FROM JOHN F. KENNEDY TO JIMMY CARTER

On October 6, 1973—the Jewish holiday of Yom Kippur—Syria and Egypt invaded Israel. This brief war, the fourth Arab-Israeli conflict since 1947, coincided with a series of events that most Americans now commonly identify as the origins of the "energy crisis."

Ten days after Egyptian armies bridged the Suez Canal and pushed into the Sinai, representatives of the 13-nation Organization of Petroleum Exporting Countries, meeting in Kuwait, raised the posted price of "marker" crude—Saudi Arabian "light"—from $3.01 to $5.12 per barrel.

Four days later, on October 20, enraged by President Richard M. Nixon's request to Congress for $2.2 billion in arms for Israel, the seven-member Organization of *Arab* Petroleum Producing Countries brandished the "oil weapon" and ordered an oil embargo against the United States.

In early November, the Arab oil ministers, whose governments together controlled 60 percent of the noncommunist world's proven reserves of petroleum, agreed to cut production to 75 percent of the September 1973 level.

On Christmas Eve 1973, OPEC raised the price of marker crude once again, to $11.65.

In eight weeks, the price of OPEC crude had nearly quadrupled. The cost of foreign oil soared above the artificially supported price of U.S. crude.

Initially, however, the prospect of a long embargo seemed to Americans more ominous than the impact of higher prices. Owing in part to unwieldy federal efforts to allocate supplies, shortages appeared here and there almost immediately, as the Northern Hemisphere braced for winter. School systems were shut down to conserve heating fuel, and janitors removed 750,000 light bulbs from federal buildings in Washington. There were long lines at the gasoline pumps, especially in urban areas.

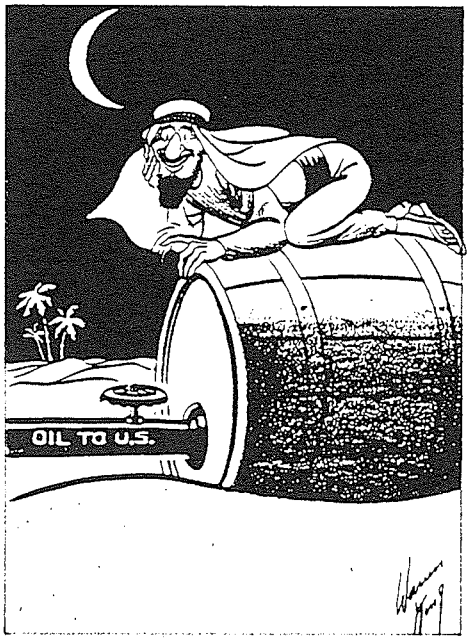
The Arab embargo and the OPEC price hikes coincided; therefore, in the eyes of many Americans and their Congressmen, there was a direct link between the two. Even as the major oil companies, in the absence of effective cooperation among Western governments, adroitly eased the winter crisis by rerouting tankers and allocating supplies around the globe, there

was a widespread suspicion in America that the shortages were "artificial," to use consumer advocate Ralph Nader's word.

Skepticism in Congress and the press grew when the Arab embargo faded in the spring of 1974; yet oil prices still remained on a high plateau. Oil industry profits for 1973 rose by an average of 48 percent.

In fact, sharp foreign increases in the price of crude had long been inevitable—and openly predicted by officials of producing countries and Western oil companies alike. OPEC had matured since its founding in 1960, when news reports generally prefixed its name with the tag "little-known." Its membership had grown from 5 to 13, and each of the member nations now boasted a cadre of native-born, Western-trained technocrats who well understood the international oil economy. They knew how to turn the spigot on and off to get a better deal from their customers. Increasingly, there was no one strong enough to prevent them from doing so.

If the Seven Sisters had once mounted an effective cartel, by the early 1970s they no longer could. The number of oil companies with investments in the Middle East and Africa had grown into the hundreds as "independents" such as Sohio and Getty Oil and scores of wildcatters had gained access to the established fields and opened up new ones west of Suez, in Libya and



After the 1973–74 oil embargo, the menacing Arab became a stock character in editorial cartoons.

Algeria. By the early 1960s, the oil majors' dominance of all aspects of the international market, from exploration to production to transport to marketing, had eroded.

Needed: A Blackout

The new order was fragile. Independent producers and refiners, often dependent on a single Mideast or African nation's crude, were vulnerable to the demands of their hosts; in price negotiations, the oil companies were no stronger than their weakest link. Thus, in 1970, Libya's mercurial Colonel Muammar al-Qaddafi, successor to the pro-Western King Idris, won an increase in both the posted price of Libyan crude and the oil company taxes paid into his treasury by briefly squeezing supplies to Occidental Petroleum, which depended on Libyan oil for its European refineries. Occidental's capitulation soon led to others. Moreover, by 1973, the Arab oil-producing nations had taken steps toward full control of the oil production facilities on their soil.

The final necessary factor in the crisis of 1973–74 was the West's increasing dependence on foreign oil. This was an unfamiliar phenomenon in the United States, whose domestic oil production peaked in 1970 even as demand kept growing. America's surplus production capacity had averted shortages at home and abroad during the Suez crisis in 1956 and the Mideast War in 1967, but there was no longer any such capacity. The United States was now an importer not by choice but by necessity, depending on the Arabs alone for 1 million barrels of oil a day in 1973, and on OPEC as a whole for 65 percent of total imports.

In vain, for two decades, oil industry geologists and Washington specialists had warned that a day of reckoning would come. Early in 1973, Representative Chet Holifield (D.-Calif.), chairman of the Joint Committee on Atomic Energy, wondered whether anything short of a "good, 24-hour blackout" could focus the attention of the public and official Washington on the need for a coherent energy policy. The Arab oil embargo and OPEC price increases sounded the necessary alarm, at a time when the United States still had many energy options to explore.

The events of 1973–74 provided an opportunity to act. The

This essay has been adapted by the editors from chapters 4–9 of Energy in Perspective, *which were written by economists William J. Barber (Kennedy), James L. Cochrane of the University of South Carolina (Johnson and Carter), Neil de Marchi of Duke University (Nixon and Ford), and Joseph A. Yager of the Brookings Institution (Carter).*

question was whether the United States would seize it.

