

April 1974

Coal and the Energy Crisis

C. Howard Hardesty Jr.
Continental Oil Co.

Follow this and additional works at: <https://researchrepository.wvu.edu/wvlr>



Part of the [Energy and Utilities Law Commons](#), and the [Oil, Gas, and Mineral Law Commons](#)

Recommended Citation

C. H. Hardesty Jr., *Coal and the Energy Crisis*, 76 W. Va. L. Rev. (1974).
Available at: <https://researchrepository.wvu.edu/wvlr/vol76/iss3/4>

This Article is brought to you for free and open access by the WVU College of Law at The Research Repository @ WVU. It has been accepted for inclusion in West Virginia Law Review by an authorized editor of The Research Repository @ WVU. For more information, please contact ian.harmon@mail.wvu.edu.

COAL AND THE ENERGY CRISIS

C. HOWARD HARDESTY, JR.*

The condition of the coal industry today is summed up in an oft-quoted phrase of David Freeman of the Ford Foundation: "Only two things are wrong with coal: we can't dig it and we can't burn it." Discussion of how to right these two wrongs is our goal today. Coal's contribution to easing our shortage of energy materials will be limited until the proper goals are set.

Broad solutions are self-evident. Of course, we can dig coal and we can burn it as soon as the economics of energy favor its development and we strike a balance between stepped-up production and environmental and safety standards. The minute we arrive at a positive perspective on coal, rapid development could begin, but not a minute sooner. To date, it has not begun. The speed with which we develop much greater benefit from our most abundant resource is a direct function of the time it takes to acquire a national perspective which recognizes the importance of coal to this nation's goal of energy adequacy.

Before detailing some of the intricacies of effecting the long-heralded turnaround in the coal industry, it is necessary first to place coal in the overall United States energy perspective. Regardless of the ups and downs and conflicting reports of recent months, the United States faces an energy problem of unprecedented proportions. William Simon has put it plainly, saying: "We Americans consume more fuel than we produce. We have thus become increasingly dependent upon foreign oil—a dependency which has an impact not only upon our domestic economy but also upon our balance of payments position as well. We must respond, now."¹ That is, by definition, a crisis.

Thus, largely due to accelerating demand for, and declining production of, domestic oil and gas, our formerly strong energy position has deteriorated. The Arab embargo on oil shipments to the United States exacerbated the situation by transforming a precarious oil supply situation into an immediate supply shortfall.

By the end of the first quarter of 1974, according to government estimates, the average oil shortfall will amount to at least

*Vice-President, Continental Oil Co.; A.B., Duke University, 1943; J.D., West Virginia University, 1949; West Virginia State Tax Commissioner, 1961-62.

¹Address by William Simon, National Press Club, Feb. 5, 1974.

two million barrels daily from the pre-embargo forecast of demand. This is a reduction from earlier forecasts thanks to conservation efforts of the American people, marginally increased imports from Western Hemisphere sources, a reasonably good stock level due to warm weather so far this winter, and higher-than-expected imports in the first two months of the Arab embargo. But, even with this reduction in the deficit, supplies are expected to be more than ten percent below pre-embargo forecasts of demand. Thus, it is clear that we are still in a tight situation and that we cannot relax in our efforts to conserve petroleum supplies. Even after the Arab embargo is lifted, supply stringencies will persist for some time because of the thirty to sixty day time lag required to move oil from the Middle East to the United States.

Concurrent with these supply restrictions has come a significant upward surge in petroleum prices. Not only has the price of imported oil skyrocketed, but domestic prices—now partly decontrolled—have risen as well. These price increases, which narrow the gap between domestic and foreign prices, will help to bring forth additional supplies, curb growth in demand and stimulate development of various potential new sources of domestic supply, such as shale oil gasification and liquefaction of coal.

In curbing supply and raising price, the Arabs have done the United States—and, I believe, the coal industry—an unplanned favor. They have shown the American public the shape of the future. They have helped us recapture awareness of our dependence upon energy and recall that the only guarantee of an uninterrupted supply is the ownership of that supply. The arrow points to the alternative fuels in the United States that can be developed as soon as possible to make up for the oil shortfall. The most likely candidate for such a role, in the short term, is coal. We can and will increase oil production; we can and will increase gas production; we can and will get Alaskan oil moving into our refineries. But assuming all that, when you get right down to the core of the problem, United States self-sufficiency in energy must rely upon greatly increased coal production and consumption. As William Simon said, "We have more coal than the Middle East has oil. Let's use it."²

What magnitude of contribution to this goal can coal achieve? The National Petroleum Council published a study in 1972 showing that, under ideal political and economic conditions, coal con-

²*Id.*

sumption between 1970 and 1980 would grow at an annual rate of 5.7 percent and would exceed 750 million tons by 1975. Since the study was made, however, the growth rate has been approximately zero. We are not going to reach the 750-million-ton target by next year. The National Coal Association says we may reach 650 million tons—or a hundred million tons short of the goal—in 1974, but even if we do, consumption will reach 660 million tons—10 million tons more than we produce. These are just figures. Actually, a potential market exists for essentially any amount of coal that we might be capable of producing. However, problems of productivity and environmental regulations have stunted the growth of the coal industry.

