules.

Perhaps the key characteristic of the Reagan Administration energy tax policy, however, was the extent to which its objectives of neutrality and efficiency were compromised by the combined effect of its energy tax policy and its other tax policies. While the objective was to create a free-market energy policy, significant liberalization of the depreciation system and reduction in marginal tax rates – both the result of the Economic Recovery Tax Act of 1981 (ERTA, P.L. 97-34) – combined with the regular investment tax credit and the business energy investment tax credits, resulted in negative effective tax rates for many investments including investments in alternative energy investments such as solar and synthetic fuels. (See, for instance: CRS Report 84-85 E. *Effective Tax Rates on Solar/Wind and Synthetic Fuels as Compared to Conventional Energy Resources*.) Also, the retention of percentage depletion and expensing of IDC’s (even at the reduced rates) rendered oil and gas investments still favored relative to investments in general. Other energy tax policy developments during the Reagan era were as follows:

- The Deficit Reduction Act of 1984 (P.L. 98-369) tinkered with several energy tax provisions including the WPT and percentage depletion. provision of the Tax Reform Act of 1975. Also, the 1984 tax law extended several of the tax incentives for alcohol fuels: (1) the tax exemption for alcohol fuels mixtures was raised from 5¢ to 6¢; (2) the law retained the prior 9¢-per-gallon exemption for neat alcohol fuels, i.e., those that are at least 85% alcohol, derived from alternative substances, but it provided for

a new exemption of 4.5¢ per gallon for alcohol fuels derived from natural gas; (3) the alcohol “blenders” credit was raised from 50 to 60¢ per gallon; and (4) the duty on alcohol imported for use as a fuel was increased from 50 to 60¢ per gallon.

- In 1986 two environmental excise taxes were enacted on oil: 1) Under the Superfund Amendments and Reauthorization Act of 1986 (P.L. 99-499), an increase in the Superfund oil tax from 0.79¢ to 8.2¢-per-barrel on domestic oil received and to 11.7¢ per barrel on imported petroleum. This tax differential violated the General Agreements on Tariffs and Trade (GATT) and the Steel Trade Liberalization Program Implementation Act of 1989 (P.L. 101-221) made the rates uniform at 9.7¢ per barrel; and 2) Under the Omnibus Budget Reconciliation Act of 1986 (P.L. 99-510), imposition of the Oil Spill Liability Trust Fund excise tax at 1.3¢ per barrel tax, which was subsequently raised to 5.0¢/barrel. Both these taxes expired at the end of 1995.
- In addition, the TRA of 1986 reduced the excise tax exemption for “neat” alcohol fuels, from 9¢ per gallon to 6¢ per gallon. It also permitted alcohol imported from certain Caribbean countries to enter free of the 60¢-per-gallon duty. The TRA also repealed the tax-exempt financing provision for alcohol-producing facilities and for certain steam-generating facilities.

Energy Tax Policy After Reagan

After the Reagan Revolution, several major energy and non-energy laws were enacted that amended the energy tax laws in several ways, some major:

- *Revenue Provisions of the Omnibus Reconciliation Act of 1990.* President Bush’s first major tax law included numerous energy tax incentives: 1) for conservation (and deficit reduction), the law increased the gasoline tax by 5¢/gal. and doubled the gas-guzzler tax; 2) for oil and gas, the law introduced a 10% tax credit for enhanced oil recovery expenditures, liberalized some of the restrictions on the percentage depletion allowance, and reduced the impact of the alternative minimum tax on oil and gas investments; 3) for alternative fuels, the law expanded the §29 tax credit for unconventional fuels and introduced the tax credit for small producers of ethanol used as a motor fuel.
- *Energy Policy Act of 1992 (P.L. 102-486).* This broad energy measure introduced the §45 tax credit, at 1.5¢ per kilowatt hour, for electricity generated from wind and “closed-loop” biomass systems (poultry litter was added later. (This tax credit expired at the end of 2001 for new facilities.) In addition, the 1992 law: 1) added an income tax deduction for the costs, up to \$2,000, of clean fuel powered vehicles; 2) liberalized the alcohol fuels tax exemption; 3) expanded the §29 production tax credit for non-conventional energy resources; 4) liberalized the tax breaks for oil and gas.
- *Omnibus Budget Reconciliation Act of 1993 (P.L. 103-66).* President Clinton proposed a differential Btu tax on fossil fuels (a broadly-based

general tax primarily on oil, gas and coal based on the British Thermal Units of heat output), which was dropped in favor of a broadly-applied 4.3¢/gal. increase in the excise taxes on motor fuels with revenues allocated for deficit reduction rather than the various trust funds.