It had been many years since energy, even briefly, had held the spotlight. When John F. Kennedy assumed the Presidency on a cold day in January 1961, millions of Americans viewed the festivities on TV in their living rooms, thermostats turned up high. If there was an energy problem, it was a problem of surfeit.

Yet specific energy issues had cropped up in JFK's 1960 campaign to "get the country moving again." The Senator from Massachusetts found himself, for example, stumping for public power projects (in depressed Maine) and for a revival of coal (in West Virginia). In language reminiscent of the Paley Commission report, he had championed a "national fuels policy."

Business As Usual

By the time of his assassination in November 1963, no such policy had emerged. Comforted by the scientific optimism that pervaded his administration and feeling hemmed in politically by his narrow election victory over Vice President Richard Nixon, President Kennedy, like his predecessors, ignored the long-term in favor of coping with the short-term. His calls to action during the campaign became calls for "more study" when he reached the Oval Office.

Unwilling to face opposition from the oil and gas industries, Kennedy backed away from the campaign pledges that played so well in the mining towns during the 1960 West Virginia primary. He settled instead for symbolic gestures—an order that U.S. forces in West Germany use American coal, for example.

On other issues, Kennedy was content to tinker with the status quo. The protective oil import quota program inherited from Eisenhower was riddled with loopholes. The President engineered some adjustments but generally left the system intact. Natural gas, meanwhile, had become the fifth-largest industry in the nation, and Kennedy favored continued federal regulation to keep prices low. Neither he nor his advisers were struck by the decline in domestic gas reserves that low prices, popular with consumers, only abetted. A few federal moves were made in behalf of atomic energy, notably a reduced price to private utilities for government-owned uranium oxide, or "yellowcake." In 1962, Westinghouse took its first orders for "turnkey" atomic generating plants in Connecticut and California.

In sum, President Kennedy made few changes in the mixed bag of federal energy policy. Thanks to exemptions and loopholes, foreign oil imports kept on growing—to 20 percent of U.S. oil consumption in 1963. Natural gas continued to outdistance

Courtesy of the John F. Kennedy Library. Photographer unknown.

Candidate John F. Kennedy assured West Virginia coal miners during the 1960 campaign that "the future of coal and the future of West Virginia can both be bright." But in office, Kennedy pledged more studies but no action, and the ailing coal industry continued its long decline.

coal as the preferred fuel nationwide.

Energy was the least of Lyndon Johnson's concerns when he took the oath of office on Air Force One. Sensitive to conflict of interest charges (he had been a Senator from Texas), he later told reporters that Interior Secretary Stewart Udall would have "full control over oil matters." Johnson then turned his attention to getting JFK's New Frontier legislative program through Congress, and to the 1964 election.

To some in Lyndon Johnson's entourage, notably Donald Hornig, director of the White House Office of Science and Technology, it seemed obvious that the cumulative effect of Washington's energy policies was contradictory. Hornig, a Manhattan Project alumnus and later president of Brown University, worried that "energy pluralism"—setting policies for individual fuels without reference to the energy picture as a whole—had led increasingly to bizarre and worrisome consequences.

Much of the nation, for instance, was now "hooked" on artificially cheap natural gas, to the detriment of coal, even as the

ratio of gas reserves to production dwindled to half the 1947 level. Curbing oil imports, meanwhile, had had the ironic effect of worsening the U.S. trade balance; American petrochemical manufacturers, compelled to rely largely on relatively expensive U.S. petroleum "feedstocks," claimed that they could no longer compete with foreign rivals in the export market.

Yet a high-level interagency staff report concluded in 1966 that there was really nothing to worry about. "The nation's total energy resources," its authors wrote, "seem adequate to satisfy expected requirements through the remainder of the century, at costs near present levels."* President Johnson, immersed in the politics of his Great Society and in the torments of the Vietnam War, was not inclined to argue.

To LBJ, technology promised salvation. In 1964, the President hailed an "economic breakthrough" in nuclear power. Utilities had suddenly discovered that atomic energy could be commercially successful. Twenty-one reactor contracts were awarded in 1966, 30 in 1967. Plans for a federally funded liquid-metal fast "breeder" reactor, which would create more fissionable material than it consumed, went forward. The breeder, like atomic power generally, would not become an "issue" for another decade.

As for oil policy, Lyndon Johnson did not keep his word to Interior Secretary Udall. It was a promise no President could sustain. Thus, early in 1966, with the future course of the Vietnam War uncertain, and the consumer price index edging upward, LBJ intervened to keep down crude oil prices by increasing the production "allowables" on domestic oil. Domestic crude prices remained constant during the Johnson years, at about $3 per barrel. In constant, uninflated dollars, crude oil prices actually declined; not surprisingly, so did drilling for new wells.

Because consumers are highly sensitive to changes in the price of gasoline—far more than its 3 percent weight in the Consumer Price Index would justify—LBJ privately jawboned oil company executives to keep gasoline prices down. The oilmen, fearing a flood of imported gasoline, did as they were bid.

Johnson virtually lifted what remained of the restrictions on imported residual fuel oil, continually raising the quota ceilings so that, in effect, supply always conformed to demand.†

*_Energy R&D and National Progress_, Washington: Government Printing Office, 1966.

†Residual fuel oil is what is left over when lighter products, such as gasoline, have been distilled from crude. Refiners generally sold the "bottom of the barrel" to utilities and industrial users, primarily on the East Coast, at prices below cost. As demand for gasoline and other refined products rose after World War II, the fraction of each barrel of U.S. crude left as resid declined; imports—not coal—filled the gap.

LBJ's "resid" policy illustrated the gradual unraveling of Eisenhower's protective oil import program generally. More important, because coal might have been substituted for residual fuel in almost all its uses, allowing unhampered imports guaranteed that a significant proportion of U.S. energy supplies was needlessly exposed to the OPEC price hikes in 1973.

