

IMPACT OF ENERGY TAXES AND SUBSIDIES

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Summary

Energy taxes, incentives and subsidies are tools which governments use to manipulate the energy market for their benefit. These tools are designed to ultimately affect the purchasing behavior of businesses and consumers. The tools are also designed to capture “social” costs not previously brought into the equation by the marketplace, and to change behavior or “level the playing field” between energy types. The hope for these tools is often that they will facilitate a cleaner environment, lower prices, and/ or safer conditions that would otherwise have not existed.

1. Introduction

Energy taxes, incentives and subsidies are governmental tools with a long history. Most governments are not content to allow energy markets to function without interference. In the United States, policies to stimulate oil and gas production were first formulated during World War I. In China, India and the former Soviet Union, the government assembled its own power generation facilities and oil production companies as a way to subsidize energy production, running them as state enterprises. Even the United States

government created Power Management Authorities in the 1930s to generate and sell electricity at subsidized rates. Taxes, trust funds, regulation and subsidies have been used to develop new sources of energy during energy crises, research and develop nuclear power during more peaceful times and to address environmental issues and concerns associated with energy production and consumption.

These tools are designed to ultimately affect the purchasing behavior of businesses and consumers. The tools are also designed to capture “social” costs not previously brought into the equation by the marketplace. As social objectives and energy markets have evolved over time, so have the wide array of taxes, subsidies and other incentives governments can use to change behavior or “level the playing field” between energy types. The hoped-for results are a cleaner environment, prices that are more socially acceptable or safer conditions that would otherwise not have existed.

2. Energy Taxes and Fees

Application of a tax is one of the oldest forms of generating revenue as well as modifying behavior. Excise taxes are found on crude oil, gasoline, electricity and other forms of energy. Excise taxes are used for many government activities, from road building to environmental protection. Excise taxes can be placed in the general operating fund unless otherwise earmarked and used to support day-to-day government activities. Fees are generally imposed to capture costs on energy production that formerly escaped valuation by the marketplace. These include issues like health risks to workers and consumers, liability for spills and accidental contamination, and waste disposal. Fees are generally placed into a “trust fund” that can be used to mitigate any issues that might arise during the use, transportation or disposal of the product. These are designed to reflect a more “real” cost for the product.

3. Energy Subsidies

Energy subsidies can take several forms, including direct subsidies, indirect subsidies and R&D expenditures. Direct subsidies are payments made straight to producers or consumers for completing certain activities or for certain buying patterns. Examples include payments made to companies to drill for coal bed methane and to homeowners who purchase solar panels to generate electricity in their homes. Indirect subsidies involve activities by governments that affect the cost of consumption or production of energy. Examples include a government providing electric power at below-market rates to industries or a low-interest loan to a homeowner to retrofit his or her home to be more energy efficient. Research and development activities funded by a government are also an example of indirect subsidies.

4. Regulations

Governments can impose regulations to effectively change the behavior of energy producers and consumers. Regulations intended to protect the environment may limit fuel choices to one or two options, either specifically stating what must be used or placing

such stringent emission limitations that only a specific energy source could be used to meet the regulations. Environmental regulations also specify emission requirements for the energy itself. Limitations on emissions from gasoline have added additional costs to the refining process. It has also added additional costs to store and sell the fuel, which may only be required in certain areas. National governments are not the only ones who can regulate. Local governments in many countries apply additional requirements to national requirements, limiting emissions even further or restricting driving habits. Regulations have been much debated as a “hidden” tax on energy.

5. Impact of Taxes and Subsidies: United States

The United States has developed a complex system of taxes, fees, subsidies and regulations to address a variety of issues in the energy market. The National Energy Policy addresses many of these issues, including protection of the environment, increased production of domestic energy supplies, research for alternative energy development and technological advancement, improvements in energy efficiency and improved system reliability. The U.S. focuses efforts to achieve these goals primarily through taxes, fees and regulation. Subsidies are also used but account for a much smaller portion on the total impact that Federal Government market intervention has in energy markets.

5.1 Taxes and Fees

The United States collected over two point two billion dollars in excise taxes and fees in 1999. These revenues were earmarked for a variety of “trust funds,” or disbursement programs, including the Highway Trust Fund, Airport and Airway Trust Fund, Superfund and the Black Lung Disability Trust Fund. \$642 million of the total two point two billion dollars was collected from user fees for nuclear power producers to fund the development, acquisition and operation of nuclear disposal facilities. The U.S. has set up a long list of trust funds that utilize the taxes placed on energy production and consumption:

Trust Fund	Energy Source Taxed
Highway Trust Fund	Gasoline
Highway Trust Fund	Diesel Fuel Used on Highways
Aquatic Resources Trust Fund	Boat Motor Fuel
Airport and Airway Trust Fund	Aviation Fuels
Inland Waterways Trust Fund	Diesel and Other Liquid Fuels
Collections to Internalize Environmental Impacts	Various Fuels
Superfund	Petroleum and Petroleum Products
Underground Storage Tank Trust Fund	Gasoline and Other Motor Fuels
Oil Spill Liability Trust Fund	Crude Oil
Black Lung Disability Trust Fund	Coal
Abandoned Mine Reclamation Fund	Coal

Table 1:

Rates for trust funds taxing gasoline, diesel and aviation fuel range anywhere from five cents to twenty-four cents per gallon. Excise taxes placed on gasoline, aviation fuel, railway diesel and highway diesel fuel are also used to in the country’s general fund – and can be used to pay for any government program or activity.