- *Taxpayer Relief Act of 1997 (P.L. 105-34)*. This tax cut legislation also included a variety of excise tax provisions pertaining to motor fuels excise taxes, some of which involved tax reductions on alternative transportation fuels, and some of which involved increases such as on kerosene, which on balance further tilted energy tax policy toward alternative fuels.
- *Tax Relief and Extension Act (H.R. 2923)*. Enacted as part of P.L. 106-170, the Ticket to Work and Work Incentives Improvement Act of 1999, Title V of the law, the Tax Relief and Extension Act of 1999, extended and liberalized the 1.5¢ renewable electricity production tax credit, and renewed the suspension of the net income limitation for the percentage depletion allowance for marginal oil and gas wells.

As this list suggests, the post-Reagan energy tax policy returned more to the interventionist course established during the 1970s and primarily was directed at energy conservation and alternative fuels, mostly for the purpose of reducing oil import dependence and enhancing energy security. However, there is an environmental twist to energy tax policy during this period, particularly in the more recent years, as the discussion of President Clinton's proposals will demonstrate. Fiscal concerns, which for most of that period created a perennial search for more revenues to reduce budget deficits, has also driven energy tax policy proposals during the post-Reagan era. This is underscored by proposals, which have not been enacted, to impose broad-based energy taxes such as the Btu (British Thermal Units) tax or the carbon tax to mitigate greenhouse gas emissions.

Another interesting feature of the post-Reagan energy tax policy is that while the primary focus continues to be energy conservation and alternative fuels, no energy tax legislation has been enacted during this period that does not also include some, relatively minor, tax relief for the oil and gas industry, either in the form of new tax incentives or liberalization of an existing tax breaks (or both).

As an indication of the current posture of federal energy tax policy, Table 1 on page 16, summarizes current energy tax provisions and the corresponding revenue effects. A “-” sign indicates revenue losses, which means that the provision is a tax subsidy or incentive, intended to increase the subsidized activity (energy conservation measures or the supply of some alternative and renewable fuel or technology); no minus sign means that the provision is a tax, which means that it either reduces supply of, or the demand for, the taxed activity (either conventional fuel supply, energy demand, or the demand for energy using technologies, such as cars).

Energy Tax Proposals in the 107th Congress

Over the last 4 years there have been a steady stream of energy tax policy measures, culminating in comprehensive energy policy reform legislation – the measure approved by the House (H.R. 4) and that pending in the Senate (S. 517). To understand the context of

these measures, one needs to review both the recurrent energy market problems over this time period, which some had viewed as an “energy crisis.”

First, there have been wide fluctuations in crude oil prices. Domestic crude oil prices reached a low of just over \$10 per barrel in the winter of 1998-1999, among the lowest crude oil prices in history after correcting for inflation. From 1986-1999 oil prices averaged about \$17.00 per barrel, fluctuating from between \$12 and \$20 per barrel. Low oil prices hurt oil producers (upstream operations), reducing profits and output, while benefitting oil refiners (downstream operations). In addition, they also encourage consumption (are disincentives to conserve and invest in energy efficiency technologies) and discourage production of alternative fuels and renewable technologies. To address the low oil prices, there were many tax bills introduced during the first session of the 106th Congress (1999) to provide economic relief through the tax code for the ailing domestic oil and gas producing industry, particularly small independent drillers and producers. Proposals mainly focused on production tax credits for marginal or stripper oil, but they also included carry back provisions for net operating losses, and other fossil fuels supply provisions.