The Johnson administration, in the main, was notable for its senior officials' blindness to the problems of impending scarcities, price rises, and growing OPEC strength. LBJ unabashedly subordinated energy issues to transient political and economic pressures. By passing on to his successor a war in Southeast Asia and the first stirrings of rampant inflation, he ensured that underlying energy issues would gain little White House attention for several years to come.

The Environmentalists Arrive

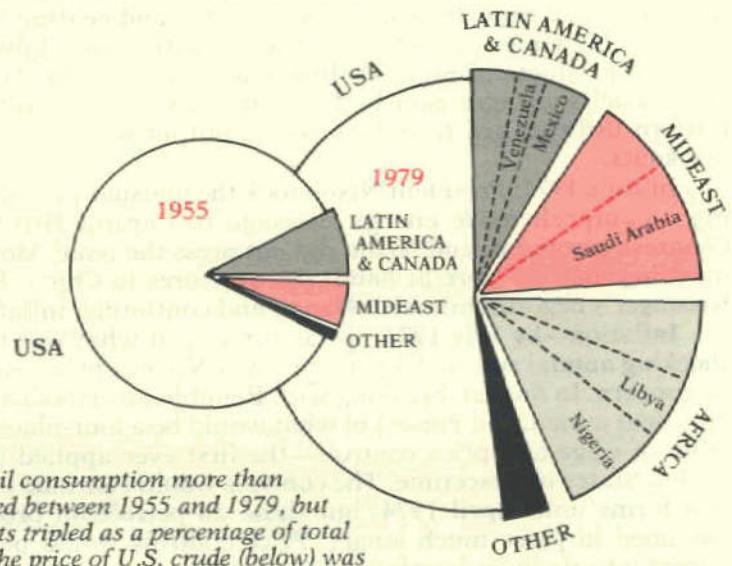
Vietnam, inflation, détente, China, and Vietnam again: These were Richard M. Nixon's overrriding concerns during his beleaguered first term in office, facing a hostile Democratic Congress. Energy problems were treated by the White House in piecemeal fashion and received only intermittent attention at the highest levels.

Perhaps President Nixon's most important contribution to the U.S. energy problem during his early years in office did not involve energy per se. Eight days after his inauguration in 1969, an oil rig "blowout" in the Santa Barbara Channel coated southern California beaches with black muck. Press photographs of seals and seabirds mired in slime gave new impetus to an environmental movement that had quietly been growing in power and cohesion. Thousands descended on Washington in April 1970 to celebrate the first "Earth Day."

Protecting the environment was widely viewed in the press and on Capitol Hill as a necessary effort that a wealthy nation could afford. From the White House, the environment appeared as a field for bold—and politically popular—action. President Nixon backed the Clean Air Act of 1970 and creation of the Environmental Protection Agency that same year.

It was not long before the consequences for energy use became clear. Power plant executives began converting even faster from "dirty" coal to "clean" oil and gas. Refinery construction slumped. Licensing of new nuclear power plants, though favored by Mr. Nixon, became a nightmare of red tape. Offshore drilling for oil and gas was placed under a federal moratorium. Strip mining encountered new roadblocks.

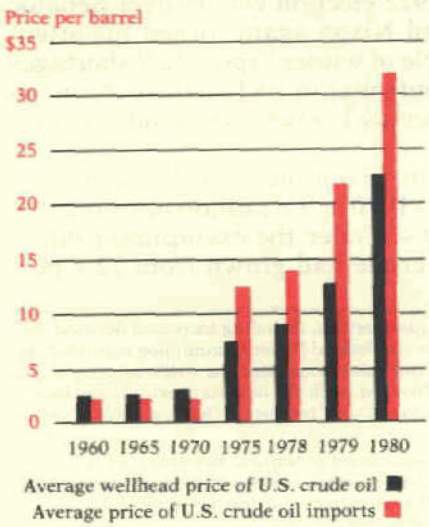
WHERE AMERICA GOT ITS OIL, 1955 AND 1979

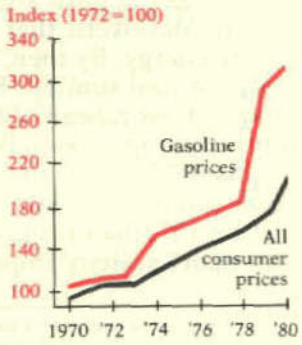


U.S. oil consumption more than doubled between 1955 and 1979, but imports tripled as a percentage of total use. The price of U.S. crude (below) was artifically held above, and then below, world levels. Gasoline prices paced inflation in the 1970s, but total energy costs account for less than 25 percent of current U.S. double-digit inflation.

Source: U.S. Bureau of Mines.

OIL IMPORT PRICES AND THE PRICE OF GASOLINE





Source: The British Petroleum Company Ltd.; U.S. Department of Energy; U.S. Department of Labor.

Even before Earth Day, the first signs of a chronic energy imbalance had begun to appear. Natural gas and heating oil ran short in the winter of 1969–70.* A few months later, Libya cut back oil production. Summer brownouts plagued the Atlantic coast. Fuel shortages persisted into the next winter, and four Eastern utilities had to reduce power output to prevent total blackouts.

In June 1971, President Nixon took the unusual step of sending a comprehensive energy message to Capitol Hill.† The Congress ignored it, and Nixon did not press the issue. More demanding matters were at hand: the overtures to China; Henry Kissinger's negotiations with Hanoi; and continuing inflation.

Inflation—by July 1971, it was running at what was then a shocking annual rate of 4.4 percent—was Nixon's prime domestic concern. In August, breaking with Republican orthodoxy, the President announced Phase I of what would be a four-phase program of wage and price controls—the first ever applied in the United States in peacetime. The controls would continue in various forms until April 1974, but those on petroleum products remained in place much longer. Price controls would play an important role in undermining Nixon's later energy policies, as foreign oil prices began to rise. "It would be hard to think of a more effective way of creating a fuel crisis," Paul McCracken, chairman of the energy subcommittee of Nixon's Domestic Council, pointed out, "than to decree U.S. price ceilings . . . below those prevailing in the world market."

