

Natural gas deregulation has brought United States more chaos, less energy

by Steve Parsons

Before the 1973 oil crisis, the prices at which producers could sell oil and natural gas were regulated by a combination of government agencies on the federal, state, and local levels. This ensured a relatively stable price of fuel for industrial and residential users, as well as for companies involved in refining and delivery. As a result, long-term contracts between producers, refiners, and distributors were the rule. They guaranteed a certain base level of income for all involved. This meant that both long-term and short-term projects could be planned and executed with reasonable certainty of financial success.

Under this system of regulation, the nation's energy supply expanded enormously in the postwar period, thanks to development of new resources through exploration and drilling and construction of pipelines and refineries. Industry of all kinds grew rapidly, secure in the knowledge that cheap, reliable fuel was always available.

But in the autumn of 1973, oil was almost instantaneously transformed into a speculative financial commodity. Overnight, the steady supply of oil was interrupted, on the pretext of the 1973 Arab-Israeli war, forcing distributors increasingly to bid for oil on the speculative "spot" market. This international "free" market, centered in London, was the only place where non-contract oil could be bought—from firms dominated by financial trading companies specializing in speculation.

Until the oil crisis, oil volume in the spot market was less than 1% of the world market. But that changed in 1973. Today, the spot and related futures markets essentially determine the price and purchase of oil and natural gas worldwide. This shift was the turning point toward deregulation in the United States. When oil prices quadrupled by the winter of 1974, U.S. producers raised a hue and cry to deregulate crude oil and natural gas prices, arguing that they could then pour more money into increased exploration and development to meet the increased demand for domestic energy.

The deregulation disaster

Under the Federal Power Commission's well-head price regulation of natural gas in the 1960s and 1970s, pipeline companies concluded long-term "take-or-pay" contracts with producers—generally with a 20-year duration—agreeing to

take a designated amount of gas each year and guaranteeing to pay producers for 70-90% of the gas specified in the contract, whether the pipelines needed the gas or not.

On the positive side, this locked in both prices and a steady supply, and enabled long-term capital planning throughout the delivery chain from producers to end-users. As we shall see, this is the exact opposite of the state of affairs today.

The main drawback was that the FPC-set rates were generally below \$1.00 per million cubic feet (mcf), which was too low to generate sufficient profit margins for expanded investment to keep pace with growing demand. This led to limitations on gas use, a situation which became severe after 1973.

Faced with rising costs because of the inflation generated by the oil crisis, plus fast-growing demand for much cheaper natural gas, Congress enacted the Natural Gas Policy Act in 1978. This deregulated approximately 20% of the natural gas supply from price controls, with the proportion rising in increments to about 60% by 1987. Producers poured the extra money into more drilling, and by 1982, the new gas started hitting the market. But under the "controlled disintegration" high interest rate policies of Paul Volcker's Federal Reserve, the economy had sunk into a deep recession, causing a relative natural gas glut. Prices tumbled from an average well above \$3.00 per million cubic feet—and remain low today at an average of about \$1.25.

But pipeline companies still had long-term contracts under which they were obligated to pay producers for gas that local distributors, the gas companies, could not sell. The Federal Energy Regulatory Commission (FERC), which had replaced the FPC, then took another step toward deregulation. In 1984, it ruled that, in the interest of "competition" and lower prices for consumers, local gas distributors could break their contracts with the pipelines and refuse to purchase gas they had been obligated to buy from these companies.

From 1984-86, the pipelines' take-or-pay liabilities zoomed. In 1986 alone, they were hit with \$10 billion in unused gas for which they had to pay. The total take-or-pay loss for pipelines mounted to \$44 billion, worth more than the value of all the pipeline companies put together. So far, the pipelines have already paid out \$9 billion. The remainder is still tied up in court litigation.

With FERC's 1984 ruling, local gas distributors became free to buy gas directly from the producers—which, in practical terms, meant from the previously minuscule spot market. In fact, that deregulatory decision essentially created the natural gas “free” spot market. Today, it has developed into an “industry” itself, burgeoning to about 250 companies by 1987, and handling two-thirds to three-quarters of all gas purchases.