By the summer of 1999, crude oil prices had recovered to about \$20 per barrel; and by the summer of 2000 prices peaked at well over \$30 per barrel, due largely to output reductions by the Organization of Petroleum Exporting Countries (OPEC), but also due to the increased energy demand accompanying increasing growth in the world (particularly the Asian) economies. To address the high crude prices, which also caused high gasoline, diesel, and heating oil prices, legislative proposals focused on many of the same energy tax proposals made during 1999 to address the low crude prices: production tax credits and other supply incentives. The rationale was not tax relief for a depressed industry but tax incentives to increase output, reduce prices, and provide price relief to consumers.

But in addition to high petroleum prices there were forces – some of which were understood (factors such as environmental regulations and pipeline breaks) and others which are still are not so clearly understood – that caused the prices of these petroleum products to spike. In response to these energy market problems, there were many proposals in the spring and summer of 2000 to temporarily either reduce (or totally eliminate) the federal excise tax on gasoline and diesel fuel, and other special motor fuels. These proposals were viewed as a way of helping consumers (including truckers) cushion the financial effect of the price spikes. (For an analysis of this legislation, see CRS Report RL30497, *Suspending the Gas Tax: Analysis of S. 2285.*) The spike in gasoline prices in the Midwest during the summer of 2000 kept interest in these excise tax moratoria alive; they also engendered some interest in proposals to impose a windfall profit tax on oil companies, which were, by then, earning substantial profits due to the high prices. (For more detail on the windfall profit tax on crude oil that was imposed from 1980 until its repeal in 1988, see CRS Report 90-442, *The Windfall Profit Tax on Crude Oil: Overview of the Issues.*)

Despite the numerous proposals to address these energy problems over the last 4 years, no major energy tax bill has been approved, although there have been three relatively minor amendments to energy tax provisions as part of non-energy tax bills during this period. Examples are Title V of the Ticket to Work and Work Incentives Improvement Act of 1999, P. L. 106-170, signed by President Clinton on December 17, 1999, and the Job Creation and Worker Assistance Act of 2002 (P.L. 107-147),) signed into law by President Bush on March 9, 2002. The latter is a \$42 billion, ten-year tax cut that retroactively extends several energy tax provisions:

- **The \$45 Tax Credit for Electricity Produced From Wind, Biomass, and Poultry Waste.** The 1.5¢ per kilowatt hour (in real, 1992 dollars) tax credit for electricity produced from wind technologies, "closed-loop" biomass, and poultry waste (as described above), is available for 10 years after the generating facility is placed in service, which was before January 1, 2002. The tax cut bill extended this deadline to December 31, 2003.
- **Tax Credit for Electric Vehicles.** The onset of the phase-out of the \$4,000 tax credit for the purchase of electric vehicles began on January 1, 2002. The tax cut bill deferred the onset of the phase-out date by two years.
- **Deduction for Clean-Fuel Vehicles and Certain Refueling Property.** The deduction for clean fuel vehicles, which ranges from \$2,000 to \$50,000, is to be phased out over 3 years beginning on January 1, 2002. This was extended by two years to January 1, 2004.
- **The Dyed Fuels Mandate.** Beginning on January 1, 2002, registered terminals were required to store both dyed diesel fuel and dyed kerosene as a prerequisite for being allowed to sell undyed diesel and kerosene. The tax cut bill repeals this mandate effective on January 1, 2002.
- **Percentage Depletion Allowance.** The 100% net income limitation for the percentage depletion allowance on marginal wells had been suspended since December 31, 1997, but this expired on January 1, 2002, thus reinstating the limitation. The tax cut bill reinstates the suspension, thus repealing the limitation through December 31, 2003.

While no tax bill was passed that reduced taxes on oil and gas, the 106th Congress did enact a package of \$500 million in loan guarantees for small independent oil and gas producers, which became public law (P.L. 106-51), in August 1999.

Tax Provisions in the Comprehensive Energy Policy Legislation

At the convening of the 107th Congress, policymakers witnessed not only the usual gamut of energy market problems just described, there was also an electricity crisis in California, and spiking natural gas prices, which increased steadily during 2000 and reached \$9 per cubic foot at the outset of the 107th Congress. (At one point on the spot market prices reached about \$30 per cubic foot, the equivalent of \$175/barrel of oil). Recurrent energy problems had developed into an "energy crisis."

