

# A Brief History of Energy Regulations

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February 2009

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## Overview

Large-scale federal intervention into America's energy markets began in the 1930s and continued through the 1970s. A series of major laws and executive actions sought to control energy prices, regulate electric and gas utilities, and limit imports. Competition was stifled and domestic investment was suppressed.

By the 1970s, the Middle East oil embargoes and other upheavals began making the failure of federal energy interventions clear to policymakers. They reversed course, and took major deregulatory steps in the 1970s and 1980s to free up energy markets, to the ultimate benefit of consumers and the overall economy.

The following sections on oil, coal, and natural gas discuss how federal policymakers intervened to try and solve perceived problems in markets, often with the active encouragement of the energy industry.<sup>1</sup> Unfortunately, most of the major federal intrusions in energy markets during the 20th century proved to be serious mistakes, as they often destabilized markets, reduced domestic output, or decreased consumer welfare.

Energy markets have a number of features that have prompted government intervention. One problem in oil markets is "capture," which relates to the failure of surface property rights to coincide with oil reservoir boundaries underground. If good property rights are not established for oil reservoirs, each surface owner with access will produce as rapidly as possible leading to reduced overall output in the long run.

Another feature of oil markets is the low short-run price elasticity of demand and supply. The inability of oil markets to respond quickly to supply and demand changes has resulted in repeated boom and bust cycles over the last 130 years or so. Consumers are unhappy during price booms, and producers are unhappy during busts, and both have sought help from Washington in those situations.

A further issue is that oil, coal, and natural gas are commodities, which makes it more difficult for producers to enjoy a steady income than producers of brand-name products. Since different brands of oil, for example, are equivalent, consumers will desert an existing supplier if cheaper sources become available. One consequence was that during the early 1930s, early 1970s, and mid-1980s, U.S. oil firms called for restrictions on imports.

Another energy market feature is the high variance in production costs between different sources of supply, which creates intra-industry tensions because producers with the lowest-cost supplies earn higher profits. As a consequence, higher-cost producers have often called on policymakers to pass legislation that directly or indirectly imposes extra costs on lower-cost producers in order to even the playing field.

## Oil Market Policies

Oil markets have long-term price cycles. The peaks and troughs of those cycles have often coincided with demands for federal intervention, but those interventions have usually made cycles more, not less, severe. In the 1920s, oil prices were peaking and many commentators believed that oil supplies were running out. Congress was confronted by requests to augment supplies, so it enacted a generous depletion allowance for producers in 1926, which increased investment returns substantially. This change induced additional exploration activity, and subsequently the discovery of large new oil reservoirs.

During the next decade, the situation was reversed, with prices low and dropping. That led to demands for more "orderly" competition and oil price supports. Rather than repealing the supply-enhancement policies enacted during the 1920s, Congress left them intact and enacted a price-support system. Similar cycles occurred in the 1950s and 1970s. In each case, Congress enacted policies that overreacted to the current peak or trough and failed to quickly repeal the policies when petroleum prices retreated from their extreme highs or lows.

Beginning in the late-1920s, different groups in the oil industry proposed policy measures to help prop up prices. Initially, the major oil companies supported industry planning similar to that used during World War I. The war experience left many corporate leaders favorably disposed toward managed capitalism under the protection of the state.

The major oil companies sought and received a prorationing order from the Texas Railroad Commission in 1930. Prorationing involved mandated production cutbacks designed to prop up prices. The wildcatters in East Texas ignored the order, and in 1931 a federal district

court ruled the order illegal. In 1932, the majors again demanded that the Texas legislature do something about what they believed was overproduction. Ultimately, the legislature added new powers for the Texas Railroad Commission to limit supply. For their part, independent domestic oil companies lobbied for import quotas to restrict competition from oil imported by the major multinationals.

Federal intervention increased enormously in the 1930s. The National Industrial Recovery Act of 1933 (NIRA), which passed with support from large oil companies, substituted producer agreements for normal market competition. The oil industry was the first to adopt a “fair trade” code under the Act. When the Supreme Court ruled NIRA unconstitutional in 1934, the majors once again turned their attention to Washington. They favored federal regulation to limit supply, but when some in the Roosevelt administration argued for public-utility style regulation of major oil companies (which would involve limits on rates of return), oil company support shifted to the Connally Hot Oil Act of 1935, which gave federal sanction to the state prorationing (supply restriction) programs that restricted competition and raised prices.

After World War II, a major issue became the surge in oil imports, which was partly prompted by government policies that kept domestic prices artificially high. Independent oil firms, such as Occidental and Amerada Hess, were not participants in the oligopolistic bargaining arrangements that had governed the world oil market since 1928, and they profited by importing lower-cost oil into the United States. Domestic producers became alarmed at the imports because it forced them to cut back their production under the controlled domestic markets.