The typical contract is now just 30 days long, enormously increasing uncertainty of supply and demand for all involved—from producers, through the pipeline companies, to the local distributors. And, ironically, to institute some semblance of rationality in this sea of chaos, FERC has had to slap all kinds of rules on the market and the various gas company participants, thus fomenting a regulatory nightmare that has been a boon only to the myriad lawyers and accountants that have had to be hired.

No more long-term contract purchases

FERC's 1984 action also required the pipeline companies to transport all such gas, thus putting the nail in the coffin of long-term contract purchases by pipelines. Today, 80% of pipeline revenue is from transportation alone; in the past pipelines purchased all the gas produced, which it then transported.

Now, FERC has gone even farther to spur “competition,” with a recent ruling permitting large industrial end-users, like utilities, to purchase gas directly on the spot market, rather than from the local gas company distributor. The local gas companies, as well as the pipelines, are required to store that gas for future use, and must themselves absorb all storage and inventory charges (see interview).

Much has been made of the money “saved” by all parties and the lower prices for consumers through such deregulated “free market competition.” But in reality, this deregulation has weakened the entire gas delivery system from many standpoints.

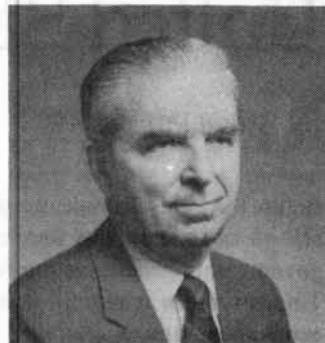
First, an assured supply of gas is in question, because 1) the producer does not know what price he will get for his gas, nor how much will be bought, and thus has no real way of planning production; 2) neither the pipeline companies nor the local distributors have an assured supply of gas at a known price, since neither knows how much of their own purchased gas will be bought by customers; and 3) neither knows the long-term needs of their customers.

Second, and most important, the combination of insecurity and uncertainty of supply, use, and revenues makes it extremely difficult, at best, if not generally impossible, to plan capital construction projects at any level, from producers to industrial consumers. For example, almost all of the major gas pipelines were laid from the 1940s to 1960s. Many more are needed, especially in the Northeast, where consumption has risen dramatically in recent years. But very few are, or will ever be, under construction.

Interview: Charles Mankin

The ‘zoo’ of deregulation

The following is the concluding portion of an interview conducted on Sept. 5 with Charles Mankin, Director of the Oklahoma Geological Survey. (For the first part, see EIR, Sept. 21.)



EIR: What have been the effects of deregulation on the natural gas industry over the last ten or so years?

Mankin: For natural gas, deregulation has brought on a whole series of unexpected consequences—that is, unexpected to some. The kind of knee-jerk reaction that says deregulation is good because it frees up the process, has brought about some very unexpected and very complicating results.

Historically, producers found natural gas and sold it to a pipeline company, which then transmitted the gas and sold it to local distribution companies (LDCs), the end-users of gas. It was a relatively simple stream of activity, one that could be followed with some ease. Today, with the deregulation of natural gas, this is no longer true.

What you're seeing now is producers who are selling directly to consumers, and the pipeline becomes a common carrier; LDCs are actually investing in exploration and acquiring reserves. Industries in fact are acquiring reserves of gas in certain areas. And so when one tries to get a picture of the gas industry today, it is more like a plate of lasagna.

We're in the process of trying to use the state of Oklahoma as a kind of model for deliverability studies, to find out how much gas you can send through the system to get gas from point A to point B. You can look at the physical connections, you can look at the pipe and wells and draw up a schematic and show how you can physically move gas from point A to point B through all of the constraints.

But that has become frankly the least important part of the issue, because much of the gas that you're seeing has contractual implications. To get gas in a certain field, all of that gas may be under contract, through perhaps a joint venture, in which the reserve is developed solely for their use. And this means that during high gas demand, that gas may not be available not because you can't physically get it out, but because legally and contractually, there are constraints on its being moved.