It was not until after his 1972 election victory over Senator George McGovern that Richard Nixon again turned his attention to energy. By then, the cycle of winter "spot" fuel shortages and localized summer brownouts was in its fourth year, an extended dress rehearsal for the crisis to come. Demand was rapidly outstripping supply.

As 1973 began, the situation, in outline, was this: Domestic crude production had peaked in 1970 at 9.6 million barrels a day and by 1973 had declined to 9.4. Under the exemption-riddled oil import system, imports of crude had grown from 22.7 per-

*There were several reasons for the natural gas shortage, including increased demand. Another was the "double market" for gas. While the Federal Power Commission regulated the wellhead price of gas sold *inter*state, state commissions regulated the wellhead price of gas sold *intra*state. These two prices gradually diverged, with the intrastate price rising faster. As a result, producers of gas had an incentive to sell their product in their own states, rather than in, say, New England.

†Nixon's proposals included: creation of a Department of Natural Resources; expansion of the civilian nuclear power program; stepped-up research into synthetic fuels; accelerated leasing of the outer continental shelf for oil exploration; and leasing of federal lands for shale oil development. The emphasis was on *long-term* energy needs.

cent of U.S. needs in 1970 to 35.9 percent. Consumption of regulated, low-priced natural gas (it cost 22¢ per 1,000 cubic feet, compared to 72¢ for an energy-equivalent amount of oil) was running at twice the rate of new discoveries, and winter curtailments of usage were expected to equal 10 percent of demand in 1973–74. Oil from Alaska's promising North Slope, meanwhile, had not yet begun to flow; Congress, citing environmental hazards, had not approved construction of the Prudhoe Bay–Valdez pipeline. And there were tremors overseas: For the first time, the cost of foreign oil on the international "spot" market exceeded the price of domestic crude.

Spreading Scarcity Around

Long neglect of the coal industry had shrunk its share of U.S. energy consumption to 18 percent (versus 23 percent in 1960), while court challenges by environmentalists had halted all leasing of federal lands for strip mining in 1971. The surge to nuclear power had stalled—it accounted for only 5 percent of electricity generation in 1973—and the federally sponsored Clinch River Fast Breeder demonstration project had encountered technical difficulties and cost overruns on the order of 250 percent. The production cost of synthetic fuels from coal, oil shale, and tar sands still remained too high—in relation to that of other fuels—to warrant heavy investment.

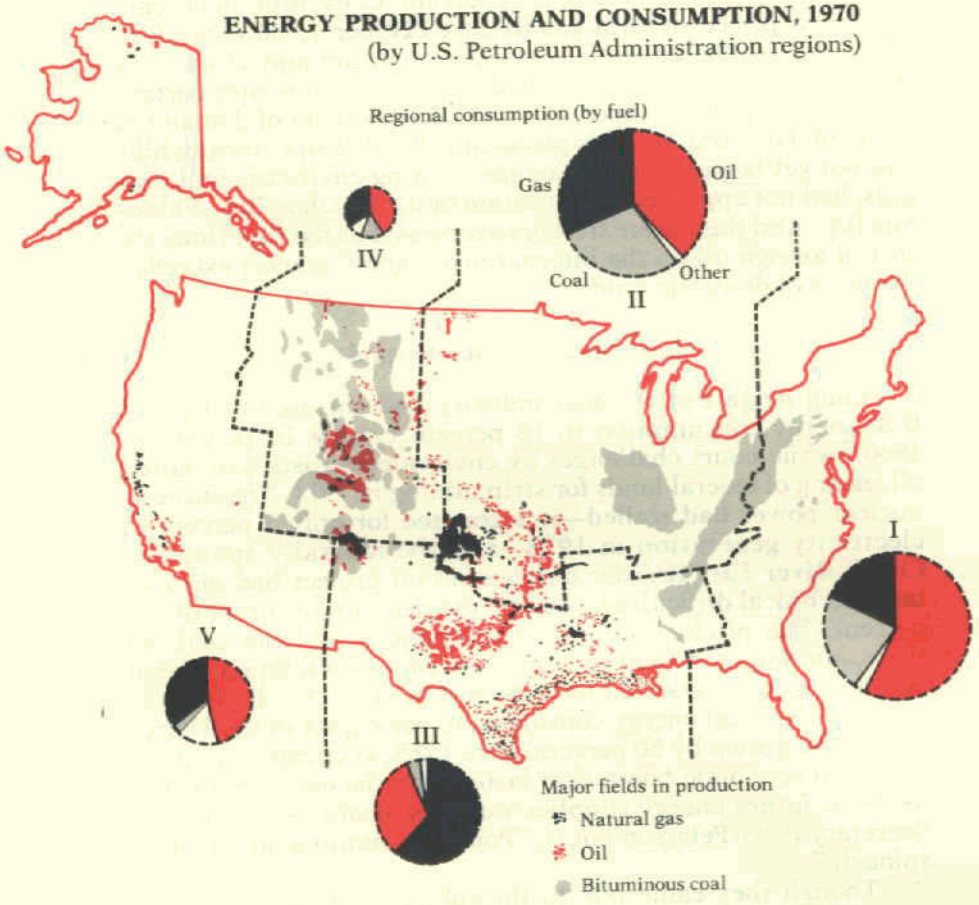
In all, annual energy consumption per capita in the United States had grown by 50 percent since 1955, as cheap oil and gas fueled an economic boom that lasted into the early 1970s. But by 1973, future energy supplies were uncertain. As Commerce Secretary Peter Peterson put it, "Popeye is running out of cheap spinach."

Though they came late to the subject, Nixon and his key advisers—these included, at various times, Treasury Secretary George Shultz, his deputy (and later head of the Federal Energy Office) William E. Simon, special energy assistant Charles Di Bona, and former Colorado Governor John Love, director of the Energy Policy Office—arrived at a sound diagnosis of what was wrong with U.S. energy policy.