In the longer term, the main features of our energy situation are as follows: *First*, despite energy conservation programs and sharply rising prices, the demand for energy will continue to grow. *Second*, with intelligent, accelerated action, the nation can develop a strong energy supply position which can satisfy our growing energy needs. As a nation, we are liberally endowed with potentially recoverable reserves of oil, gas, uranium, shale oil, and, above all, coal. Taken in aggregate, these resources are sufficient to meet our energy requirements for at least two hundred years. Long before these are depleted, advances in technology should bring us new energy sources such as the breeder reactor, nuclear fusion, solar power, and geothermal power, which will greatly diminish the drain upon our natural energy materials and assure energy availability for future generations.

Third, for most of our needs over the next decade or longer, we shall have to rely upon the four conventional fuels—oil, gas, coal and nuclear power. These fuels now supply all but four percent of the nation's energy requirements. Technological problems, together with the long lead times and massive capital inputs required for new plant construction, preclude any major contribution from the new energy sources for some time.

In light of current developments and the short-term reliance that the United States will place on the basic four fuel energy sources, the most bothersome question to many is whether it is a healthy thing to have an energy company that produces the four basic energy sources as Continental Oil does. I think this question can best be answered by considering happenings since the merger of Consolidation Coal and Continental Oil in 1966. In the five years preceding the merger, Consolidation had had capital expenditure programs of about 15.5 million dollars each year. Since the merger,

investment in expanding coal capacity and opening new mines has been three times that figure—in the area of 45 million dollars a year. In addition, we have been able to engage in exciting new areas of research and development by combining a very solidly based research department at Consolidation with the rather more sophisticated and four times as large research department of Continental Oil. Research efforts since the merger have more than quadrupled. When these facts are considered, I think it apparent that the association has been a healthy one. Of course, no one has asked for a waiver of any anti-trust law that exists in the United States today. However, I do believe that the anti-trust laws should be carefully examined and applied to each and every association between basic energy producers to make sure that there is no opportunity for the destruction of what could be and should be a very viable marketplace.

Fourth, fuel imports will continue to be a major factor in the United States' energy supply just as they will be in Europe and Japan, for indigenous supplies of the four conventional fuels are not likely to be developed fast enough to meet our energy needs in the period immediately ahead. In 1973, we imported an average of over six million barrels of crude oil and petroleum products daily, about one-third of our total oil requirements. The United States will continue to need sizeable petroleum imports over at least the next five years. The goal of self-sufficiency takes time.

No one should doubt that there will be definite changes in the life style of all Americans. The motor vehicle industry, in response to consumer demand, is placing increasing emphasis on smaller, less powerful cars, as the European industry has so wisely done for years. More attention will also be given to end uses for energy fuels, and properly so. It makes little sense, for example, to burn oil and natural gas in electric utility boilers. These fuels have a unique set on properties which make them especially valuable as a petrochemical feedstock, motor fuel, and space heating fuel. Fueling boilers is a job for coal and nuclear fuel.

Unavoidably, price is king with respect to energy development. So far, the costs to develop new alternatives to the traditional domestic sources of energy have been non-competitive in the marketplace. Unfortunately, the entry price for synthetics rises with everything else. At present, the minimum entry level for synthetic gas would be reached when crude oil is priced at nine dollars a barrel or more. In a short time we will be at that price, although current price rollback proposals would put it below that level.

Assuming that the kind of massive coal development we are talking about cannot take place except in an economic climate that permits reasonable earnings, on a par with other basic industries, what conditions and what policies within the bounds of practicality and reason will be most conducive to rapid development of our coal reserves? I would like to approach that question by considering the obstacles that now stand in the way of expanding production. These obstacles vary from region to region, from company to company, and from mine to mine, but they may well be described under three categories: (1) Government restrictions, including land use policy and realistic modification of the Mine Health and Safety Act provisions; (2) availability of manpower and labor stability; and (3) availability of capital.