After an intense lobbying effort, Congress adopted a clause in the Reciprocal Trade Act Amendments of 1955 that authorized the president to limit imports of a commodity if he thought such imports were detrimental to national security. In 1959, President Dwight Eisenhower invoked the clause and imposed oil import quotas.

This effort to restrict imports drove down international oil prices and encouraged the creation of the Organization of Petroleum Exporting Countries. International oil companies, which were now effectively shut out of the U.S. market, flooded Europe with cheap oil and increased its oil dependence. The world price of oil declined until the mid-1970s. With lower prices, oil companies reduced their royalty payments to Middle East countries, which prompted those nations to create OPEC.

The energy crises of the 1970s (the oil shocks of 1973 and 1979) coincided with a predictable upswing in the long-run oil price cycle, but it was exacerbated by perverse incentives created by government policies. Controls on oil imported into the United States, enacted in 1959, lowered the price of oil elsewhere in the world and increased consumption, particularly in Europe.

By the early 1970s, the elaborate production and marketing control mechanisms on U.S. domestic oil markets was collapsing. The price of oil had dropped almost to depression levels and oil company profits were flat or falling. At the same time, oil-import quotas and strong economic growth had exhausted the U.S. oil surplus. Domestic production reached a peak in 1970. Even though U.S. prices had been kept well above world competitive levels, petroleum demand was growing rapidly just at a time when the huge easy-to-produce pools discovered in the 1930s were producing at maximum rates.

In the United States, the effects of a tighter world oil market were aggravated by President Richard Nixon's price controls, which gave special attention to oil because oil prices were rising rapidly. The Nixon price controls, which began in August 1971, were complex and they went through a series of phases over time. The controls interacted with changing market conditions to create shortages of different products at different periods during the 1970s. For example, heating oil shortages arose during late-1972, but most other oil products were less affected at that particular time.

Then in 1973, severe shortages of gasoline developed at independent retailers. Oil price controls collided with the rising cost of imports, forcing oil companies to cut back on imports. Those cuts in turn particularly hurt independent refiners and retailers, who obtained a large share of their supplies from the major importers. Thus, gasoline shortages were particularly acute at independent gas stations.

Congress responded to this situation not with a repeal of the price controls that were the source of the problems, but rather with a series of new complex regulations. Congress passed the Emergency Petroleum Allocation Act in 1973, which enmeshed federal regulators even closer into oil company operations, and it created a two-tier system of price controls on domestic oil. The price of “old” domestic oil was frozen, but “new” domestic oil was decontrolled.

The EPAA created many distortions, as one example will illustrate. Expensive imported oil was not subject to price controls and it determined the marginal cost, and thus price, of gasoline sold in the United States. But since many refiners had access to domestic old oil that was subject to price controls, they made larger profits than refiners dependent on new domestic oil. In response to this situation, the Federal Energy Administration created complex new rules in 1974 to spread around the refiner benefits of price-controlled old oil. Those rules, in turn, created incentives for refiners to further increase oil imports.

The EPAA helped to create the very shortages that it was supposed to ameliorate. By attempting to insulate the U.S. market from world oil prices, EPAA actually created incentives to hoard just at those times when inventories should have been released on the market—during the disruptions of 1973 and 1979. In sum, a range of new government interventions in the 1970s exacerbated the conditions that they were supposed to resolve.

The EPAA regulations were scheduled to expire after two years, and Congress replaced them with new rules under the Energy Policy and Conservation Act of 1975. This law placed previously uncontrolled new oil produced since EPAA had passed under price controls, so we went from a two-tier price control system to a three-tier system. EPCA created and exacerbated a range of economic distortions, including increasing the incentives to import and decreasing consumer incentives to shift from oil to other energy sources or to conserve.

Price controls on oil and refined products were extended through 1979 with various further iterations. Finally, in 1979 President Jimmy Carter began to repeal price controls through a series of administrative actions. President Ronald Reagan finished the job in 1981.

America's experience with oil regulations from the 1930s through the 1970s has been much studied, and an academic consensus is that those regulations had large negative effects on both oil producers and consumers.<sup>2</sup> Congress has typically responded to petroleum-market problems with inappropriate legislation that has damaged markets and prompted further rounds of legislation and regulatory action.

However, in a world where a cartel, such as OPEC, is able to raise world crude oil prices by constraining production, are price controls warranted? From an economic perspective, the answer is no. Domestic price controls will not reduce OPEC's market power. The manner in which domestic price controls were implemented in the United States in the 1970s actually increased the demand for OPEC imports and thus increased its profits and punished domestic producers who are not responsible for OPEC production decisions. Price controls also reduce incentives to increase production—and, thus, reduce supply—whether OPEC is strangling the market or not. Domestic price controls thus assist the cartel's attempts to restrict supply.