As they saw it, Washington's regulatory policies, especially those affecting oil and gas prices, were contradictory and had helped to cause the transient shortages of 1969–73. Further, the administration had gone too far in the right direction on the environment, leading to unreasonable curbs on coal burning and mining and to bottlenecks in the construction of refineries, power plants, and other facilities.

ENERGY PRODUCTION AND CONSUMPTION, 1970

(by U.S. Petroleum Administration regions)



Source: *International Petroleum Encyclopedia;* U.S. Department of Energy; U.S. Geological Survey, Department of the Interior.

Rival regional interests have helped fashion many U.S. energy policies; federal policies, in turn, have affected regional energy development. Exploitation of vast Western coal reserves was impeded by curbs on the leasing of federal lands for mining and by environmental regulations. (The latter, by requiring all *coal-fired plants to install expensive "scrubbers" to remove pollutants from high-sulfur coal, reduced utilities' incentives to buy the West's naturally low-surfur coal.) Politicians from energy-short Regions I and II pressured Washington to ease oil import controls and regulate gas prices to keep domestic fuel costs down; their counterparts in energy-rich Region III shared a different perception of the national interest.*

Effective control over energy policy, the White House also realized, had long been impeded by the dispersion of responsibility throughout both Congress and the executive branch.

The Departments of State and Defense, for example, had an important say on security issues, notably oil import and naval reserves policy. The Office of Emergency Planning watched over the oil import quota program, which was actually administered by the Interior Department. Coal was the bailiwick of Interior's Bureau of Mines and its Office of Coal Research; oil and gas policy was set by Interior's Office of Oil and Gas. Nuclear energy was the province of the Atomic Energy Commission. The Federal Power Commission regulated interstate sales of gas and electricity. Surveillance of the "competitive climate" of the energy industries was the responsibility of the Federal Trade Commission and the Department of Justice. Nothing seemed beyond the purview of the Environmental Protection Agency.

Whether President Nixon, given time, might have brought a coherent energy policy to life (and the various energy bureaucracies to heel) is idle speculation. For the events of 1973 acquired a momentum of their own; and Nixon, preoccupied with surviving the Watergate investigation, did little more than take each crisis as it came. There was no time for grand strategies.

In April 1973, in response to a worsening gasoline shortage, Nixon issued a makeshift energy message, his second. It lacked all the elements of the bold "big play" that had so appealed to him earlier.

The 14-year-old protective quota system had become a poignant relic of an era of surplus. By 1973, as world oil prices neared the level of domestic U.S. prices, the quota system, combined with Nixon's price controls, had the effect of choking off desperately needed imports, since oil companies could not pass on all foreign price increases to consumers. In his April message, President Nixon replaced the quota program with a system of license fees whereby importers could bring in as much oil as they wished; the fees were modest, but those on refined products were stiffer than those on crude, to encourage refinery construction at home. Inadequate refinery capacity was a major cause of gasoline shortages.*

By May, local gasoline shortages had become acute, and the administration slipped more deeply into regulation. In response to charges by independent refiners and dealers that the big oil

*In his April message, President Nixon also called for the deregulation of "new" natural gas; easing of Clean Air Act standards for coal-burning; accelerated leasing of the outer continental shelf for oil and gas exploration; and, once again, creation of a Department of Energy and Natural Resources.

companies were using shortages to deprive them of oil and thereby drive them out of business, Nixon announced a voluntary "allocation" plan. Major oil companies were asked to supply all refineries and dealers with the same percentage of the total supply of crude and petroleum products as they received between September 1971 and August 1972. Allocations did nothing to ease the basic energy problem; at best, they merely spread the scarcity around.

By June, 1,500 independent gasoline dealers had closed temporarily; 400 more had shut down for good. Gasoline prices crept upwards, as far as controls allowed. Nixon responded with another quick energy message, calling for voluntary conservation and urging a five-year, $10 billion investment in energy R&D. In July, Phase IV of the price stabilization effort went into effect, introducing a two-tier crude pricing system, with "old" oil subject to a price ceiling but "new" oil (anything produced from a given property above the 1972 level) exempt. Variations of this system remained in effect until January 1981.

Fighting inflation through price controls was no more compatible with curing energy ills in mid-1973 than it had been six months earlier. Ceilings remained on retail prices of many oil products. As foreign crude prices rose through the summer, responding to increased world demand, importers, still unable to pass on many cost increases to consumers, cut back on foreign oil purchases. The shortages grew worse.

In September 1973, as Arab governments stepped up their calls for a "correction" in U.S. policy toward Israel, President Nixon worried openly at a press conference that the nation might soon be "at the mercy of the producers of oil in the Mideast." He pleaded with Congress to approve the 789-mile Alaska pipeline. (Congress didn't act until November.) In early October, with the winter fuel situation looking bleak, the President ordered mandatory federal allocation of propane, heating oil, and jet and diesel fuels. Mandatory allocations were eventually extended to all crude oil and refined products.*

*A further "refinement" in the allocations program came in late 1974 with the appearance of "entitlements." Entitlements were devised to aid small and independent refiners, which had popped up when foreign oil was inexpensive and were threatened now that it was dear (the world price was about $11). Unlike the large refiners, the independents often had little access to "old" domestic crude, the price of which was then controlled at $5.25. Under the scheme, all refiners were issued entitlements authorizing them to use a proportion of old crude in their runs equal to the national average. A large refiner with *more* than the national average of old crude available thus had to buy entitlements (initially, at $5 per barrel) from small refiners with *less* than the national average. This gave small and independent refiners a vested interest in keeping price controls on old oil, where no such interest had existed before. President Reagan lifted the remaining controls on oil in January 1981; the negative impact on small refiners is expected to be substantial.

On October 20, the Arab oil ministers placed the United States under an oil embargo. By the end of the month, the posted price of OPEC crude had nearly doubled.

By now, federal involvement in the U.S. energy markets was as tangled and complex as the White House's involvement in the Watergate cover-up, but the economy seemed to have built up a certain immunity to intervention. It took more to do less.

