the House and was signed into law by President Roosevelt.

President Roosevelt also tackled the power question in two other exciting ways:

The TVA and the REA

On May 18, 1933, he signed into law the Act authorizing the Tennessee Valley authority (TVA). It covered the Tennessee River Valley, which spanned 41,000 square miles and parts of seven states. The area was economically terribly backward, and was overrun by the raging waters of the Tennessee River and its tributaries, which periodically destroyed millions of acres of farmland, as well as business and homes. The TVA provided integrated flood control, hydroelectric power, and irrigation. It provided scientific farming, brought in industry, eliminated malaria, conquered illiteracy, and many other achievements. One of its greatest accomplishments is that it electrified the area, which the utility companies had been unwilling to do. In the 1930s, before the TVA was built, the average person in the Tennessee Valley used only 60% as much electricity as the average person in the nation as a whole; but already by 1939, the average person in the Tennessee Valley used 1.25 times the amount of electricity as the average person in the nation.

In May 1935, while the fight against the utility holding companies was going on, the Rural Electrification Administration (REA) was created. The large utilities would not string transmission lines in most rural areas, because it was not profitable, and was indeed a money-losing proposition. The REA created cooperatives of farmers and rural people, who undertook with the REA to construct transmission lines for rural areas. At the end of 1934, only 10.9% of all U.S. farms had electricity, while in the state of Mississippi, less than 1%, and in Tennessee only 3% of the farms had electricity. As a result of the work of REA, by 1941, four out of ten American farms had electricity; by 1950, nine out of ten.

With the TVA and REA producing new electricity and transmitting electricity, respectively, the assault on the electric utility holding companies took on even deeper significance.

As a result of the PUHAC and the Federal Power Act of 1935, for the next 60 years, the United States had the overall conditions for a steady supply of abundant energy, whose price was falling by a modest, but important amount decade by decade. This played a vital role in providing economic development to America, at least until the "post-industrial" policies introduced since 1967 seriously forced contraction.

Now, the same Wall Street forces that ran the utility holding companies, and which opposed the PUHAC in the 1930s, are calling for the abolition of the PUHAC, as a keystone feature of deregulating America's power system. Those who do not have short memories, should realize that this would take America back to a period of speculation, rising energy prices, looting of the energy infrastructure, and destruction of the economy.

Natural Gas

The Next Energy Crisis

by Marsha Freeman

This past winter and spring, the United States suffered rising gasoline and home heating oil prices, often blamed on OPEC, but most likely the result of the manipulation of the market, for the greedy gain of the multinationals that control it.

Since the spring, consumers have seen their electricity bills rise, in some cases, astronomically. As documented above in this section, the lion's share of the increase has not been a result of some "law of supply and demand," but rather the reprehensible practices of unregulated companies, which stand to obtain a pirate's ransom from withholding supplies, and creating a crisis, to drive up the price.

But part of the rise in electricity rates, and the nation's energy budget overall, is due to the doubling of the price of natural gas over the past eight months. And for households that depend upon gas for heat in the winter, this year promises both continued price increases, and if there is a cold spell, spot shortages and prices that many people may not be able to afford.

Supply and Demand?

One might think that the steep rise in natural gas prices was due to the fact that, while demand is steady or growing, reserves have somehow suddenly fallen, and there isn't gas to drill. On the contrary, as **Figure 1** shows, the price of natural gas has little to do with how much is produced, but actually follows the price of petroleum. When oil prices fell in 1997 and 1998, so did natural gas prices. The decline in prices, according to the industry, led to a contraction in the exploration and drilling for new reserves, which has now led to a shortage, and hence, rising prices.

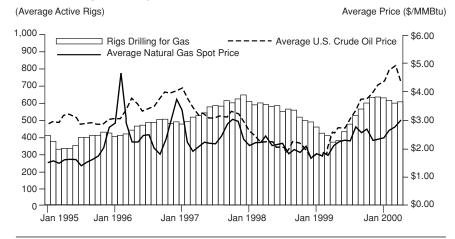
But, wait! More than half of the oil used in the United States is imported—its price is out of U.S. control—while almost 90% of the natural gas used here is domestically produced. There is no reason, therefore, why changes in one should determine the other, especially since these two fuels are often interchangeable. One would think that when oil prices went through the roof, smart natural gas producers would have offered stable prices, and picked up the extra business, not doubled their prices, and cut back on production.

In fact, as an Aug. 6 article in the *New York Times* explains, there is a fundamental shift taking place in the natural

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FIGURE 1

Gas Drilling Activity and Crude Oil and Gas Prices



Source: American Gas Association.

gas industry, which many in the industry believe, has brought *permanently* higher prices.

At the present time, natural gas provides less than 15% of the fuel for the electric utility industry. But about 90% of the new capacity that is slated to come on line will be natural gasfired. There is no reason that this increasing demand for gas from the electricity-generating sector should have caught the gas industry by surprise: This shift toward gas has been going on for a number of years. According to the American Gas Association, the forecast is that over the next 20 years, the quantity of gas needed for electricity generation will double (**Figure 2**).

Energy analysts Daniel Yergin and Thomas Robinson wrote in an op-ed commentary in the *Washington Post* on July 21, that the current deficit in gas production, which is 7% less than in 1997, will persist. They estimate that more than \$500 billion will be required over the next decade, nearly double the investment level of the 1990s, to bring the required new production and transportation capacity on line. For that to materialize, Wall Street will have to be willing to move some investment resources in to this "old economy" vital industry, and out of quick-buck "new economy" which is where money has been going.