Congress finally allowed oil price controls to expire, but decided to place a windfall profits tax on companies in 1980. The tax was not really a tax on profits, but an excise tax on domestic oil production and thus made domestic production less attractive, while encouraging imports. One congressional study found that the tax reduced domestic oil production by 3-6 percent and increased U.S. imports by 8-16 percent.<sup>3</sup> The windfall profits tax was repealed in 1988. And the period since 1990 has been generally free of petroleum market regulation.<sup>4</sup>

## Coal Market Policies

Like oil producers, coal producers have had various reasons to dislike open markets and have often called for federal regulations. Coal industry profits have been volatile and the industry has easy entry, which has heightened competition. As in the oil industry, there have been struggles between lower-cost producers and higher-cost producers. Further, coal producers have faced competition from fuel oil, natural gas, and nuclear power.

The tough competitive climate has sometimes manifested itself in federal regulations on issues regarding worker wages, health and safety, and the environment. High-cost producers have used these issues to favor policies that disadvantage lower-cost competitors. From the 1930s to the present, coal disputes have involved struggles between traditional Appalachian underground mines, which are unionized, and cheaper market substitutes such as southern-drift and surface-mined coal. Numerous policy disputes involve regulations that will make these substitutes relatively more expensive.

As with oil markets, major federal intervention began in the 1930s. Most coal companies were in favor of the Roosevelt administration's National Industrial Recovery Act, which substituted a producer cartel structure for market competition. After the Supreme Court ruled NIRA unconstitutional, industry leaders and politicians from coal states looked for a substitute.

The substitute was the Guffey Coal Act of 1935, which imposed price controls and various labor regulations on the industry. The effect was to limit competition and to favor high-cost Appalachian coal at the expense of other lower-cost coal sources. The Supreme Court struck down the Act in 1936, but a second Guffey Act that included price controls was passed 1937.

The law was renewed in 1941, but allowed to expire during World War Two. After the war, a coal price boom was ending, and Congress considered a variety of direct and indirect policies to stem the industry's decline. The depletion allowance was raised modestly, but legislative efforts to boost demand for coal and restrict competition were not successful.

Instead, higher-cost union mines pushed for indirect methods of equalizing coal industry costs at higher levels, such as by having Congress mandate higher mine safety standards. The Department of the Interior imposed new mine safety standards in 1946 and those were codified in a 1952 law. At first, federal rules exempted small, low-cost operators, but over the next decade, more comprehensive safety laws were passed with the effect of eliminating many of the smaller competitors. The 1969 Coal Mine Health and Safety Act caused the exodus of small mines and thus reduced competition for the underground, unionized, mines.

Another competitive threat to the large, high-cost mines in Appalachia were western surface mines. Surface mining began to grow rapidly in the mid-1960s. The struggle to enact federal regulation of surface mines began with the introduction of a bill from President Lyndon Johnson in 1968, and ended with the passage of the Surface Mining Control and Reclamation Act of 1977. In between, President Gerald Ford vetoed bills in 1974 and 1975. The Appalachia mine operators and unions favored federal restrictions, while surface mine owners resisted them. By 1977, however, the unions had organized numerous surface operations, and resistance to surface mining regulation crumbled. The passage of the 1977 Act and the new source performance standards in the Clean Air Act Amendments of 1977 decreased both the productivity and pollution advantages held by western coal.

Federal policies moved in coal's favor in the 1970s. With the Middle East oil crisis, policymakers began to adopt policies to try and shift the nation toward greater coal consumption, which was a domestic energy resource. The Energy Supply and Environmental Coordination Act of 1974 directed the Federal Energy Administration to prohibit the use of oil or natural gas by electric utilities that could use coal, and it authorized the FEA to require that new electric power plants be able to use coal. The Energy Policy and Conservation Act of 1975 extended those powers for two years and authorized \$750 million in loan guarantees for new underground low-sulfur mines. Further pro-coal mandates were passed in the late-1970s.

In sum, coal's policy history has reflected a series of struggles between high-cost producers and lower-cost substitutes. From the 1930s until 1970, the coal industry was plagued with chronic excess capacity, but disinvestment was slow because of the reluctance of marginal workers and operators to migrate from Appalachia. The struggle over safety legislation was partly a manifestation of the battle between segments of the industry over excess capacity.