As his authority and prestige steadily deteriorated, Nixon delivered a major televised address in November to the nation to promote "Project Independence." With the Mideast crisis as a backdrop, he asked Congress to establish a nationwide 50-mile-per-hour speed limit for cars (55 for trucks), to permit year-round establishment of Daylight Savings Time, to relax environmental standards and ease licensing of nuclear power plants, and to act on his proposed Energy Research and Development Agency. A detailed blueprint for energy self-sufficiency would be drawn up soon, he promised. "Let us set as our national goal," Nixon concluded, "in the spirit of Apollo, with the determination of the Manhattan Project, that by the end of this decade we will have developed the potential to meet our own energy needs."

A Cat-and-Mouse Game

Project Independence never really got off the ground, although Congress did approve the speed limit and Daylight Savings proposals, and White House officials spent much of the next year drawing up a "Project Independence Blueprint." The winter of 1973–74 was unusually warm; shortages were less severe than anticipated. By summer, the lines of automobiles at gas stations had disappeared. Congress, it seemed, was less interested in pursuing solutions than in finding scapegoats; and the attentions of Senator Henry Jackson (D.-Wash.) and others were fixed on the big oil and gas companies, whose long-cherished and once sacrosanct depletion allowance was promptly eliminated.

"The American people want to know," Senator Jackson demanded during a series of hearings, "whether major oil companies are sitting on shut-in wells and hoarding production in hidden tanks and at abandoned service stations." Three times, Congress came within a handful of votes of requiring oil companies to divest themselves of all but one phase—exploration, production, refining, marketing—of their business. To what extent the oil companies may have created (or exploited) shortages during the 1970s is difficult to say. Much was beyond their control. Justified or not, the backlash against the oil industry de-

flected attention once again from the business of formulating a national energy policy.

In the throes of Watergate, President Nixon was in no position to follow through on his energy proposals.

He did not leave Washington in disgrace until August 9, 1974. But Watergate's repercussions had been felt outside the Oval Office for many months, measured by executive indecision, tangled lines of agency authority, and paralysis in Congress. For the new President, Gerald R. Ford, devising a politically salable package of energy initiatives in late 1974 was further complicated by prickly short-run concerns (e.g., record postwar unemployment, persistent inflation) and the hazards of getting any energy bill past a gauntlet of special interests.

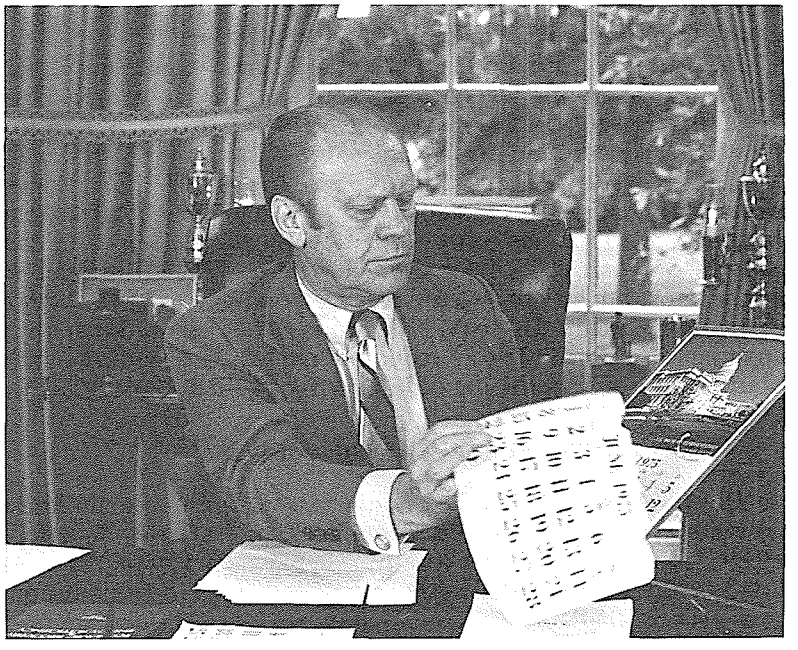
President Ford nevertheless acted bravely to get energy planning under his control. By December 1974, he had a comprehensive energy package, striking in its consistency, ready for Congress. It was put together largely by Interior Secretary Rogers Morton and Frank Zarb, administrator of the Federal Energy Agency, which Nixon had created after the embargo in an attempt to get energy planning "under one roof."

The main objectives of the Ford program were to reduce oil imports, spur energy research and production, and create a free market in energy. Among its key proposals: decontrol of oil and deregulation of natural gas (coupled with an excise tax on gas to equalize the price of oil and gas on a per-Btu basis); a rise in utility rates; weakening of the Clean Air Act; authority to order major power plants to switch from oil and gas to coal; creation of a 300-million-barrel strategic petroleum reserve as a hedge against supply interruptions; and a tariff on imported crude of (eventually) $3 per barrel.

President Ford believed, correctly, that his energy plan was the most coherent yet devised by an American President; he believed, incorrectly, that a Democratic Congress, the press, and the public would respond with gratitude. He encountered instead the larger problem that occurs when laws must be made by legislators subject to frequent re-election: the temptation in Congress to sacrifice the electorate's real long-term interests to its perceived short-term interests.

"If this energy problem is as bad as they tell us," observed Representative James A. Burke (D.-Mass.) early in 1975, "we're going to have to take steps in every direction." Congress did just that, coming up with a grab bag of Democratic alternatives to the program submitted by the President, all of them backed by powerful coalitions on Capitol Hill.

As domestic oil and gas production sagged and imports



The Gerald R. Ford Library.

In a May 1975 TV address, President Ford ripped pages from a calendar to illustrate how long Congress had been sitting on his energy proposals.

reached pre-embargo levels, a peculiar cat-and-mouse game developed. While the undisciplined Democrats could not agree on their own plan, they had enough votes to block any Ford initiative; while Ford couldn't get his own legislation passed, he had enough votes to sustain a veto of any Democratic bill. The basic conflict was between the President's free-market philosophy and a Congress that was disposed, in Interior Secretary Rogers Morton's words, "to [regulating] our way out of something we've regulated our way into." Ford also faced the traditional Democratic reluctance to impose higher prices on consumers.