It is also clear that the natural gas industry has known for more than a decade that increased supplies would be needed for home heating. **Figure 3** plots the rise in the percent of single-family homes heated with natural gas. Between 1986 and 1998, that share has risen from 47% to 70%. The decline in natural gas production for two years was solely a function of an artificial price decline, pegged to oil, rather than any projections for declining demand.

From the 1930s up until 1978, the price of natural gas at

the wellhead (the production price), was controlled by the Federal government. In the rush to deregulate, during the Carter Administration, and in response to the winter 1976-77 natural gas shortages, the Natural Gas Policy Act phased in the decontrol of natural gas prices at the wellhead.

In 1992, the same year it "opened up" the electricity transmission system to unregulated suppliers, the Federal Energy Regulatory Commission (FERC) ordered natural gas pipelines to "unbundle" their services, opening the market to new, unregulated companies.

As a growing number of customers were given the option of choosing their gas supplier, the mandate to provide consumers with an uninterrupted, reliable, affordable supply of natural gas was disappearing.

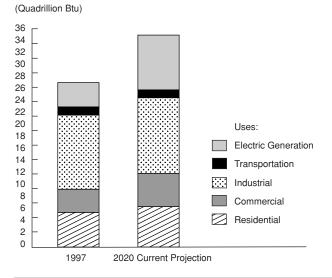
Affordable Natural Gas, a Thing of the Past

Already, the doubling of natural gas prices is being felt in the pocketbook of the consumer, both in gas and electricity prices.

• In July of this year, Reliant Energy's Houston Light & Power asked the Texas Public Utility Commission for a 14% electricity rate increase, in order to pass on to its customers,

FIGURE 2

Natural Gas Consumption and Forecast

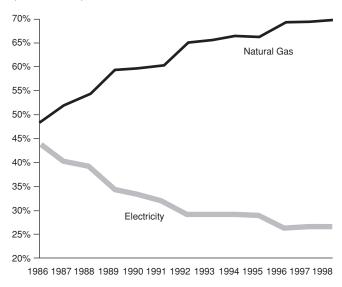


Source: American Gas Association.

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Natural Gas Heats an Increasing Number of U.S. Single-Family Homes

(Percent of Total)



Source: U.S. Bureau of the Census

the higher cost of natural gas fuel. Reliant made this an "emergency request," since its regularly scheduled request for rate adjustments is not until October. The municipal utility that serves the city of Austin had already passed on its higher fuel costs to customers.

- On July 21, the South Carolina Public Service Commission approved a 16.8% increase in the natural gas prices that could be charged by South Carolina Electric & Gas.
- Four days later, New Jersey's Elizabethtown Gas Company requested a rate hike that could raise natural gas bills for customers 18%. The state had deregulated the intrastate price of natural gas at the beginning of this year, and as one distribution company stated, now "natural gas is a publicly traded commodity, just like crude oil or coffee."
- At the end of July, the Duluth Public Works and Utilities Department began urging residents in this northern state of Minnesota to start planning ahead for higher heating bills this winter. The municipal department warned that residents could see jumps of \$200 on their bills over this winter.
- Alabama Gas Corp. has raised residential gas rates already this year, and expects that the higher prices could add up to a 15% hike before the year is over.
- The last day of July, the Washington Utilities and Transportation Commission in Olympia approved an increase for natural gas service, which could see some households paying 27.5% more this year for natural gas.
 - On Aug. 1, the local press in Oklahoma reported that

typical electricity customers in the state (which, like Texas, is a natural gas-producer), were facing increases of up to \$8.17 in their August bills as a result of skyrocketting gas prices.

- Columbia Gas of Kentucky has announced that bills will jump 20% for consumers, starting on Sept. 1. And the Public Service Commission has warned Kentuckians that their winter heating bills will rise as much as 50%, as compared to last winter.
- And while the Republican Party was holding its bacchanalia in Philadelphia the first week in August, some residents of that city were more interested in the fact that the city-owned Philadelphia Gas Works was asking state regulators for a one-time rate increase to generate the \$55 million it needed, due to the increased price of natural gas. This is not a request from a price-gouging "independent" supplier, but a government utility that must be able to purchase natural gas for its customers.

The entire situation had gotten so out of control by the first week in August, that Indiana Gov. Frank O'Bannon announced that he was considering invoking a 1981 law that would allow him to suspend the state's 5% sales tax on natural gas, in the event of an energy crisis. The Governor had earlier invoked that law to suspend the gasoline tax in order to protect the interests of the citizens. Aides to O'Bannon said they are concerned that industry projections indicate that winter heating costs "could jump through the roof."

The natural gas shortages during the winter of 1976-77, which were so severe that businesses closed, were attributed to artificially low prices under the control of the Federal government. There is no doubt that wellhead prices could have been raised in a controlled manner, or other incentives could have been found to encourage investments in new natural gas resources. Public Utility Commissions did, after all, find ways for more than 60 years of making investment in the regulated electric utility sector attractive enough for private capital to be made available to ensure adequate capacity.

Instead, the ideological rush to deregulation, to make natural gas—upon which people depend for heat during the winter, and increasingly, for electricity all year around—just another "commodity," has led to the same kind of price hikes and potential shortages that deregulating the electric utility industry has already visited upon the state of California.

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