Since 1985 coal, like oil, has not been subjected to explicit economic regulation. Instead coal regulatory struggles have been environmental in nature regarding the pollution from its use rather than the economics of its production.<sup>5</sup>

## Natural Gas Market Policies

Natural gas markets possess characteristics that are similar to petroleum markets, but with two key exceptions. Natural gas producers

have been more immune to import competition, and the retail segment of the industry has been a regulated monopoly since the beginning. Consequently, two sources of income variation that have plagued the petroleum industry have been absent in natural gas. Also, the political struggles in natural gas markets have been producer versus consumer battles, rather than battles between low and high cost producers.

Federal policymakers have struggled with a key economics question: does the production or transportation of natural gas suffer from market failures that warrant public action? Congress decided initially that pipeline *transportation* was a natural monopoly and deserved what is described as public-utility regulation in which profits and prices are limited.

In 1938, Congress passed the Natural Gas Act, which empowered the Federal Power Commission to regulate the rates for interstate natural gas sales and to restrict interstate pipeline construction. To build an interstate pipeline, a company now needed approval from the FPC.

Regarding natural gas *production*, Congress decided in the 1938 Act that it did not suffer from market failure and needed no policy intervention. Congress exempted “production and gathering” from federal price controls. However, the Supreme Court ruled in 1947 that this congressional exemption only applied to regulation of the physical processes of production, not the sale of the product.

In response, some members of Congress stepped in on the side of the industry and open markets arguing that the 1938 law had not been intended to regulate producer, or wellhead, prices. But President Truman vetoed a bill in 1950 that would have exempted natural gas production from price regulations.

In 1954, the Supreme Court ruled in *Phillips Petroleum v. Wisconsin* that the FPC must regulate natural gas prices at the wellhead. This action had profound effects on the industry, and it generated a huge growth in bureaucracy at the FPC to administer a complex array of new price controls.<sup>6</sup> The government would have to decide what the costs of production and “fair” profit levels were for the many natural gas producers across the country. Over the years, natural gas price controls led to many serious distortions including, ultimately, natural gas shortages in the 1970s.

Federal price controls kept natural gas prices artificially low, leading to higher consumer demand and reduced incentive for conservation. For producers, the artificially low prices reduced their incentives to explore for new reserves. Note that federal price controls applied only to natural gas sold in interstate commerce, with intrastate gas being exempt. One effect was that as the gap between the interstate and intrastate prices grew, producers sold their product within states and withheld supplies from interstate pipelines.

The result of those distortions was that consumers in states that did not produce natural gas began seeing severe shortages during the 1970s. In 1976 and 1977, many factories and institutions such as schools were forced to close occasionally from lack of natural gas.

To economists, the obvious reform to natural gas shortages in the 1970s was to decontrol prices. However, there were brutal political battles fought over the issue in Congress. Members from producer states, and presidents Nixon and Ford, favored deregulation of producer prices, but northeastern Democrats in consuming states favored continued controls because they feared constituent reaction to price increases.

Congress passed the Department of Energy Organization Act in 1977 and the Natural Gas Policy Act in 1978. Under the two pieces of legislation, the FPC was replaced with FERC, and price controls of wellhead natural gas prices were phased by 1985 in a complex compromise of temporary price regulations. The compromise kept price controls on old gas but freed up new gas, which created numerous market distortions during the 1980s. Additional legislation was needed in 1989 to finally complete the job of full deregulation of wellhead prices.

Today, natural gas pipeline rates continue to be regulated as common carriers. They transport gas owned by others often under long term contract. An active secondary market exists so that those with long term transportation rights can sell them to others. While distortions from this rate regulation probably exist, they are not consequential enough to have generated much academic or interest group criticism.

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<sup>1</sup> A more detailed history can be found in Peter M. VanDoren, *Politics, Markets, and Congressional Policy Choices* (Ann Arbor: University of Michigan Press, 1991).

<sup>2</sup> Joseph P. Kalt, *The Economic and Politics of Oil Price Regulation: Federal Policy in the Post-Embargo Era* (Cambridge, MA: MIT Press, 1981).

<sup>3</sup> Salvatore Lazzari, “The Windfall Profit Tax on Crude Oil: Overview of the Issues,” Report 90-442E, Congressional Research Service, September 12, 1990, p. 7.

<sup>4</sup> To be sure, petroleum markets have been affected by policy but almost exclusively from environmental mandates rather than legislation that directly regulates, subsidizes, or taxes oil.

<sup>5</sup> There has been continuing struggle over the use of so-called mountain-top removal production techniques in Appalachia that eliminate underground mining by blasting away the tops of hills and exposing the coal which is then surface mined. See Jeff Godell, “How Coal Got its Glow Back,” *New York Times Magazine* July 22, 2001.

<sup>6</sup> For a brief history of natural gas regulation, see [www.naturalgas.org/regulation/history.asp](http://www.naturalgas.org/regulation/history.asp).

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