The Republican leadership resuscitated their energy plan of the 106th Congress, particularly measures which focused on tax relief to the oil and gas industry, and proposed, a more general or comprehensive policy including major energy tax measures that would address fundamental energy problems of supply and demand. The ideas and measures in this plan were incorporated into Senator Murkowski's comprehensive energy policy reform legislation S. 389, and other Senate bills and into H.R. 4 (in the House).

The Senate Bills (S. 389, S. 596, and S. 517). On February 26, 2001, Senator Murkowski introduced S. 389, the comprehensive energy bill that includes significant expansion of tax incentives for energy supply, energy efficiency, and alternative fuels. (The

tax incentives are title IX of S. 389, which comprises over half of the bill; the non-tax provisions were introduced on the same date as S. 388). On March 22, 2001, Senator Bingaman introduced the Democratic version of comprehensive energy policy legislation, also comprising two bills, which have separate titles: S. 596, the Energy Security Tax and Policy Act of 2001 (essentially the tax component of the comprehensive legislation) and S. 597, the Comprehensive and Balanced Energy Policy Act of 2001 (the non-tax component of the legislation). This bill is based largely on Senator Bingaman's bill in the 106th Congress (S. 2904). Many of the tax measures in S. 389 and S. 596 are similar. However, S. 396 is weighted more toward production and supply than is S. 596 which is, on balance, slightly more weighted toward energy efficiency and alternative fuels. (For a comparison of these two bills, see CRS Report RL30953, *Energy Tax Incentives: A Comparison of the National Energy Security Act of 2001 (S. 389) and the Democratic Alternative (S. 596)*.)

On December 5, the Democratic leadership in the Senate introduced S. 1766, a newer version of comprehensive energy legislation, without tax provisions, which appears to be a revised version of Senator Bingaman's bill, S. 597. S. 1766 was replaced by a substitute bill, S. 517, which is largely the same as the original bill but which includes dramatic increases in fuel economy standards. The Energy Tax Incentives Act marked up by SFC, which is discussed below, was added as an amendment (Amendment #2917) to S. 517 on the floor.

The House Approved Bill (H.R. 4). In the House, the major energy tax measure is the Energy Tax Policy Act of 2001, a package of \$33.5 billion of energy tax incentives (over 10 years) for energy supply and conservation introduced on July 17, 2001. H. R. 2511 was marked up by the House Committee on Ways and Means on Wednesday, July 18, 2001. The marked up bill was a substitute amendment offered by Ways and Means Committee Chairman William Thomas. The bill was approved 24-17 and has been incorporated in the Republican leadership's comprehensive energy legislation, H.R. 4, which was approved by the House on August 2, 2001.

The energy tax provisions of H.R. 4 are generally very similar to those in the two Senate bills discussed above, although the mix of provisions differ. H.R. 4 provides tax incentives for both energy conservation – i.e., incentives that reduce the demand for energy – and the supply of conventional fossil fuels, particularly oil and gas (including nonconventional gas). Overall the bill appears to be weighted more toward stimulating the supply of conventional fuels, including capital investment incentives to stimulate production and transportation of oil and gas as well as production and transmission of electricity. This seems to be predicated on the belief that many of the recurring energy problems recently are due to supply and capacity shortages in the face of rapidly increasing demand, which has been increasing due to rapid economic growth and relatively low energy prices. The conservation incentives in H.R. 4 are weighted more toward promoting alternative fuels rather than energy efficiency.

The Senate Energy Bill. The Senate Finance Committee (SFC) held three hearings on the major Senate energy tax proposals during the first session of the 107th Congress; the Senate leadership had stated that the energy situation was one of the key issues to be taken up after the August recess. But declining federal budget surpluses, the waning of the electricity crisis in California, declining petroleum and natural gas prices, the terrorist situation, and economic recovery issues put this legislation on hold.

On February 13, 2002, however, the SFC approved the Energy Tax Incentives Act of 2002, which was added to S. 517, the Senate's energy policy bill, as Amendment #2917. S. 517 was formally renamed the Securing America's Future Energy Act when the Senate

approved the measure on April 25 as an amendment in the nature of a substitute to the House counterpart H.R. 4.