In the end, Ford had to give way, watering down his proposals until Congress finally passed the Energy Policy and Conservation Act in December 1975. Ford got his strategic petroleum reserve, authority to ration petroleum in an emergency, and his coal conversion measures. As for oil decontrol, the composite price of "old" and "new" domestic crude—then around $8.75—was actually rolled back by more than $1; price controls and the complex allocation program would remain in effect for more

than three years. The President was given limited authority to increase the price of oil to keep up with inflation.*

Despite pressure from oil companies and conservative Republicans to veto the legislation—Senator John Tower (R.-Tex.) had called it the "OPEC Relief Act of 1975"—Ford reluctantly signed the bill into law. It was, he said, a "first step."

Energy issues played almost no role in the 1976 Ford-Carter presidential campaign. Memories of 1973 had faded. Among the Big Three auto makers, only General Motors had begun in earnest to "downsize" its fleet. Democratic nominee Jimmy Carter's proposal to create a Cabinet-level Department of Energy (it was established in August 1977) aroused far less interest than his attacks on Gerald Ford's economic record. The media seemed interested mostly in the candidates' slips of the tongue.

The Moral Equivalent of War?

But if energy was not a campaign issue, Jimmy Carter knew it would be an issue in his Presidency. He took steps even before the election to put together a comprehensive energy package. As it happened, Carter failed as Ford had failed, even though Congress was controlled by his own party.

Jimmy Carter announced at his inauguration that an energy package would be on Congress's doorstep within three months. The Carter program quickly took shape in a second floor suite of the Old Executive Office Building next to the White House, under the leadership of James Schlesinger. Schlesinger, a Harvard-trained economist who had held the top posts at the AEC, the CIA, and the Defense Department under Richard Nixon, was interested in efficiency, not consultation with Congress or the rest of the executive branch. He worked in virtual secrecy. All of his associates favored increased federal intervention in the energy sector. They asked for no advice, except in the odd form of a questionnaire sent out to 450,000 Americans, most of them picked at random from the census rolls. (Among the 28,000 replies: "Darken Las Vegas"; "Reduce the birthrate.")

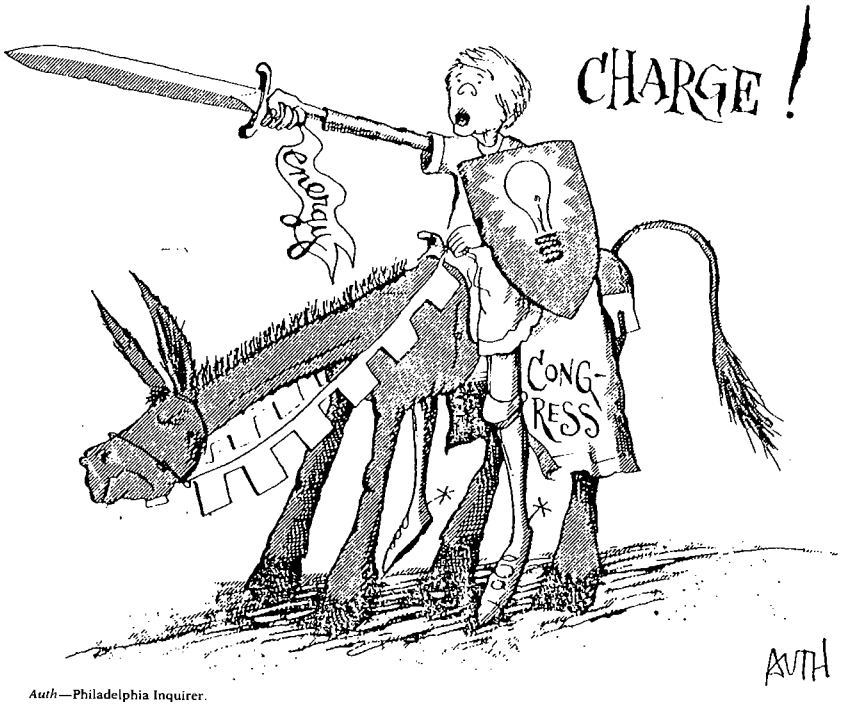
On April 20, 1977, in a speech before a joint session of Congress, President Carter unveiled his National Energy Plan and called for the "moral equivalent of war" in the struggle to get the United States on a sound energy footing.

The basic objectives of the Carter plan were to reduce reliance on imports, turn consumers away from oil and gas, and be-

*Congress took no action on deregulation of natural gas prices, but the Federal Power Commission periodically acted on its own, in 1975–76, to raise the price of "new" natural gas sold interstate to as much as $1.42 per thousand cubic feet.

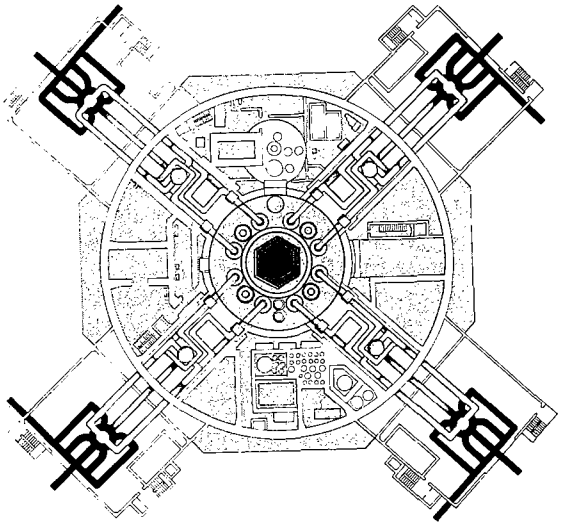
gin using more coal, despite the environmental hazards, until the sun and other clean and renewable resources could be tapped. (Carter considered nuclear power a "last resort" and tried, with some success, to scuttle the Clinch River breeder project, even as breeder development proceeded in France, the Soviet Union, and elsewhere.) He estimated that his program would reduce projected 1985 oil imports from 16 to 6 million barrels a day, lower annual growth in energy consumption to 2 percent, and cut gasoline usage by 10 percent.