During the past few decades, private citizens, industry and their elected governments have felt growing concern for environmental quality and the health and safety of workers. As a result, we have seen the growth of movements, organizations, and mounting legislation which, from our present vantage point, appear to have been headed in the right direction but occasionally have exceeded the bounds of practicality. I do not ask that anyone give up this dream and hope of a world untouched and untarnished by pollution in any way, but there must be a balance restored or we are not going to have the needed coal production. This balance must come in two very sensitive, difficult areas. One of them falls within the whole question of surface mining, and the other falls within this nation's ability to consume coal which has a sulfur content in excess of one percent. These are the two things that have to be resolved. The question of sulfur is a very tender one at this moment. West Virginia coal cannot be burned in the Eastern areas where it is so vitally needed today. We must greatly accelerate our commitment to perfect stack gas removal devices and bring sulfur down to proper levels, and we must at the same time develop a system whereby we can begin to use West Virginia coal and apply the technology as and when it becomes available.

The present emphasis on preserving environmental values will not and should not simply vanish. What is needed is a meeting of the minds between men of good reason and good will on both sides to work out policies that will bring the greatest benefit to the public at the least cost. For example, it often is argued that the environmental effects of surface mining are intolerable and that our reliance should be placed on underground capacity alone. Others argue that underground mining is too dangerous, too slow and

too costly and that we should rely on surface mining alone. I believe that our economy is going to require the maximum expansion of both underground and surface mining and that the disadvantages of both methods must be met and must be overcome.

Surface mining requires a highly visible alteration of the local environment to get at the coal. No one will pretend that the process of removing the overburden, while it lasts, is an aesthetic or environmental improvement. But given reasonable legislation and strict enforcement, the environment can be restored essentially to its previous condition, and in many cases put to a socially superior use.

The problems of underground mining are less obvious to the public, but its hardships and dangers are part of the folklore of this and many other nations. In 1970, the Federal Coal Mine Health and Safety Act became effective. It would be absurd to differ with the intent of the Act, but its actual effect needs examination. Briefly, in our experience, the Act has seriously impaired productivity of mines and workers, and has had relatively little effect on health and safety. The great majority of accidents are traceable to lack of proper safety motivation, to lack of knowledge of safety precautions, or to lack of experience. In other words, the greater part of the answer to mine safety lies not in legislation, but in our ability to attract, train and use manpower effectively. It lies most importantly in our ability to motivate the miner.

Training is a key to improved safety. In Consol alone, we committed more than 400,000 man-hours to training in 1973, at a cost of about \$5.5 million. Those figures will be higher this year, and we believe the investment of time and money will pay off in better safety and greater productivity. In fact, our 1973 safety record showed a more than fifty percent decrease in our accident rate over 1972. Regardless, until labor and industry make up their minds that they have joint responsibilities in the fields of productivity and safety and work together rather than as antagonists, we face a long road ahead. It is not clear to me yet that we are heading in that direction, but until such time as we are able to sensibly get about the safety question to labor's satisfaction—and let me assure you that this question is one entirely of mental motivation and commitment by top management right on down through the employee file—an endless number of laws can be passed without greatly improving the safety situation. This has been our experience.

As to the problem of productivity, there is again the need on the part of both labor and management to be a little more reasonable in the handling of their problems. We must be able to reason together and find innovative ways to eliminate safety questions and accordingly increase productivity. In order to do this, labor and management are going to have to discover that the goals of increased productivity and greater worker safety are common ones. This understanding has not come about, and I believe that one reason is that a different relationship has developed in the coal industry today. The recent concentration of power at the high levels of the United Mine Workers' leadership led both labor and management to look to union headquarters in Washington for the resolution of all problems. This imputation of authority resulted in a divorce between employer and employee. Such a situation persists today, and, I believe, is one reason we see so many local wildcat strikes which prove extremely damaging to productivity. Certainly, if coal is to attain a higher role in the energy picture than it has in the past, these basic employer-employee relationships must change and improve. Once again, this is a matter of proper motivation and commitment on the part of all concerned to move towards the goals of productivity and safety.

The problem of productivity leads naturally to our third major obstacle to rapid expansion, the availability of capital. To increase production, the coal industry will need huge amounts of capital to acquire reserves and open new mines. We can hope for productivity improvement at our present mines over the long term, but, for the near future, any significant increase in production will depend on expanding the scale of our operations. The capital intensive nature of coal mining and the investments that are necessary to create a safer and more productive mine are beyond the reach of most small capital structures. If coal is to be developed, it must be developed either by government funding or by industries that are large enough to carry the necessary financial risk and burdens.