As compared with H.R. 4, the tax provision in the Senate bill are much smaller, reducing energy taxes by about \$15 billion over 10 years as compared with H.R. 4, which reduces energy taxes by about \$33 billion over 10 years. The Senate bill either eliminates or significantly reduces most of incentives for fossil fuels production and supply and for nuclear power that were in H.R. 4. There are also some reductions in tax incentives for energy efficiency. The tax incentives for alternative and renewable fuels are increased over H.R. 4. As a result of these differences with the energy tax provisions of H.R. 4, which were heavily weighted toward fossil and nuclear supply, the Senate bill is evenly balanced with about half of the tax cuts accruing to fossil fuel and production and nuclear power, and the other half accruing to energy efficiency and alternative (and renewable) fuels.

Bush Administration Proposals

The Bush Administration, which has proposed its own comprehensive plan to address the energy crisis, was initially against a significant expansion of energy tax incentives (whether for supply, efficiency, or alternative fuels). It has, however, recommended a limited number of energy tax measures, some of which appear in the Administration's FY2002 budget proposal and others which are incorporated in its National Energy Policy Development Group (NEPDG) report. (See CRS Report RL31096. *Bush Energy Policy: Overview of Major Proposals and Legislation.*) Some of these energy tax measures in the Administration's FY2002 budget and the NEPDG report also appear in the FY2003 budget, and the Presidents' global climate change initiative.

Tax Issues Relating to Electricity Restructuring

The proposed restructuring of the electricity supply industry envisions a transition from a regulated and vertically integrated monopoly to a deregulated and more competitive industry, primarily in the generation sector, with all the projected benefits: lower costs and prices, technological innovation, and greater economic efficiency (including dynamic economic efficiency) both within the industry itself and economy-wide. But some of the provisions of the federal tax code, as they relate to electric utilities, evolved within the monopoly/regulatory structure or regime and thus may be inconsistent with a more competitive restructured industry. Comprehensive as well as stand-alone restructuring legislation was introduced in the 106th Congress, but no comprehensive electricity restructuring legislation has been enacted at the federal level.

Open Access and Tax Exempt Bonds. Current federal tax provisions, as they relate to the use of tax-exempt bonds by state and local government utilities (public power) effectively preclude them from participating in open-access restructuring because of the tax code's private-use rules; i.e., the bonds cannot be used for any private purpose. The private use restrictions are intended to ensure that the benefits from the tax exempt financing accrue to the general public for the welfare of all rather than to individual private entities. Opening up a public power entity's transmission lines to privately owned utilities can jeopardize the tax exempt status of its outstanding bonds – it could make the bonds retroactively taxable. If public power utilities comply with Order 888 of the Federal Energy Regulatory Commission (FERC) by providing other utilities comparable access to their transmission facilities; if they join independent regional system operators; if they let other power

marketers use their distribution facilities; and if they sell excess power outside their traditional markets; all these could jeopardize the tax-exempt status of any outstanding bonds.

The Tax Treatment of the Sale of Transmission and Distribution Lines. In general, most analysts argue that competitive electricity markets cannot work well unless the transmission systems, which are owned primarily by investor owned utilities (IOU's), are subject to independent ownership and management. For this reason, federal rules are encouraging, and certain states are mandating, IOU's to sell or divest themselves of assets used in the transmission and distribution of electricity to independent systems operators. However, under current tax rules such sales or conversions could, under typical circumstances, trigger a taxable gain, which could inhibit the sale or spin-off of the assets. Several tax bills (for example, H.R. 1459 and S. 2967) propose that these sales or spin-offs be treated as involuntary conversions, which are not taxable events provided that the funds are used to invest in similar property within two years.