Carter's major proposals included: a crude oil equalization tax that would lift the price of domestic crude up to the world market price, with receipts from the tax rebated to the public in the form of tax credits; new pricing policies for gas that would gradually bring its price into line with that of oil, on a per-Btu basis; and tax incentives to promote fuel-efficient cars, cut gaso-



Auth—Philadelphia Inquirer.

The crusade for a National Energy Plan dominated President Carter's first year in office, but Carter was unable to work effectively with Congress. Pollster George Gallup reported that one-half of all Americans surveyed were "relatively unconcerned" about energy problems.



Cross section of the Superphénix "breeder" power station, under construction in France. (Dark red represents the active core, black the steam circuit leading to the generator.) Development of a U.S. breeder was slowed by the Carter administration.

line consumption, encourage the use of solar energy, and stimulate the conversion of utilities from oil to gas to coal.

The whole plan was presented in terms of how much energy each measure would "save" in millions of barrels of oil. The emphasis was almost entirely on reducing energy demand and increasing energy efficiency. According to some estimates, the United States wasted half of its energy. Unlike the earlier Ford plan, there were few incentives for increasing supply. (Higher oil prices were meant to promote conservation; the crude oil equalization tax meant that oil producers could not "plow back" profits into exploration.) The President sent his program, encompassing 113 separate proposals, to Congress and told reporters it would be passed by October 1, 1977.

October 1 found the House and Senate deadlocked. The President's congressional liaison had been poor, and many Congressmen were irked by Carter's initially high-handed approach to energy planning. A more basic problem was that the Carter plan had been devised to be "fair"—i.e., to offend everybody. Unlike the Ford proposals, which at least had the solid backing of oil and gas companies, there was no constituency *for* the Carter plan. Congress went into recess, overcome by what Robert Samuelson, a columnist for *National Journal,* called "the moral equivalent of chaos."

When Congress reconvened in 1978, it had other fish to fry: the Panama Canal treaties, the Korean influence-peddling scandal, a financial bail-out of New York City. There were no gas lines, and oil had started to flow from Alaska's North Slope, causing an embarrassing local glut on the West Coast that seemed, in the eyes of the press, to undermine administration claims that a crisis was at hand.

In November 1978, Jimmy Carter finally got an energy bill, in tatters. Half of his proposals were gone, including the crude oil equalization tax, the centerpiece of the program. Decontrol of natural gas prices was accepted but would be phased in gradually through 1985; until then, gas would be subject to a bewildering array of regulations. Many of the tax credits survived.

Few expected the resulting energy "program" to do much of anything, and the U.S. monthly oil import bill continued to run at more than $3 billion. But Jimmy Carter could assert that he now had an energy program, however modest. The President hoped he would not have to tackle the subject again. His State of the Union message in January 1979 was almost devoid of references to energy. It was time to turn attention to other matters: SALT; revived inflation; the Egyptian-Israeli peace treaty.

It would not be possible. Even before the State of the Union address, the Shah of Iran had left his country for an extended "vacation" from which he would never return. An Islamic revolution was underway. Iran's oil production had been cut back sharply, even as OPEC stepped in with another series of price increases, the largest since 1973, boosting the price of a barrel of crude by midyear to between $18 and $23.50. (By the end of the year, the price hovered around $30.) On March 28, an accident at the Three Mile Island nuclear power plant near Harrisburg, Pennsylvania, reawakened fears over the safety of atomic energy. By April, gas lines appeared, first in California, soon spreading east, largely the result of the lapse in Iranian crude production.

On April 5, President Carter, in a nationwide television address, reacted to the uproar. He revealed his intention to decontrol the price of domestic oil ("a painful step") in order to ration consumption. Decontrol would be subject to passage by Congress of a 50 percent "windfall profits" tax on oil company earnings, with proceeds going to an "energy security fund" that would help poor families pay for fuel, and provide more subsidies for mass transit.

By July, Congress had yet to act, and Jimmy Carter's approval rating in the polls had sunk below 30 percent, where it seemed to stick. Inflation was running at 11.3 percent. OPEC

threatened further price increases. Domestic affairs adviser Stuart Eizenstat warned the President that, more than anything else, it was the nation's energy woes that had "added so much water to our ship."

An energy speech had been scheduled for July 5, but Carter mysteriously postponed it and instead convened a "domestic summit" at Camp David, the presidential retreat in the Catoctin Mountains. After meeting there with more than 100 business and civic leaders, President Carter flew back to Washington and, on July 15, delivered yet another nationwide address.

In the first part of his speech, he lectured his audience about a "crisis of confidence," asserting that America was beset by a pervasive "malaise," the first French word Americans had learned from the White House since "détente." Later in the address, the President announced a ceiling on imports of foreign crude oil and called for crash development of synthetic fuels (using funds raised by the proposed windfall profits tax) overseen by a federally sponsored Energy Security Corporation. It was the first time Carter had addressed the problems of energy's "supply side." Congress eventually passed a stiff windfall profits tax and phased in decontrol of oil. But it sharply reduced the proportion of new oil tax receipts to be applied to a synthetic fuels program, whose costs and benefits were disputed.

On November 4, 1979, Iranian militants occupied the U.S. embassy in Tehran and took 65 Americans hostage. Obscured by the hostage crisis and other issues, energy got little attention during the 1980 presidential election campaign. As Ronald Reagan was sworn into office in January 1981, both economic recession and conservation measures had curbed U.S. demand for foreign oil. But America was still importing 37 percent of its oil and 5 percent of its natural gas. A gallon of gasoline cost $1.28, and the price of a barrel of OPEC oil had climbed to $34.83, ten times what it cost in 1970. Construction of new nuclear plants had slowed. Seven years after the crisis of 1973–74, a Roper Poll found that more than half of all Americans surveyed believed that there had never been a real oil shortage and that the Arab embargo had been contrived by the oil companies.