The actual amount of capital needed will depend on a number of factors, including the location and type of mine and inflation. To put the matter into rough perspective, in 1965, the capital requirement for an underground mine in northern West Virginia capable of producing two million tons a year would have been about fifteen million dollars. The additional mining and safety equipment required in 1974 would nearly double that cost. Add the effect of inflation, and the two million ton mine today would require forty million dollars in capital—nearly three times the 1965

cost. If those figures are any indication of future requirements, then it appears that the addition of five hundred million tons of annual capacity would require capital on the order of ten billion dollars. A new mine today also requires substantially longer lead time to begin producing, which further aggravates the capital problem. Deep mines, for example, require three to five years to open and get up to meaningful production levels; for surface mines, allow two to three years.

In broad outline, those are the three major classes of obstacles standing in the way of rapid development of coal—public understanding of coal's importance, adequate manpower, and capital. What, then, needs to be done to overcome these three great obstacles to expansion? Specifically, what are the implications for basic policy, and what measures are needed to attract capital into the production of coal?

First, we need a clear understanding by federal and state governments that rapid development of our national coal reserves over the next several decades is a necessity. We need leadership at the federal and state levels to create an atmosphere in which groups with divergent views can discuss and negotiate constructively. We also need cooperation between the coal industry and the government in re-examining legislation to protect the health and safety of coal workers. At Consol, we are looking at every act of legislation to see where efficiency *and* safety can be improved, and we will share any findings and recommendations with appropriate members of state and federal government. And, we need vastly expanded research and development in the technology of producing and using coal. Private companies are looking ahead with research, and I say with pride that Continental Oil Company has some of the most promising projects, including a stack gas clean-up process and a method of coal gasification to produce a medium BTU gas for upgrading with a methanation step. In addition, forward steps are being taken in developing new and safer systems of mining coal. Our progress in this area has been furthered by the merger of Consol research and Conoco research—that is, coal research and petroleum research.

Finally, we need a policy decision on the pricing of coal. Will it or will it not be allowed to rise to its true market value when most Cost of Living Council controls terminate on April 30? That is the simplest and most direct way to stimulate production and conserve energy. I hope we are all still committed to a free economy. Let us remember that in a free economy the operation of the

price mechanism in the market is the only proven way to control the flow of resources. Freeing the price of energy is the only way the coal industry can become profitable enough to attract large amounts of capital.

Let me add a specific comment about the economic climate in West Virginia. The West Virginia Legislature has undertaken a full review of the situation of the coal industry. I congratulate that effort and welcome it. This is a common sense approach to the problem. It will, of course, include an overall review of the tax revenue from coal, and the tax burden on coal. I suggest that we face a problem of misplaced perspective. What has happened traditionally in the past is that the legislative process has tended to avoid a determination of financial needs up to the last moment and then, at the point of crisis, has looked around to find the best available target for a new tax to bring in the necessary revenue. A more reasonable procedure would be to first determine the State's needs, and then to allocate taxes according to the economic plans and policies of the State. In any tax program, fairness in the incidence of taxation is critical. I would suggest, for example, that West Virginia evaluate the total tax load of its coal industry in comparison to other industries in the State. It is also worth comparing the total taxes on coal in West Virginia with comparable taxes in each of the five adjoining states. I believe that in each case you will find that coal is now providing its fair share of revenues to the State.³ Any future taxation program must not discourage expansion of an industry already hard pressed for capital.

I would also like to suggest a similar broad approach to environmental regulations. The focus should be changed from the minute details of methods and procedures to a more fundamental concern with end results. If, for example, the regulations could be focused less on which piece of dirt has to be piled here and which piece piled there, and instead simply tell us what end result is desired, then I believe we could be more responsible, and at lower cost. The people who operate mines would like to comply with environmental objectives, but they would like to do so according to their own hard-won expertise rather than by some set of arbitrary procedures devised, in all good conscience, by those who do not know mining.

These are some of the changes, as I see it, which will permit

³See Thompson, *State and Local Taxation of the Bituminous Coal Industry*, *infra*.

energy suppliers, energy consumers, and the public to cooperate in a project at least equal in importance to Manhattan and Apollo. The present political and economic environment does little to promote such a project. The many groups interested in energy are permitted—in some ways encouraged—to act at cross purposes. If we accept the rapid development of coal resources as an important national purpose, an impartial evaluator would have to conclude that we are floundering. At a time when the nation needs both heat and light, our principal product seems to be noise. But I hope, and I believe, that a turning point is now at hand when we can, if we choose, begin to work together constructively. Coal is a key which can open the door to energy adequacy. West Virginia can be the heart of a revitalized nation.