Contributions in Aid of Construction. Payments received from land developers (and builders) or prospective customers in reimbursement of the costs of constructing facilities and power lines needed to connect these customers to the grid and extend electricity service to them have to be reported as income to the utility subject to tax. The fees that utilities charge customers for connecting them to their homes or businesses to the distribution lines are also treated as taxable income. The utility is allowed to depreciate these types of investment expenditures, which are treated as contributions in aid of construction. Under IRC §118 contributions in aid of construction are not treated as contributions to capital. Prior to 1986, such contributions in aid of construction were tax exempt as contributions to a corporation's capital, although no depreciation was allowed on the capital. The Tax Reform Act of 1986 (P.L. 99-514) made such contributions taxable. For example, if an IOU generally requires prospective customers to pay for the cost of extending the existing wires to the customer's premises, the IOU is required to include such payments in income, although it can depreciate the additional wires. The tax on contributions in aid of construction applies to IOU's. It does not apply to public power entities, which, as government enterprises, are not taxable entities. IOU's would like to amend the tax laws and make contributions in aid of construction tax exempt, thus reverting to pre-1986 tax treatment. This proposal does not hinge on the restructuring of the electric industry. It is rather part of a compromise which includes continuation of the tax breaks for investors who purchased tax-exempt bonds for public power entities.

Nuclear Decommissioning. Owners of nuclear power plants are required to establish independent trust funds, and to make contributions to those funds, to ensure that funds are available to decommission those plants when they are retired. Under present law, money set aside for the future decommissioning of nuclear power plants receives special tax treatment. Basically, the contributions into the fund are tax deductible in the year they are made, rather than in the year in which the actual decommissioning takes place as economic and accounting principles dictate. Any income earned by the fund, say from investments, is taxed at a flat rate of 20%.

The rules spelling out the tax treatment of nuclear decommissioning costs – the current deduction for accrual (as opposed to cash) basis taxpayers of costs not yet incurred, but also the 20% income tax on such funds – were enacted during a time when all nuclear power plants were operated by regulated public utilities, and when any transfers of plant assets occurred between such regulated entities. One such rule states that the amount deductible

cannot exceed the amount of nuclear decommissioning costs collected from ratepayers under the cost-of-service regulation. Thus, a public service commission must authorize that the costs be approved into the rate base. Under rate deregulation in a more competitive industry, there would be no cost of service amount for the nuclear generating plant owners, hence zero deduction for contributions into the nuclear decommissioning fund.

Also, restructuring, with its separate ownership of generating, transmission, and distribution and retailing, is likely to lead to the sale or disposition of nuclear generating plants to parties that are not regulated public utilities as the law requires for tax exempt transactions. Under present tax rules, the transfer of decommissioning fund assets as part of the sale of a nuclear power plant is not a taxable transaction as long as both the seller and the buyer are regulated public utilities. This raises questions as to the tax treatment of the nuclear decommissioning funds in a sale to a non-utility, which is somewhat ambiguous under current tax laws. Under certain conditions, the purchaser may be required to recognize gain as taxable income.

The Size of the Tax Burdens on Public Power Relative to Investor Owned Utilities (IOUs). Public power utilities are not only exempt from federal taxes (as compared with investor owned utilities, which must report and pay tax on their income), but the interest on the bonds used to finance their capital investments is also exempt from federal taxation. Restructuring could lock in the competitive advantage of public power (and cooperatives) rendered by the current tax code provisions.

Tax Exempt Status of Electric Cooperatives. Electric cooperatives are exempt from federal taxes as long as 85% or more of their annual income comes from members. Non-member, unrelated business income is fully taxable. Under restructuring, the fees that cooperatives would receive for retail wheeling of electricity, combined with other member income, could exceed 15%, which may jeopardize the cooperatives' tax-exempt status.

LEGISLATION

H.R. 2511 (McCrery)

The Energy Tax Policy Act of 2001. Amends the Internal Revenue Code of 1986 to provide tax incentives to encourage energy conservation, energy reliability, and energy production. Introduced on July 17, 2001. Marked up on Wednesday, July 18, 2001, by the House Committee on Ways and Means. The marked up bill was a substitute amendment offered by Ways and Means Committee Chairman William Thomas. The bill was approved 24-17 and has been included as part of H.R. 4, the comprehensive energy legislation currently moving through the Congress.