Product	Federal Tax (Nominal Dollars per gallon)
Gasoline	\$0.18
Diesel	\$0.24
Jet Fuel	\$0.04
Liquefied Petroleum Gases	\$0.14
M85 (85 percent methanol blend gasoline)	\$0.09
E85 (85 percent ethanol blend gasoline)	\$0.13

Table 2:

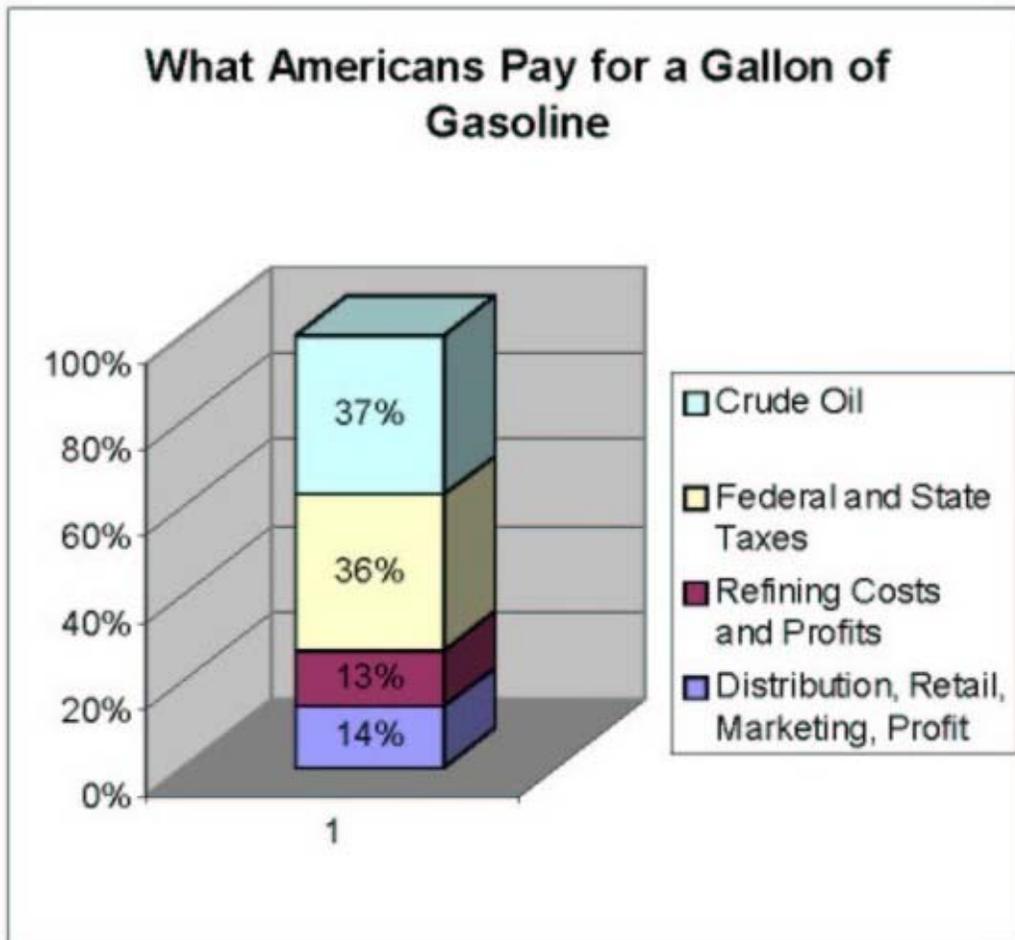


Figure 1: What Americans Pay for a Gallon of Gasoline

Most Americans are familiar with gasoline taxes. The Clinton Administration added an additional four point three cent-per-gallon increase in the federal gasoline tax to cover general expenditures. During the latest gasoline price spike in 2000, many citizens called for a repeal of the gasoline tax to lessen the burden on their pocketbooks. The federal government is not the only entity to tax gasoline. State governments also tax gasoline as well. In 1992, excise taxes on gasoline by states ranged from eight cents per gallon in Arkansas to twenty-six cents per gallon in Connecticut.

State governments also tax most other forms of energy. There are a few states such as Delaware that do not charge a tax on energy at all. Others, such as New Jersey, add seven percent tax to electricity, natural gas, oil and coal.

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Biographical Sketch

Shawn King began her career at the U.S. Department of Energy's Conservation and Renewable Office. She was a Senior Environmental Engineer with the Virginia Department of Environmental Quality for 3 years, focusing on development of air quality attainment and emissions trading programs. Mrs. King became the Environmental and Quality Manager for Wright Chemical Corporation in 1995. In 1999, Mrs. King moved into marketing and sales of filtration products for Precision Fabrics Group and later with Air Purator Corporation.

Mrs. King has a BA in Environmental Science from the University of Rochester, where she graduated cum laude with honors. She received her Masters IN Business Administration from the University of North Carolina, Wilmington and was the recipient of the Norman Kaylor Outstanding Business Student Award. Mrs. King lives in Charlotte, NC with her husband, John and her son, Matthew.