EIR: Can't this lead to spot shortages during peak use?

Mankin: Oh, absolutely. In fact, my own view is that we

“Tracing the network of middlemen created by deregulation is like trying to trace one end of a noodle through a plate of spaghetti and figure out where it goes.”

don't know what gas is available, because we aren't privy to the contracts and agreements governing use of the gas. This is going to be the overriding consideration in really trying to understand how to deal with spot shortages. Spot shortages of necessity will occur during situations of peak demand because you cannot economically build a system that will deliver at peak demand efficiently. Because if you were to attempt this, then you're overdesigned for baseload, and you can't afford it. Electric utilities have dealt with this, but in the natural gas industry, the system is not sufficiently well understood to deal with that kind of problem.

EIR: Wouldn't this necessitate building expanded storage facilities so that pipelines and LDCs could have on hand non-contracted gas?

Mankin: Yes. You see, historically, the way they used to do it in the upper Midwest and the Northeast, an LDC would contract with a large gas user like a steel plant and sell them some portion of their total load of gas in the form of an interruptible contract, so that during periods of peak demand in that area, the company could shift gas from that industry for brief periods of time to meet residential and commercial needs. And that served, in effect, as their storage. But many of these plants are no longer in operation, we've gone out of the heavy industry in this country, and as a consequence a lot of the big gas users—steel, ceramic, glass—have gone overseas.

There is no question that there is increasing need for alternative local storage. We have had in the last month an incredible increase in requests for information about the availability of abandoned fields that might be used for gas storage. If you don't have some gas locked up contractually, then the alternatives that might be available if you're an LDC or major user, is to try to buy gas at lower prices during slack times and put it in storage, and then move it during periods of higher-cost times.

The disadvantage, of course, is that that throws a new wrinkle into the delivery system that has to be taken into consideration when you're trying to look at an overall deliverability, because that gas is going to occupy space in a pipeline that could be filled with some other gas from some other place. When you start trying to worry about deliverability and how to deal with spot shortages in various parts of the country, it's not just a physical problem, it's increasingly a problem of what gas is legally and contractually available.

EIR: Even if a pipeline company has ample gas in its system, it might not be able to move that gas to a sector that needed it, because that gas was not theirs to move.

Mankin: Sure. In the past, transmission companies never had to worry about whose gas it was going through the pipeline; it was their gas, bought from the producer and resold. Now, in any one pipeline, you might have 15 or 20 different people's gas you're moving to different places. They don't have the measurement and bookkeeping system organized sufficiently to do that job without great difficulty. You can have gas from 40 different sources coming into transmission lines at different times, different quantities, that are moving to a whole array of consumers out there. Somebody may have gas that is moving through parts of three different transmission lines. So it's a case of not only keeping track of your own lines, but it's also a case of transmitting data to your competitors when you transmit gas from your system to theirs. It's an absolute zoo.

EIR: Deregulation has created an incredibly large layer of actually useless accountants, bookkeepers, etc. to try to manage all this, pure waste in terms of anything physically real.

Mankin: It's hard to say whether it's actually a layer, it's more like a giant fuzzy ball. If it's a layer, at least you could see some dimensions to it, but you can't even see the complexity of this thing, you can't disaggregate it, it's like trying to trace one end of a noodle through a plate of spaghetti and figure out where it goes. . . . It's tough enough to understand the physical system alone, because with so many constraints when you start talking about quantity of gas—capacity of pipelines, wellhead pressure, compression—there are thousands of those even in a simple system. And then you start asking who owns the gas. You can't assume that gas is available to be moved!

We have situations in Oklahoma where in a single well, there will be three different lines hooked up to that well, because the various owners will be selling their gas in three different directions out of the same well, while moving some of the gas at different rates of volume and maybe holding some, waiting for better prices. You don't know what's going to happen. Even if we were privy to the contractual arrangements, I don't know what we'd do with the information, in terms of knowing what gas is available when because of constantly shifting decisions. You couldn't wade through the process to come up with anything meaningful.