Securing America's Future Energy Act (Amendment in the Nature of a Substitute to H.R. 4)

The tax provisions are basically those approved the Senate Finance Committee (SFC) as the Energy Tax Incentives Act of 2002. Amends the Internal Revenue Code of 1986 to provide about \$15 billion (over 10 years) of tax incentives for energy conservation and fossil fuels production. Marked up by the SFC on Wednesday, February 13, 2002. The bill, which was approved by voice vote, was a somewhat expanded version of the bill introduced by Senator Baucus on February 11. Added to S. 517 on the floor as Amendment #2917. The

tax provisions embodied in Division H. of the Senate energy bill are a modified version of Amendment 2917.

S. 596 (Bingaman)/H.R. 2108

The Energy Security Tax and Policy Act of 2001. Amends the Internal Revenue Code by providing tax credits and deductions for: (1) energy efficient property used in business; (2) residential energy systems; (3) electricity facilities and production; (4) commercial applications of advanced clean coal technologies; (5) heating fuels and storage; and (6) oil and gas production and petroleum products. Senator Bingaman introduced two bills representing what was then the Democratic version of comprehensive energy policy legislation: S. 596 (essentially the tax component of the comprehensive legislation) and S. 597, the Comprehensive and Balanced Energy Policy Act of 2001 (the non-tax component of the legislation). Introduced on March 22, 2001; referred to the Senate Finance Committee.

S. 389 (Murkowski)

The National Energy Security Act of 2001. A bill to protect the energy and security of the United States and decrease America's dependency on foreign oil sources to 50% by the year 2011 by enhancing the use of renewable energy resources, conserving energy resources, improving energy efficiencies, and increasing domestic energy supplies. Introduced on February 26, 2001; referred to the Senate Finance Committee.

Table 1. Current Energy Tax Provisions and Revenue Effects (FY2001, in \$ mil.)

Category	Provision	Major Limitations	Revenue Effect
CONVENTIONAL FOSSIL FUELS SUPPLY (bpd = barrels per day; < indicates less than)			
% depletion–oil/gas	15% of sales (higher for marginal wells)	for indep., up to 1,000 or equiv. bpd	- \$300
Expensing of IDC's–oil/gas & other fuels	100% deductible in first year	corporations expense only 70% of IDC's	- 600
Enhanced Oil Recovery Credit	15% of the costs	only for specific tertiary methods	- 200
% depletion–coal and other fuels	10% for coal	must be < 50% of taxable income	- < 50
coal excise tax (fy2000)	\$1.10/ton (0.55 for surface mines)	not to exceed 4.4% of sales price	527
ALTERNATIVE AND RENEWABLE FUELS			
§29, production tax credit	\$6.25/bar. (or \$1.00/mcf)	biogas, coal syngas, coalbed methane, etc.	- 1,500
5.3¢ exemption for gasohol	exemption from motor fuels taxes	for biomass ethanol only	- 880
§45 credit for renewable electricity	1.7¢/kWh.	wind, closed loop biomass, and poultry waste	- 100
exclusion of interest on S&L bonds	interest income exempt from tax	for hydroelectric or biomass facilities used to produce electricity	-100
tax credits for alcohol fuels	53¢/gal+ 10¢/gal for small producer credit	only for biomass ethanol (e.g., corn)	- < 50

deduction for clean-fuel vehicles	\$2,000 for cars; \$50,000 for trucks;\$100,000 deduction for refueling facilities	CNG, LNG, LPG, hydrogen, neat alcohols, and electricity; phases out over 2002-2004	- < 50
tax credit for electric vehicles	10%, up to \$4,000	phase-out from 2002-2004	- < 50
credit for solar & geothermal tech.	10% investment tax credit for businesses	utilities excluded	- < 50
ENERGY CONSERVATION			
fuels taxes (fy2000)	18.4¢/gal of gas	4.4¢-24.4¢ for other fuels	33,500
mass trans. subsidies	exclusion of \$65/month	up to \$175/month for parking benefits	- 3,600
gas-guzzler tax (fy2000)	\$1,000-\$7,700/car	to limos and vehicles weighing 6,000 lbs. or less	71
exclusion for utility conservation subsidies	subsidies not taxable as income	any energy conservation measure	- < 50